IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

SOFTVIEW LLC, Plaintiff, v. APPLE INC.; AT&T MOBILITY LLC; DELL INC.; HTC CORP.; HTC AMERICA, INC.; HUAWEI TECHNOLOGIES CO., LTD.; FUTUREWEI TECHNOLOGIES, INC.; KYOCERA CORP.; KYOCERA WIRELESS CORP.; LG ELECTRONICS, INC.; LG ELECTRONICS USA, INC.; LG ELECTRONICS MOBILECOMM U.S.A., INC.; MOTOROLA MOBILITY INC.; SAMSUNG ELECTRONICS CO., LTD.; SAMSUNG ELECTRONICS AMERICA, INC.; SAMSUNG TELECOMMUNICATIONS AMERICA, LLC; and SONY ERICSSON MOBILE COMMUNICATIONS (USA) INC., Defendants.	)	Civil Action Nos. **10-389-LPS** 12-984-LPS 12-985-LPS 12-986-LPS 12-987-LPS 12-988-LPS 12-989-LPS 12-990-LPS 12-991-LPS

JOINT CLAIM CONSTRUCTION CHART

VOLUME 2 OF 2

EXHIBIT
Petitioner - Motorola
PX 1019b

<u>EXHIBIT 4</u>

Portions of Intrinsic Record Relied Upon by Defendants

JUNE 8, 2001
NPL OPERA IDS

Substitute for Form 1449/PTO		Complete if Known	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT		Application Number	11/045,757
(use as many sheets as necessary)		Filing Date	June 8, 2001
		First Named Inventor:	Rohrabaugh
		Art Unit	2176
		Examiner Name	Quoc A. Tran
Sheet 2	**of** 2	Attorney Docket Number	005207.P001XD

NON PATENT LITERATURE DOCUMENTS

Examiner Initials*	Cite No[1]	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published	T[2]
		Combined Printout of HTML Help Files for Opera 3.60 (HTML pages printed to PDF docs and combined), Available on May 12, 1999.	
		Screenshots compilations of Web pages using Opera 3.60, including: www.Altavista.com – May 1, 1999 www.cnet.com – May 8, 1999 www.excite.com – May 8, 1999 www.nytimes.com – April 22, 1999 www.softsource.com – April 17, 1999 www.utexas.edu – April 27, 1999 www.uspto.gov – May 5, 1999 www.yahoo.com – May 8, 1999	

Examiner Signature	/Quoc Tran/	Date Considered	05/28/2008

*Examiner: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. [1]Applicant's unique citation designation number (optional). [2]Applicant is to place a check mark here if English translation is attached.

Based on Form [illegible]

ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /QT/

Motorola PX 1019b_4

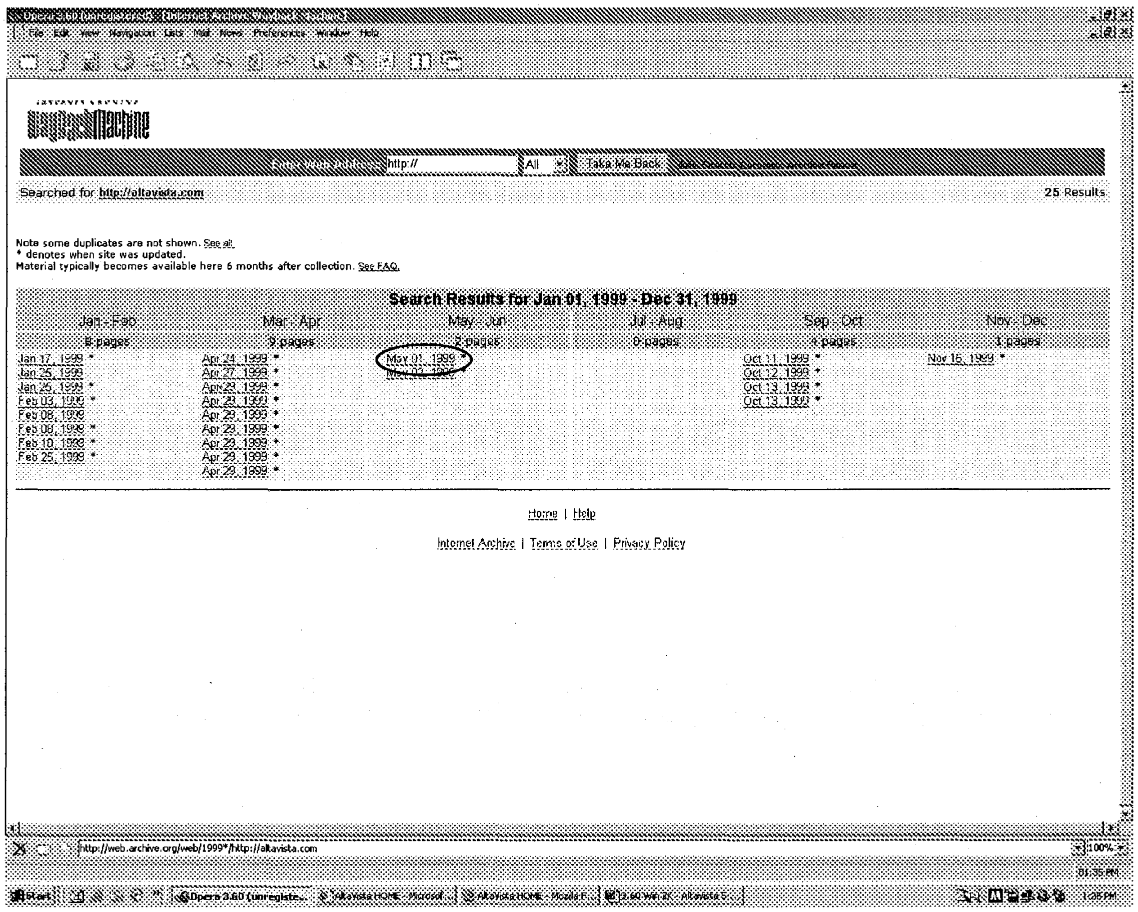
Altavista.com – May 1, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990501144236/http://www.altavista.com/index.html

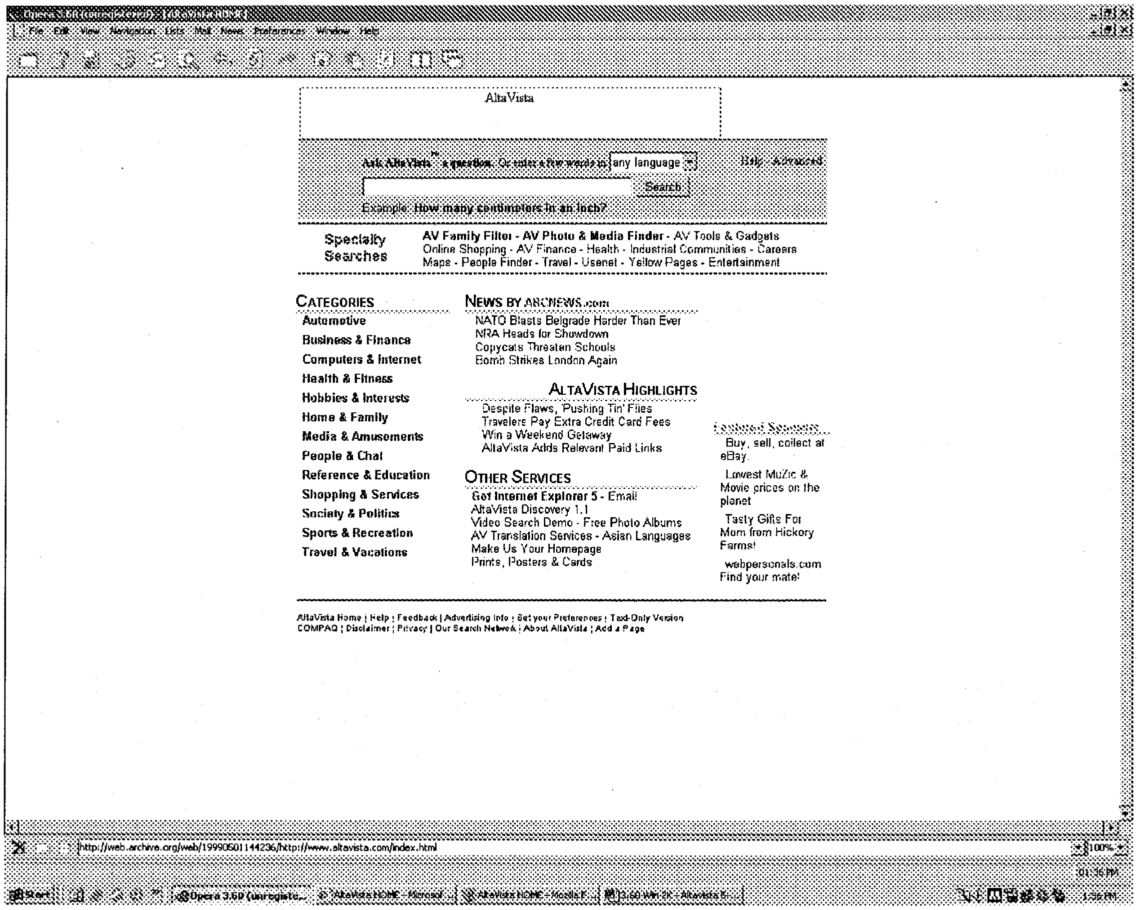
This corresponds to the www.altavista.com search page on May 1, 1999[1], as served by the Wayback Machine Internet Archive site.[2]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional

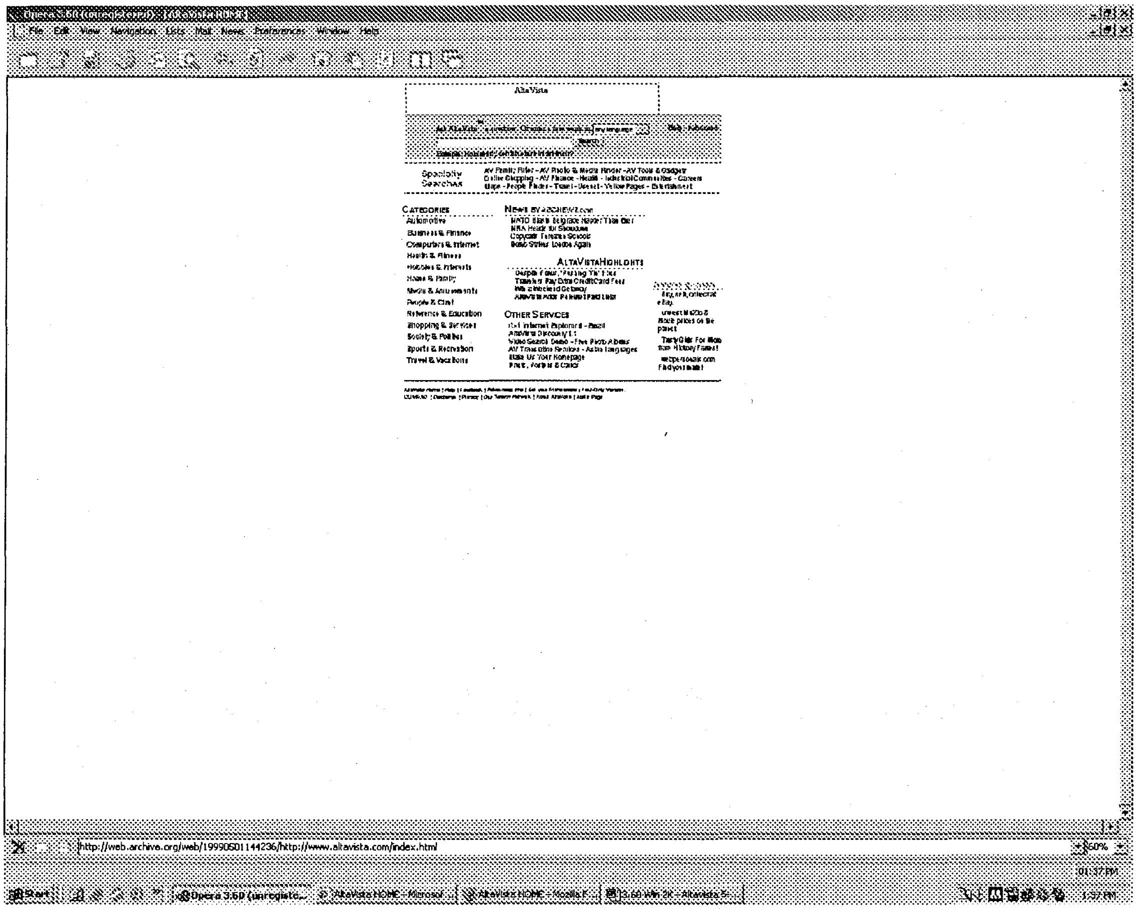


[1] The May 02, 1999 page was not available
[2] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

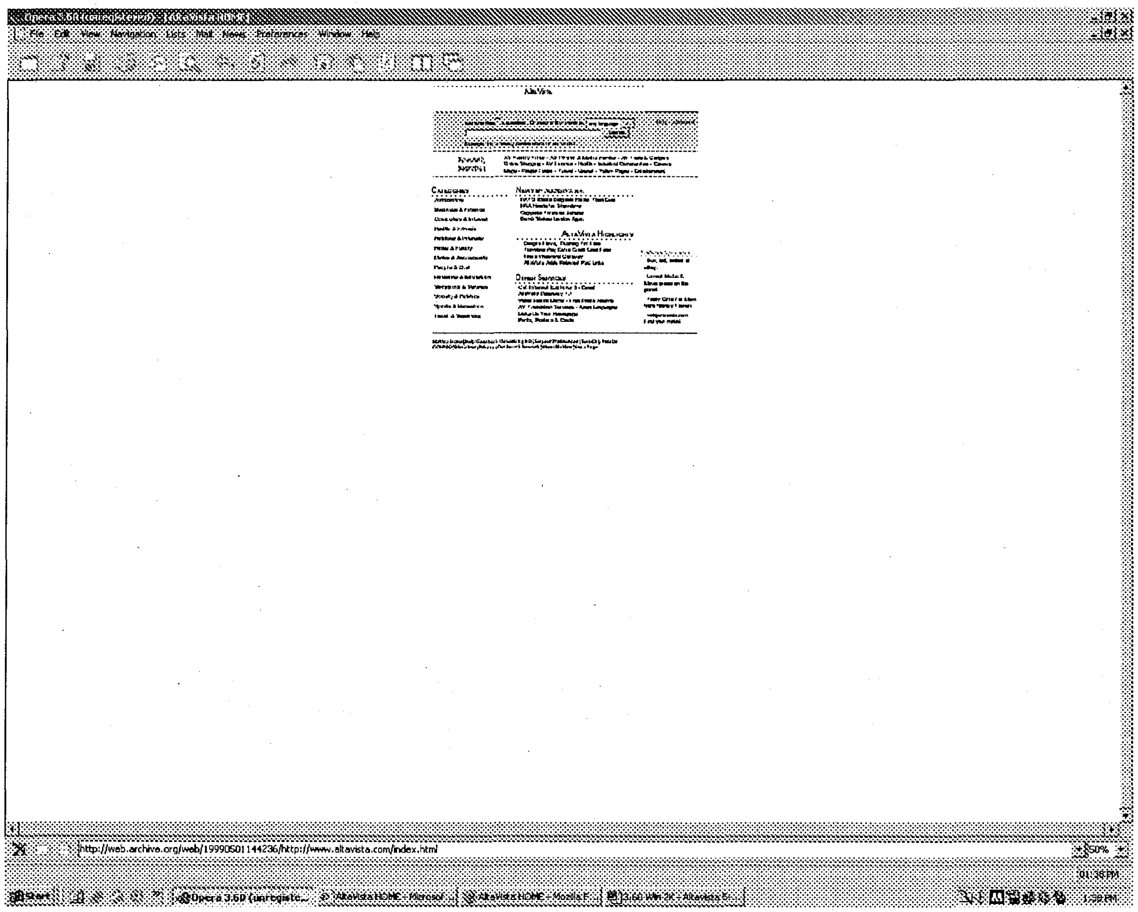
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



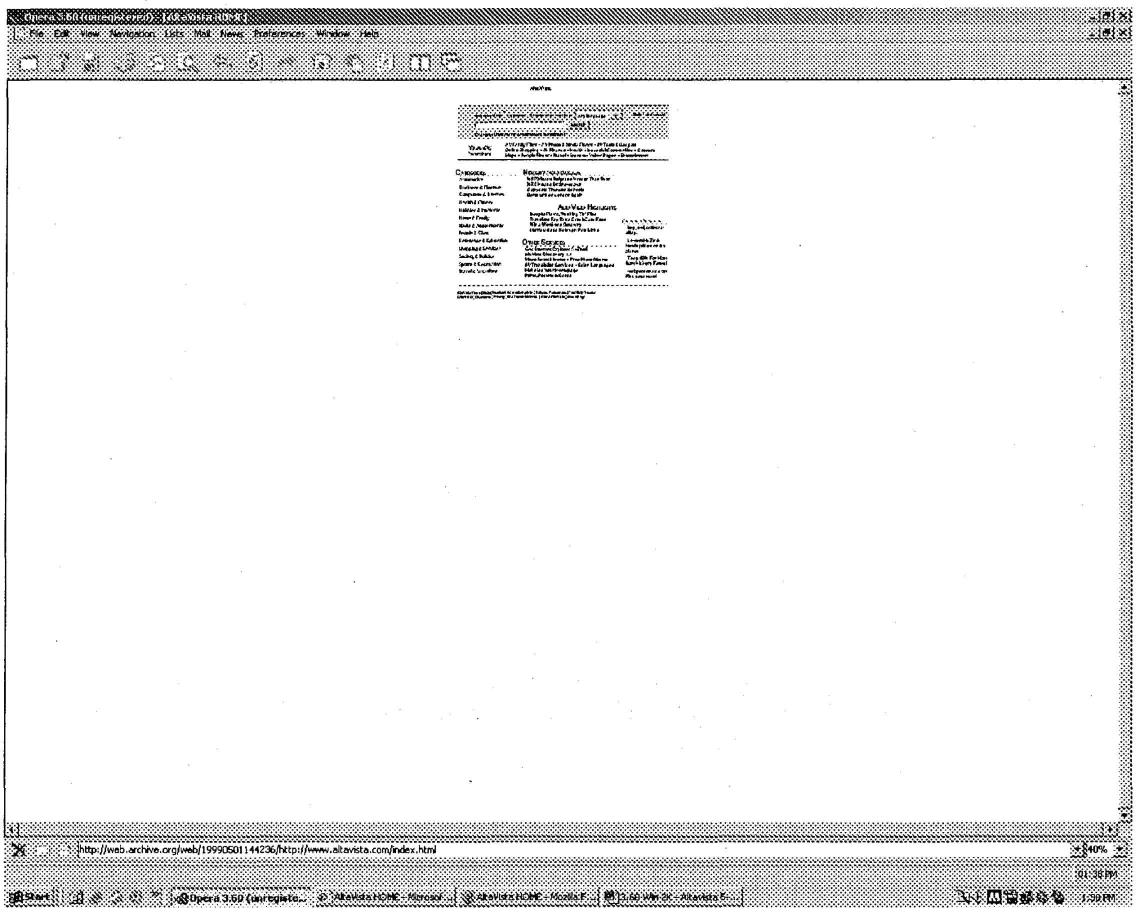
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 60%



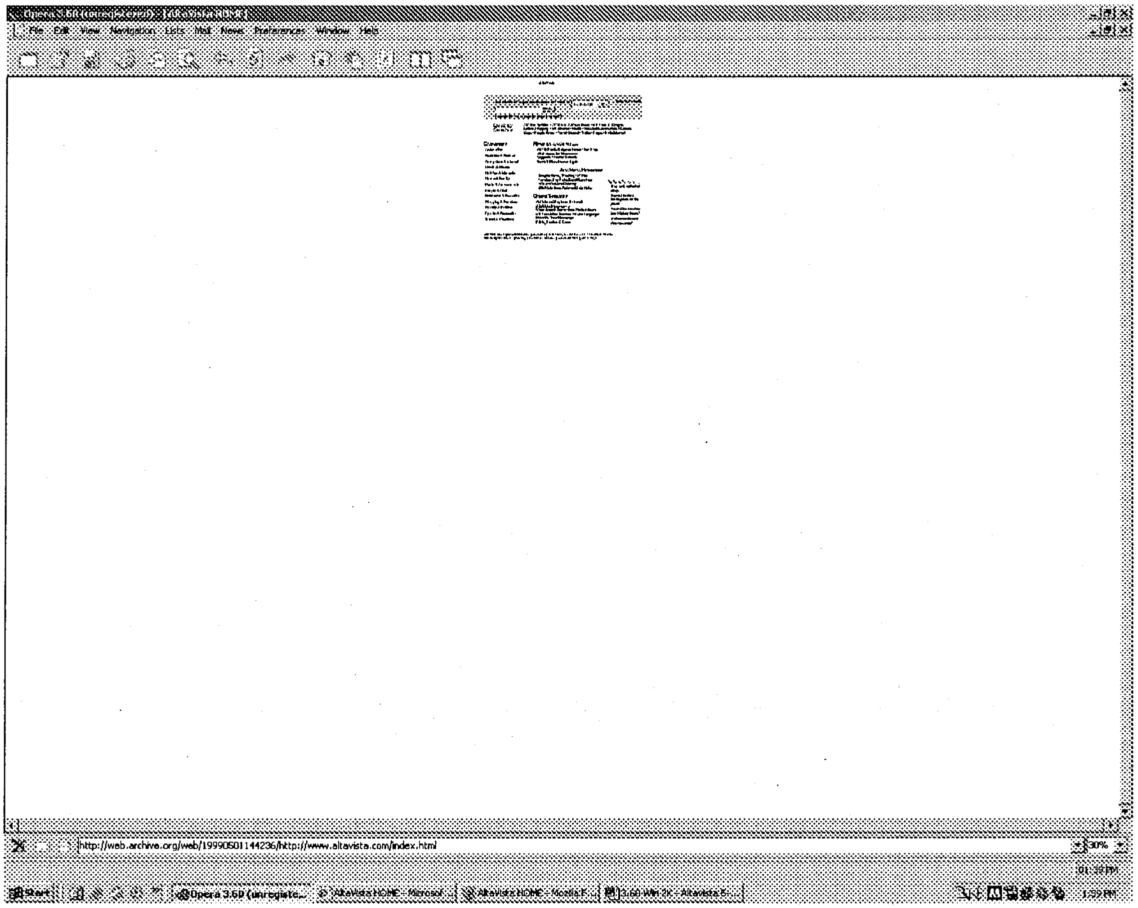
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



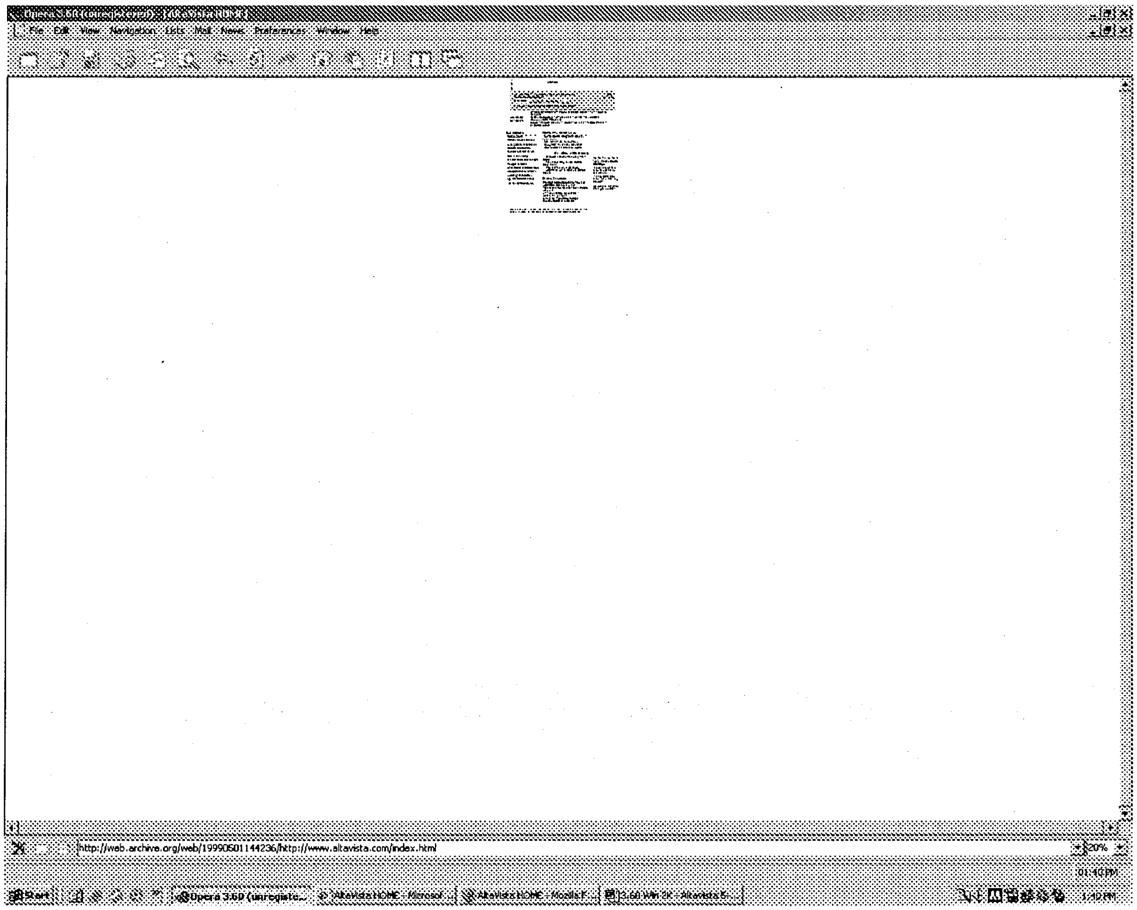
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 40%



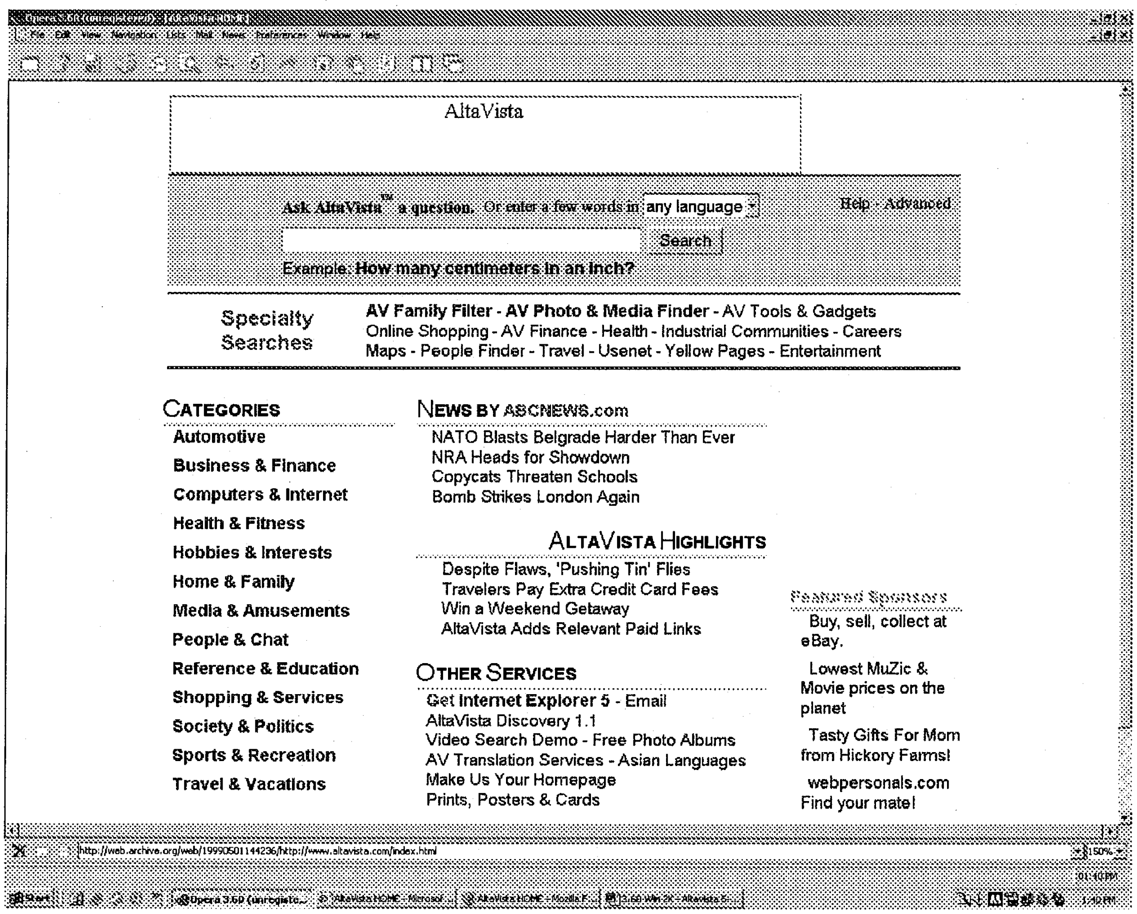
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



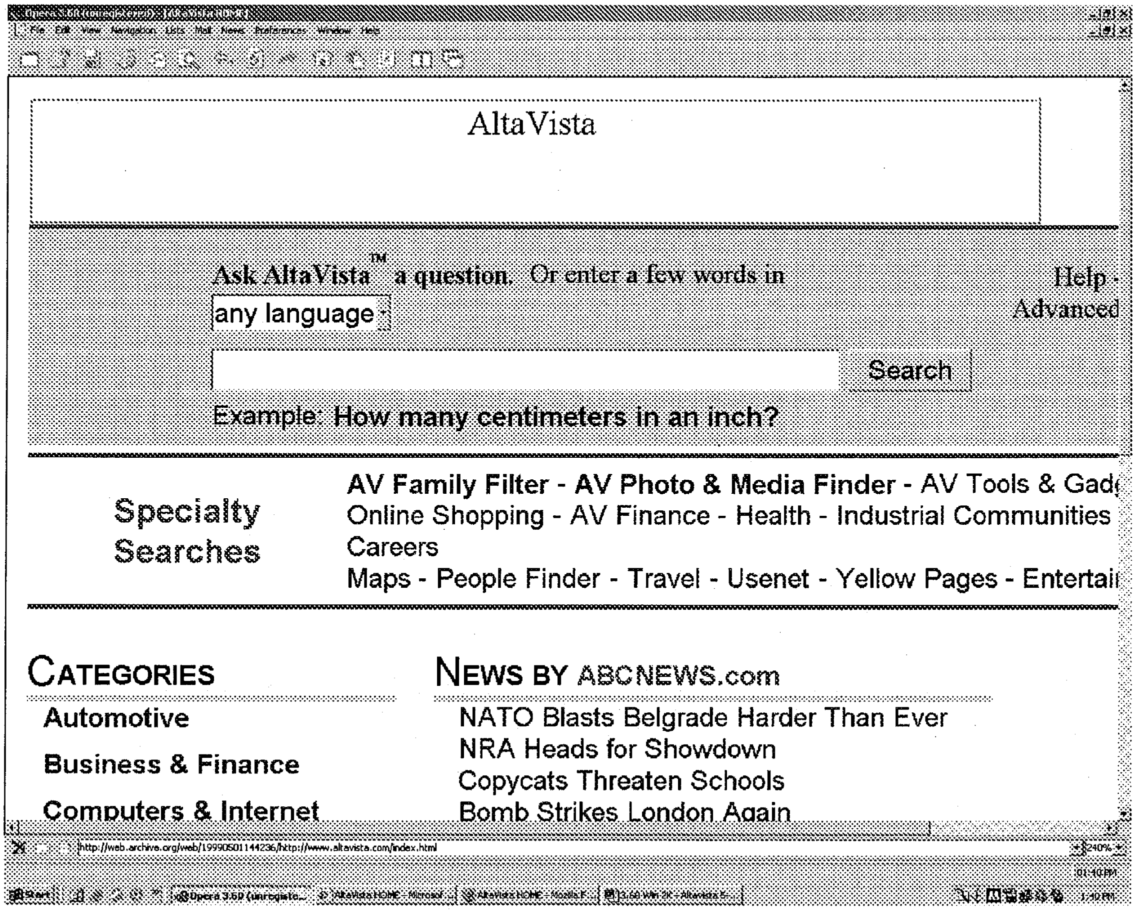
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 20%



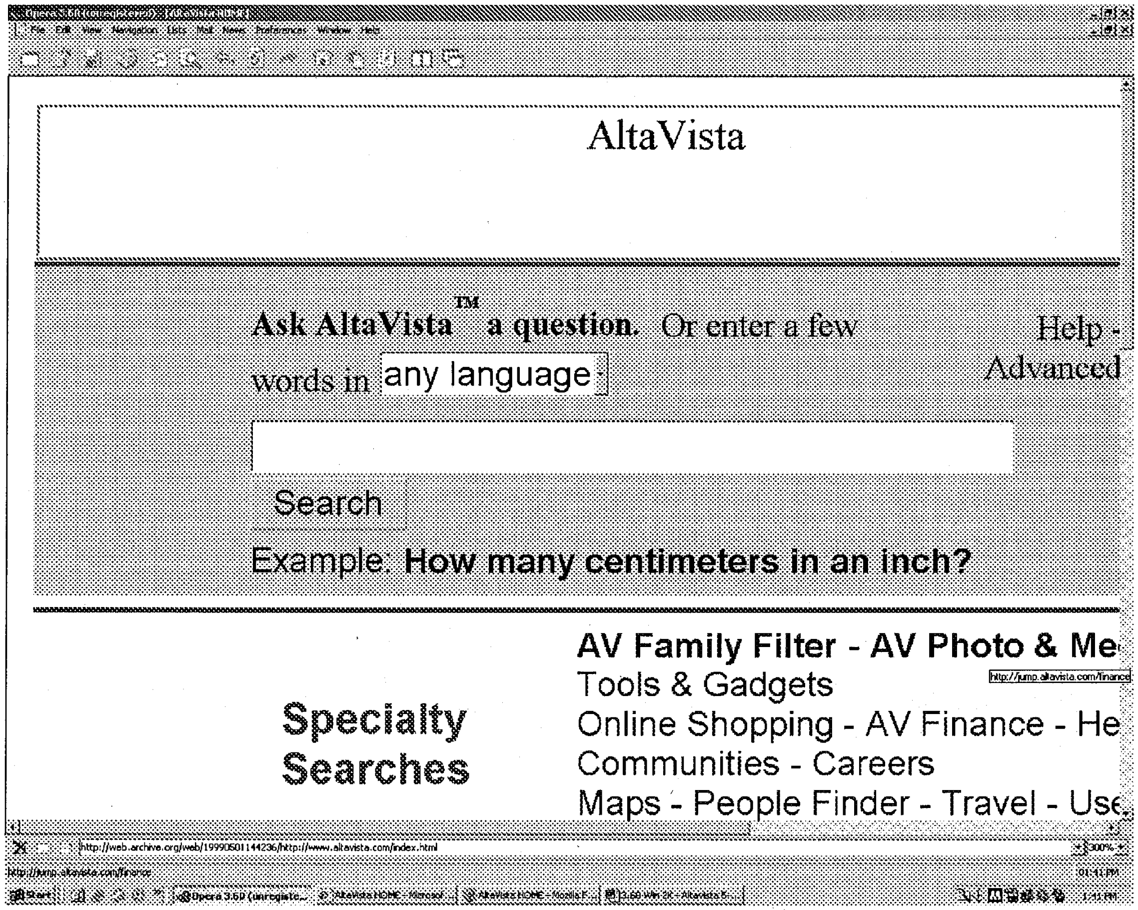
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



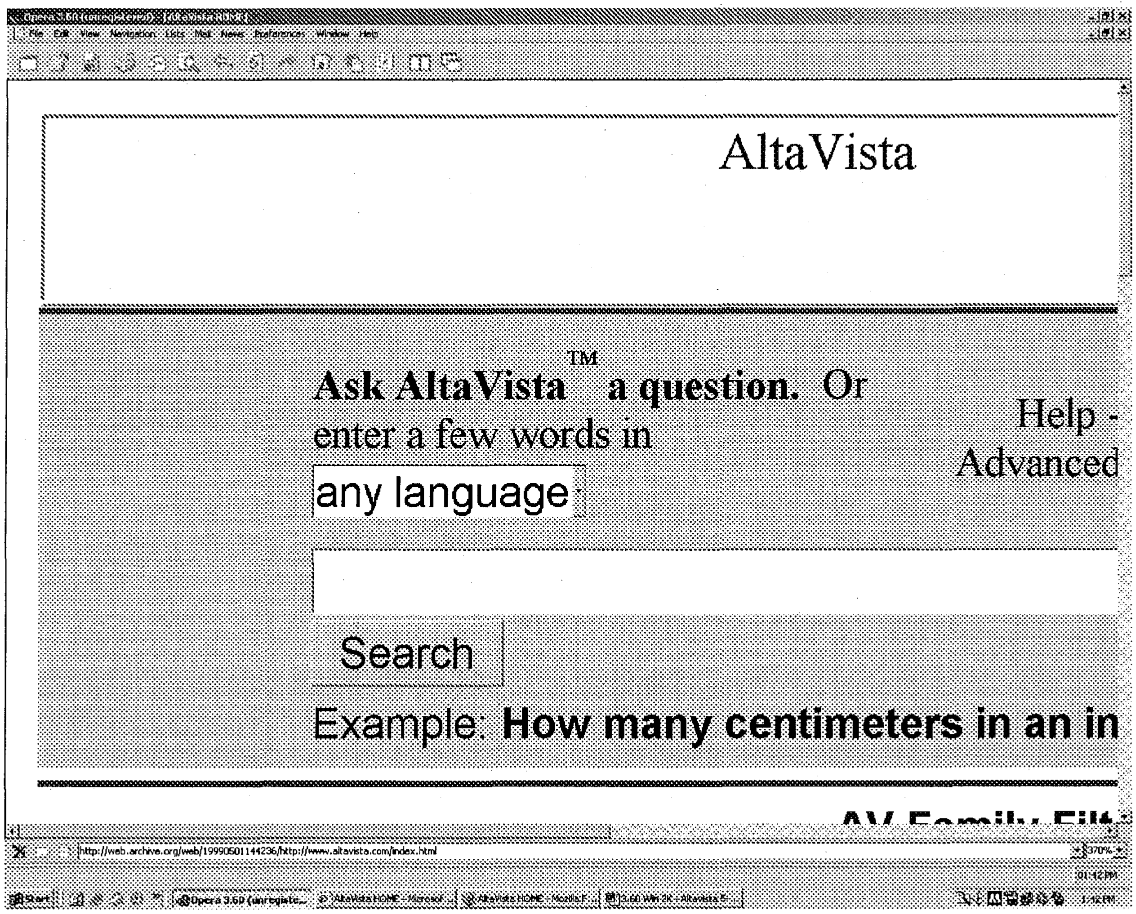
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 240%



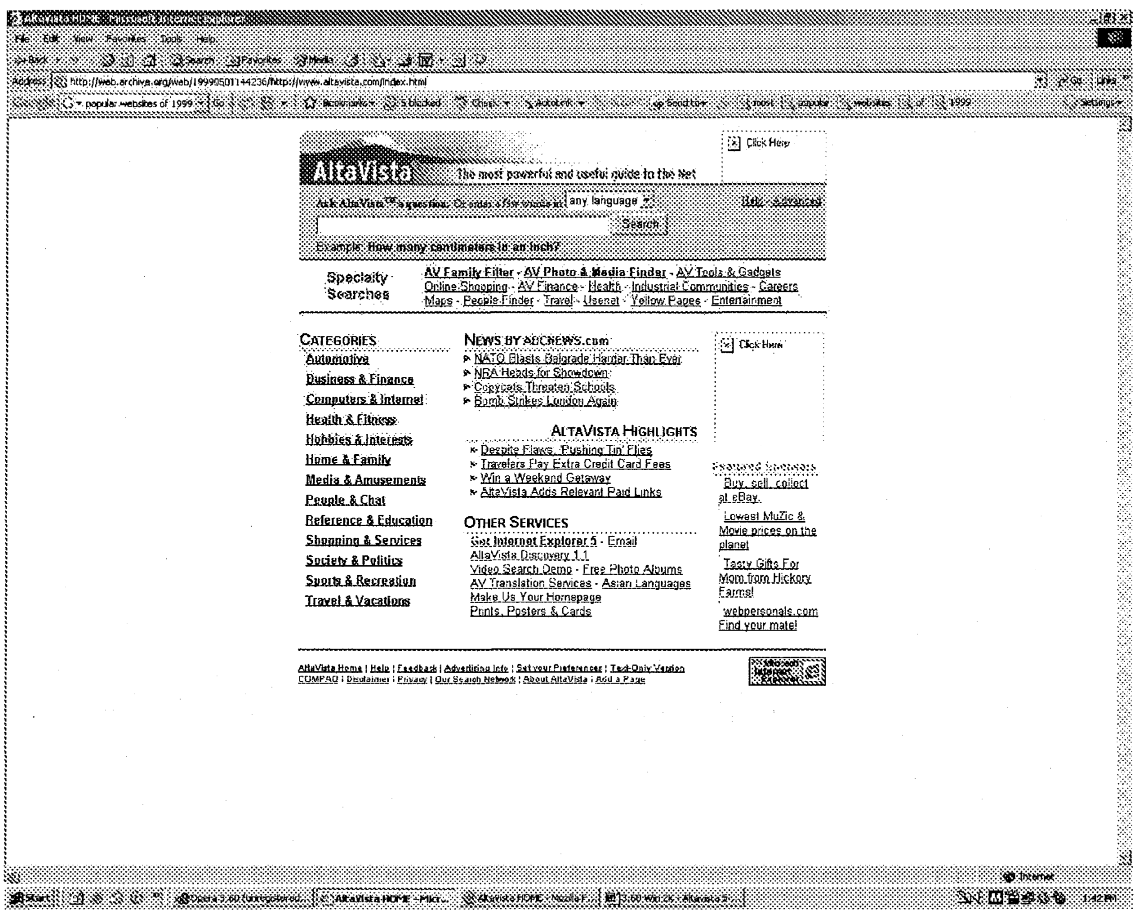
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 300%



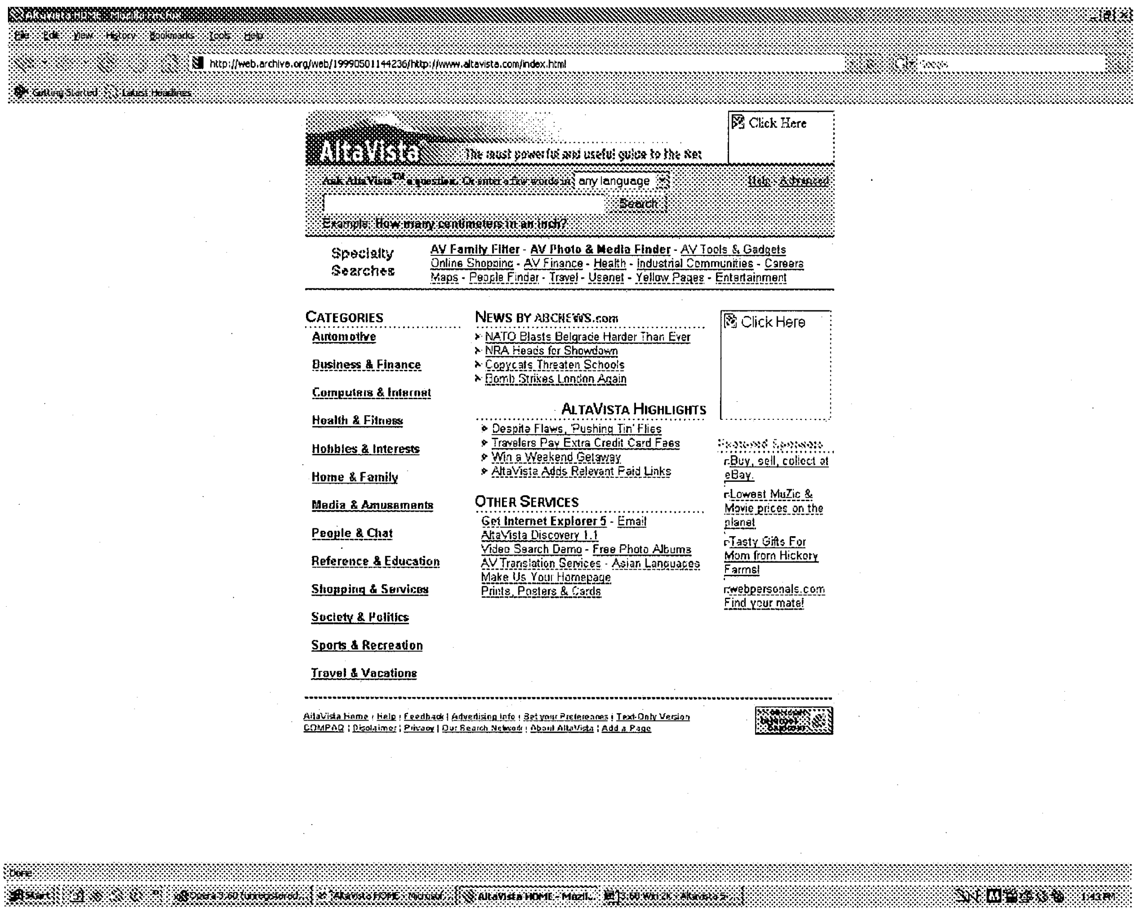
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 370%



Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



CNET.com – May 8, 1999

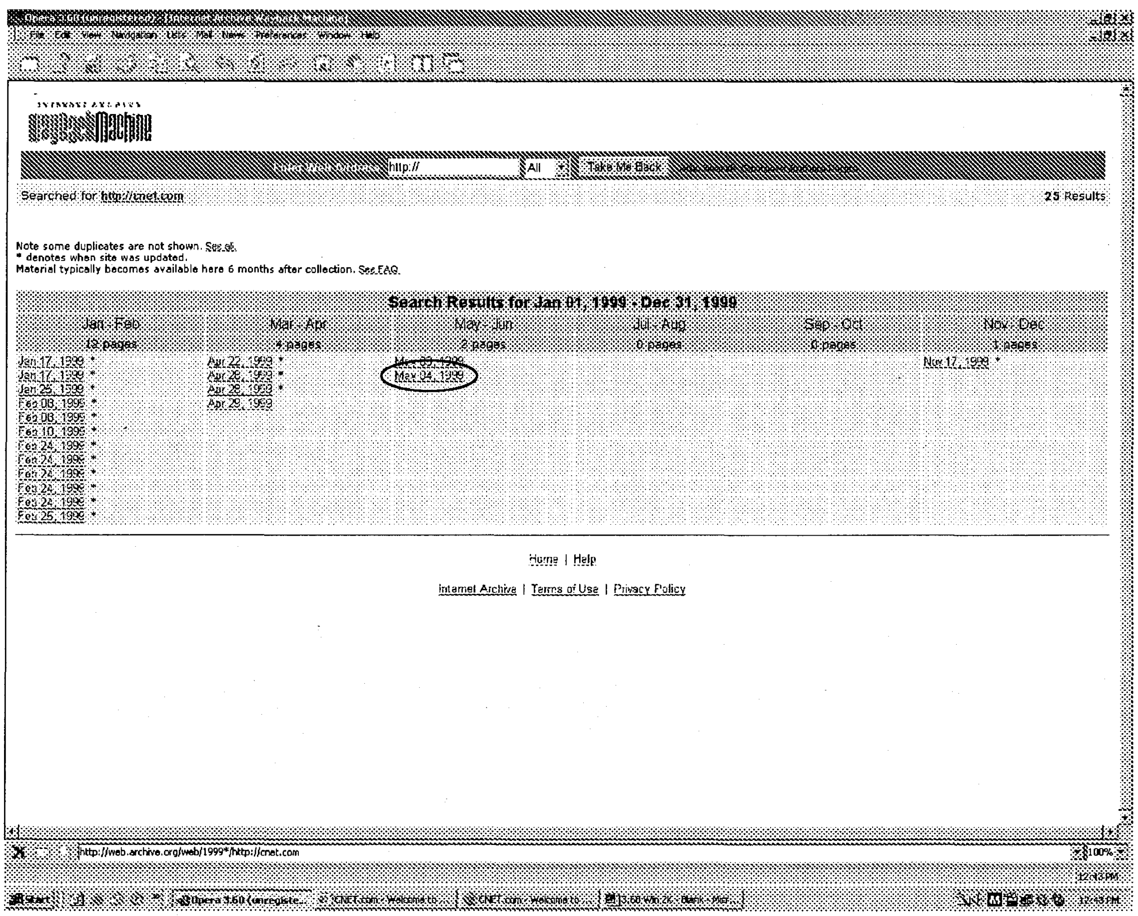
The following screenshots are of the page:

http://web.archive.org/web/19990508170808/home.cnet.com/

This corresponds to the www.cnet.com page on May 8, 1999[1], as served by the Wayback Machine Internet Archive site.[2]

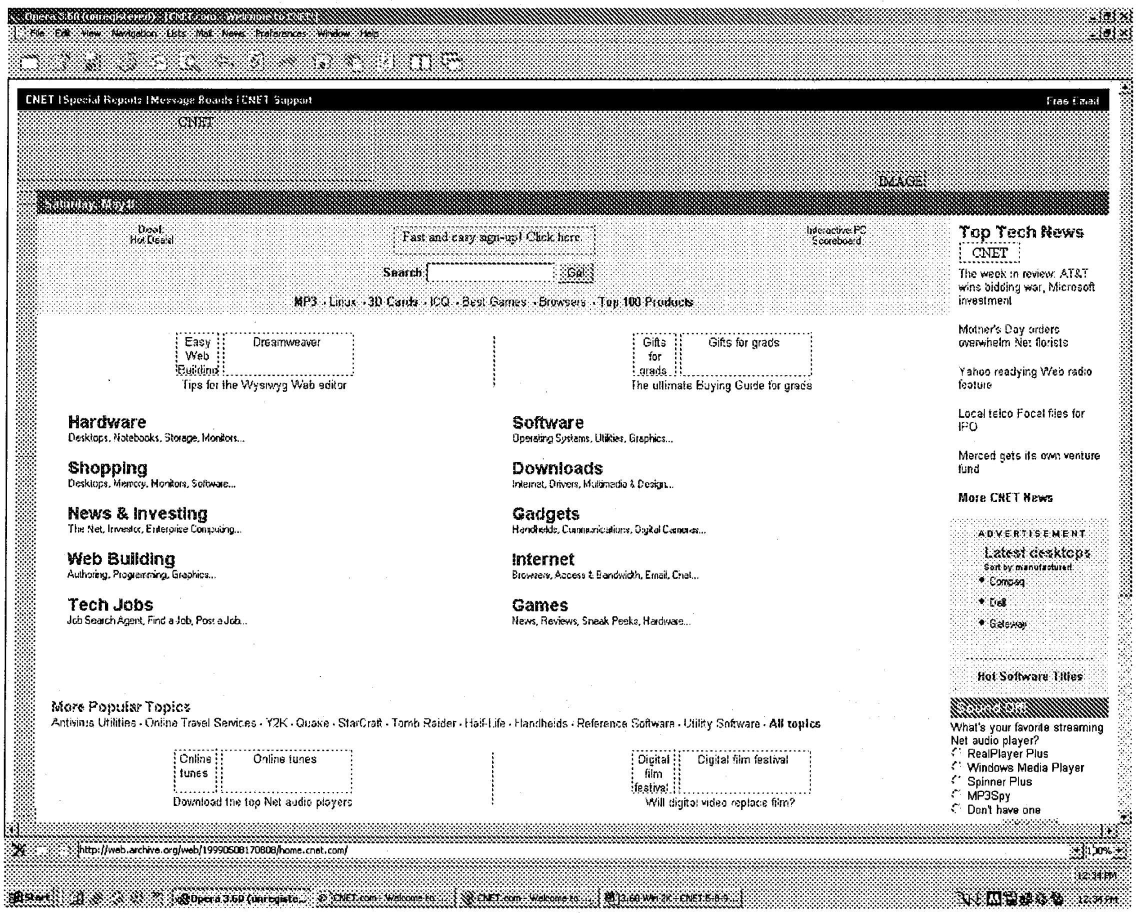
The first set of screenshots is at a resolution of 1280 x 800. The second set is at a resolution of 800 x 600.

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional

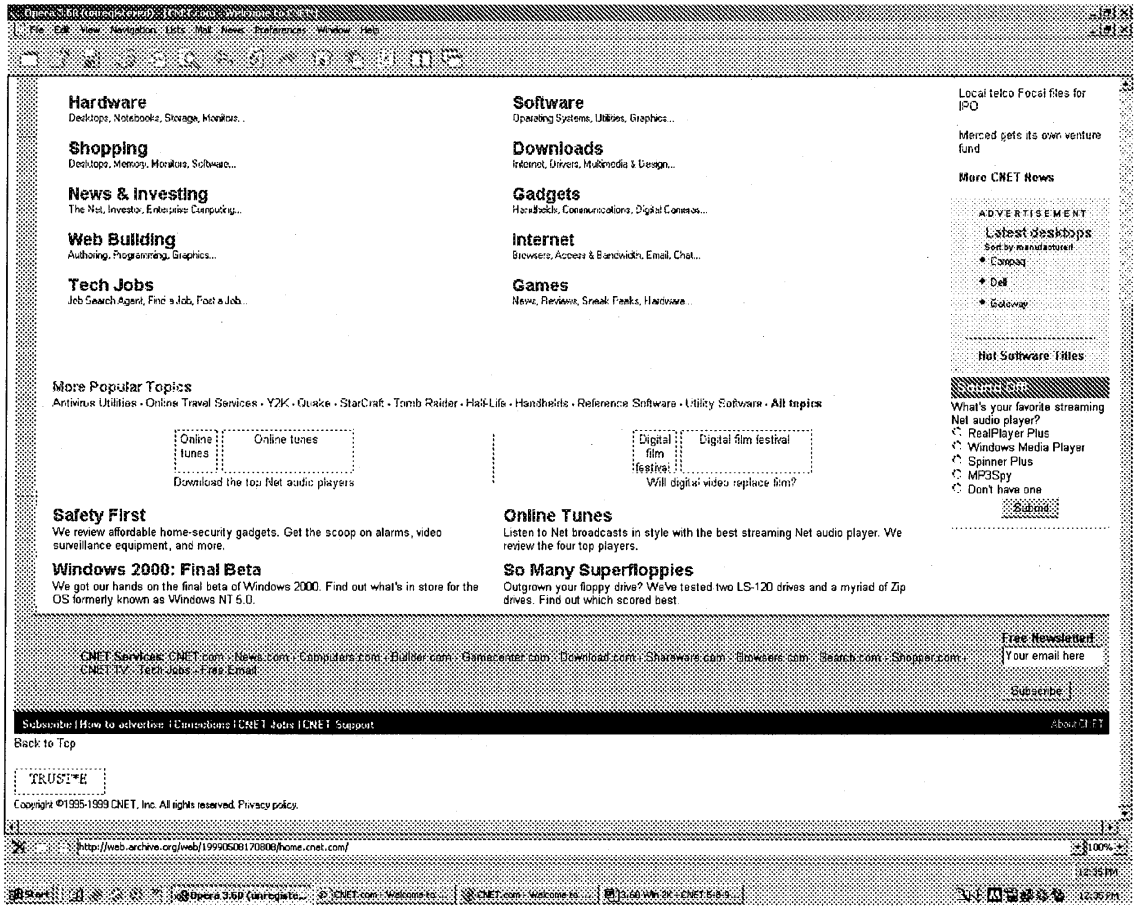


[1] May 4, 1999 date on Wayback Machine is incorrect – selection of this link returns the May 8, 1999 page.
[2] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

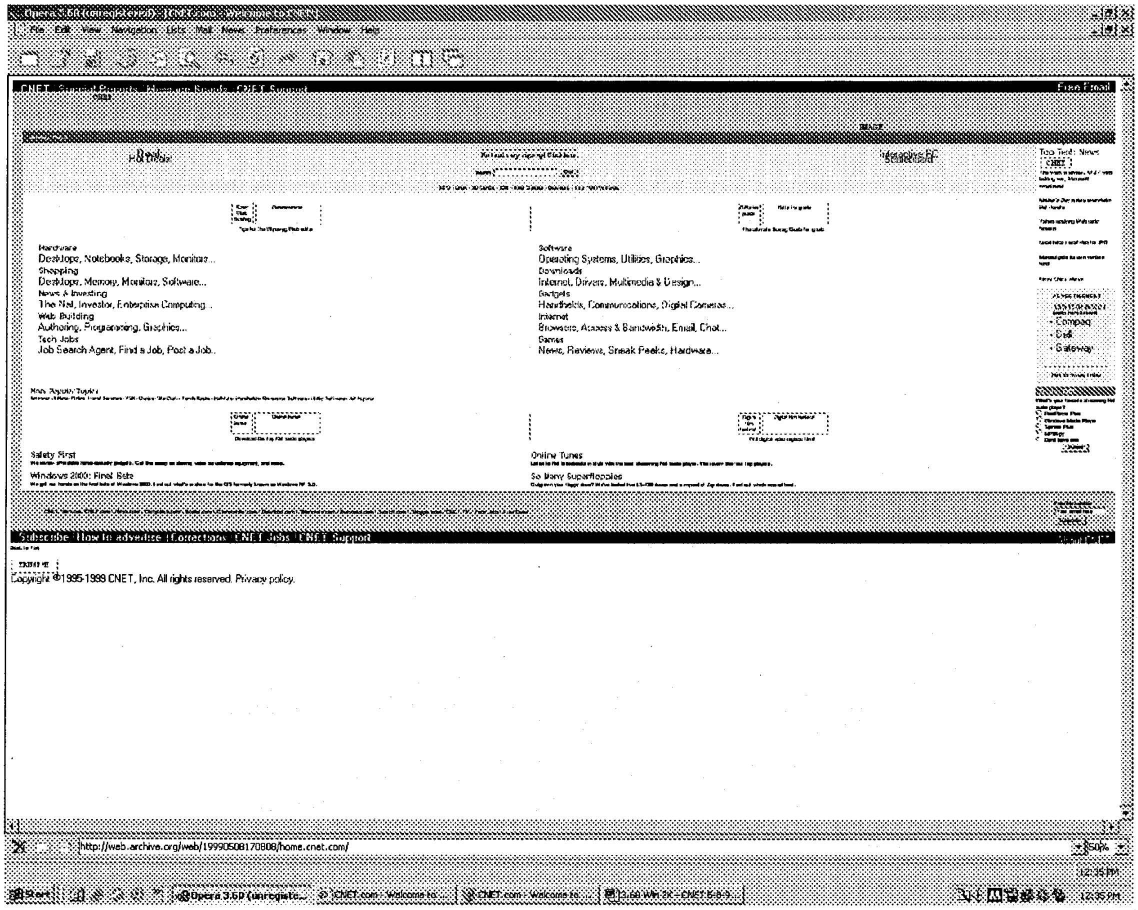
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



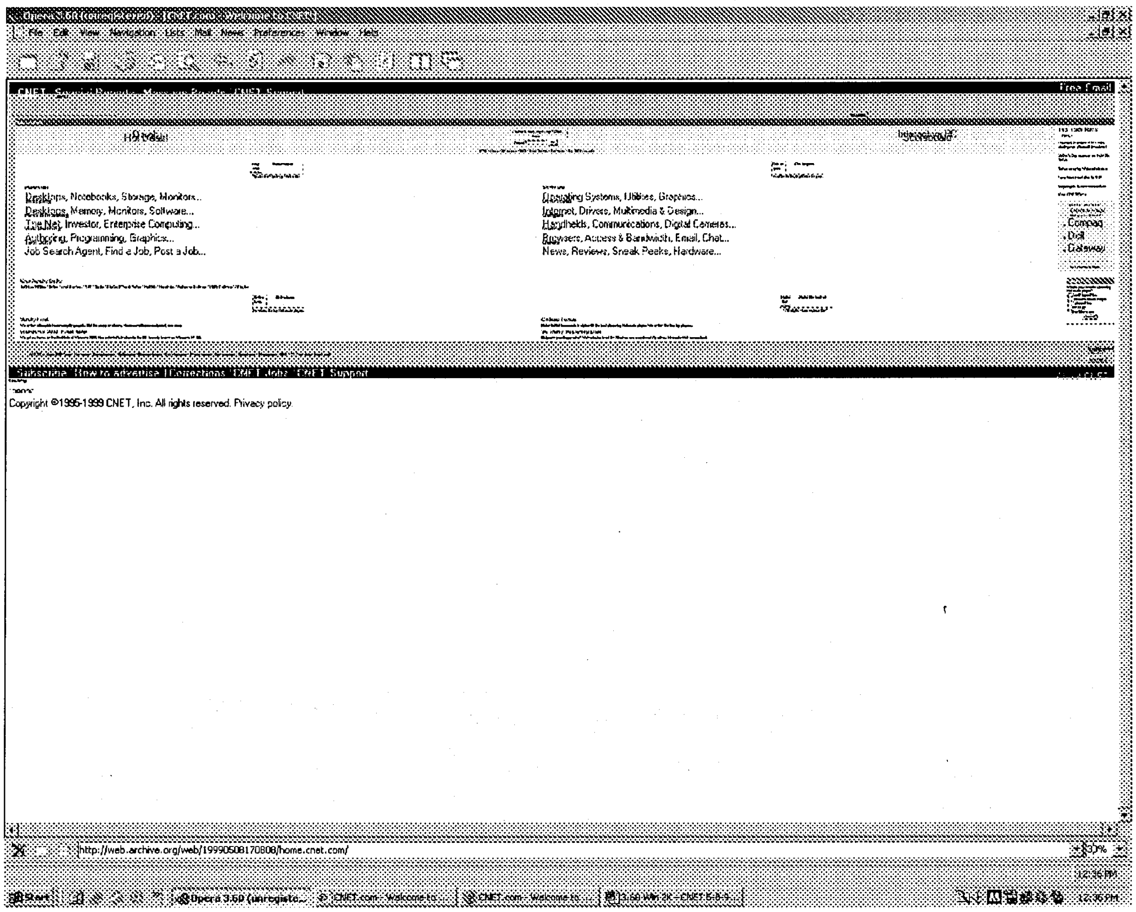
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



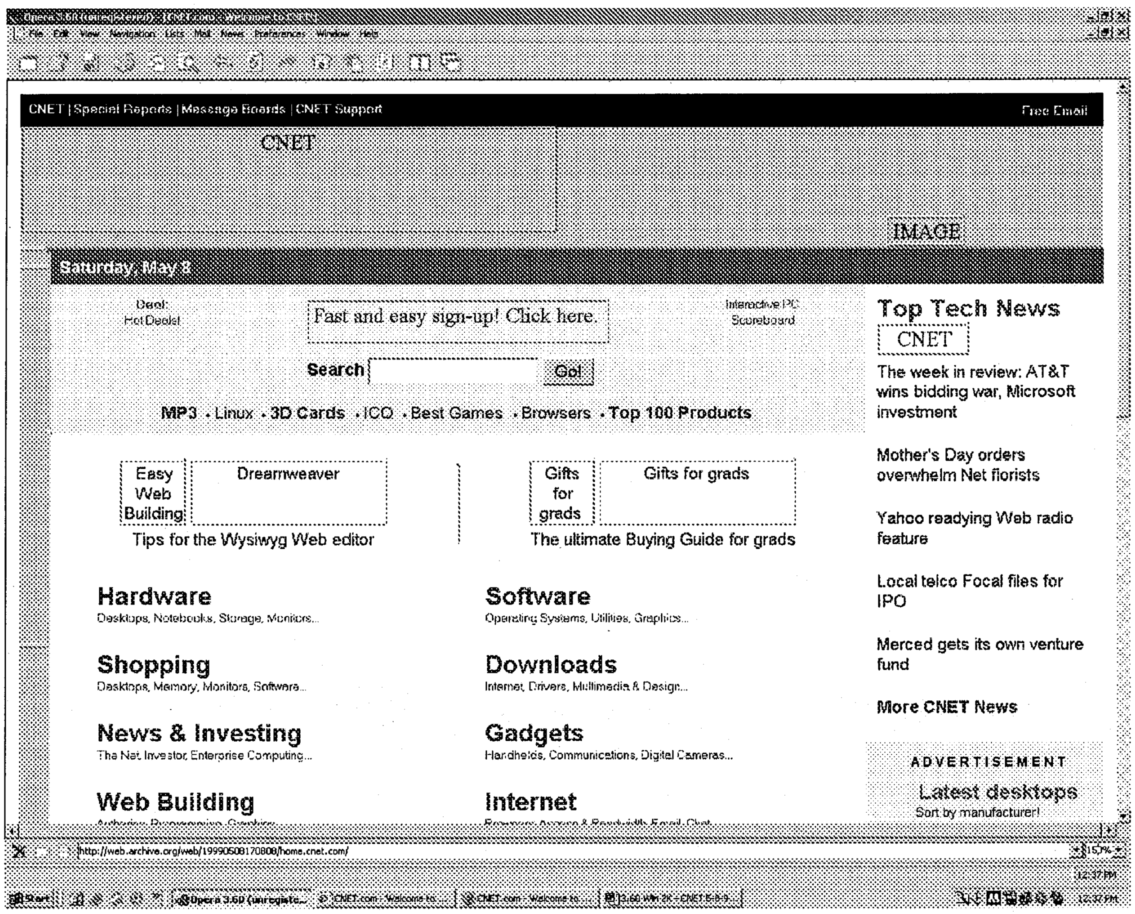
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



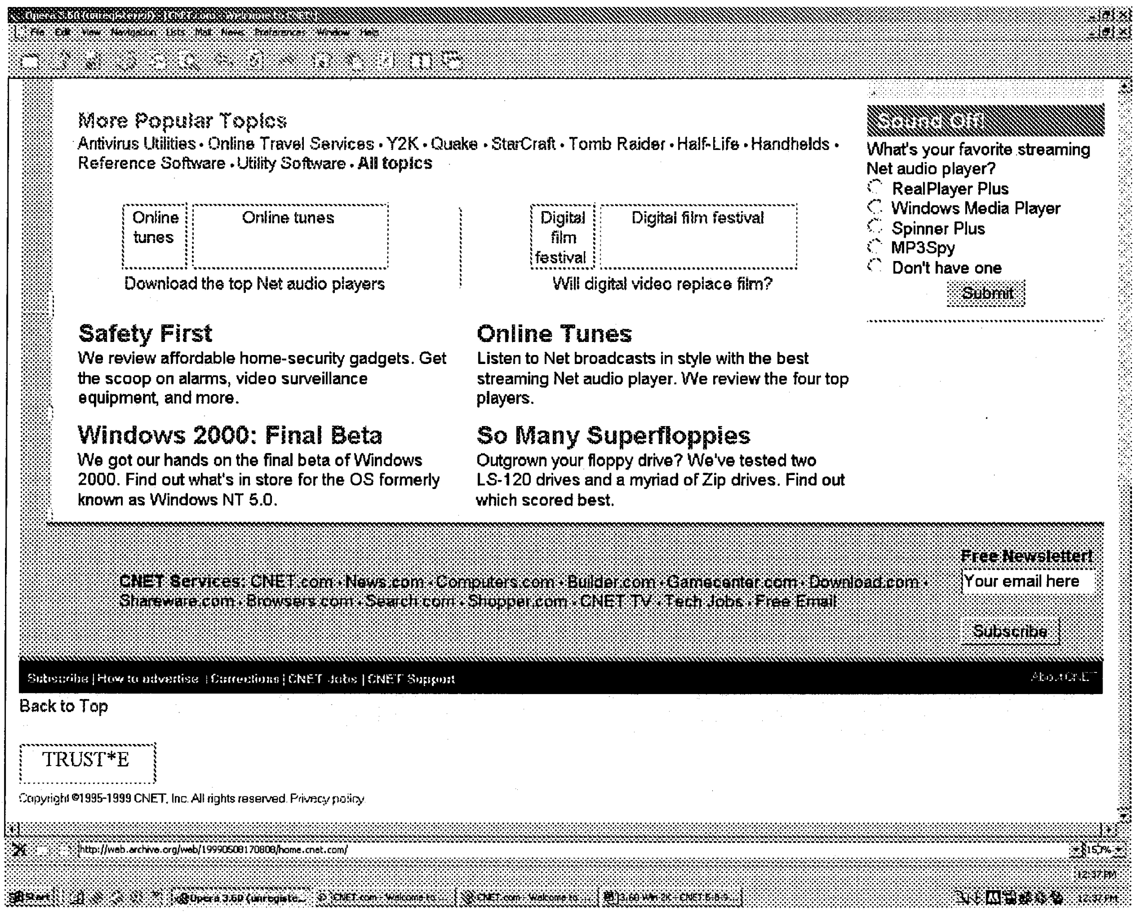
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



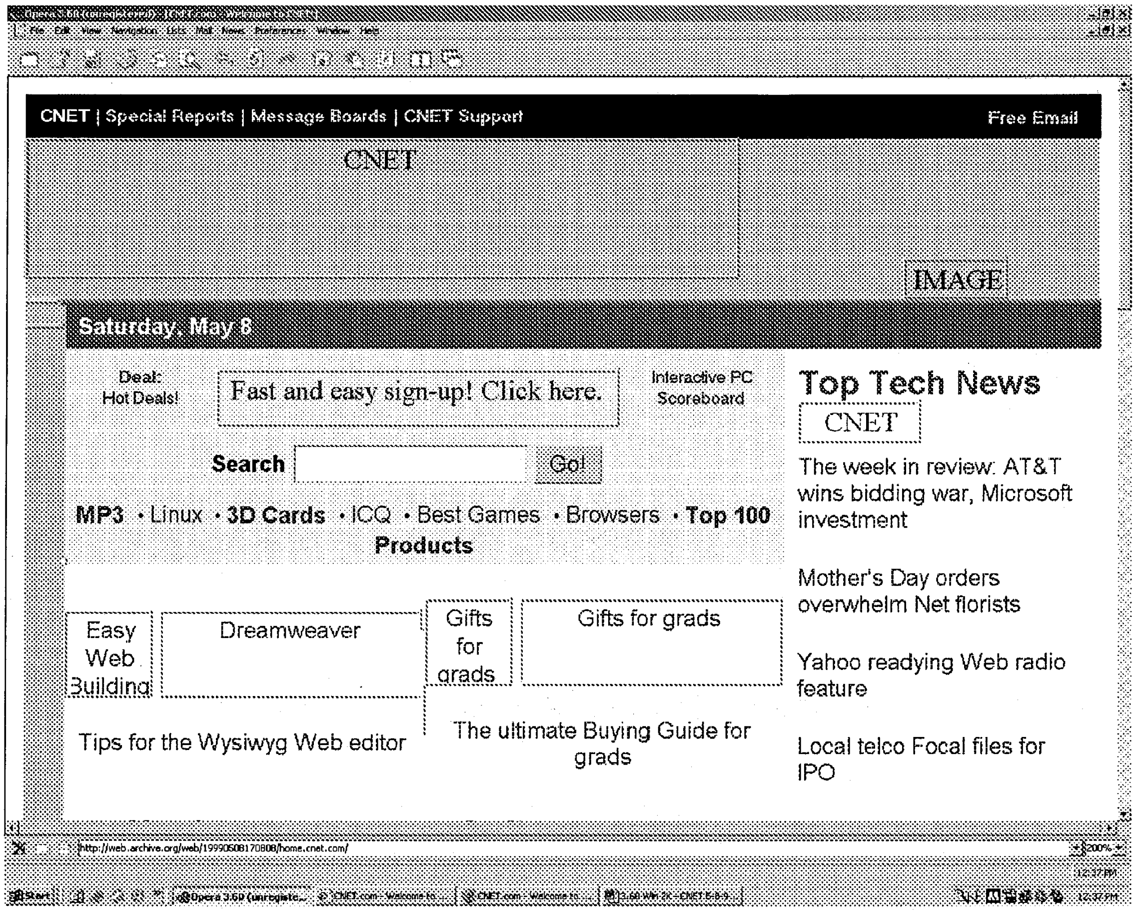
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



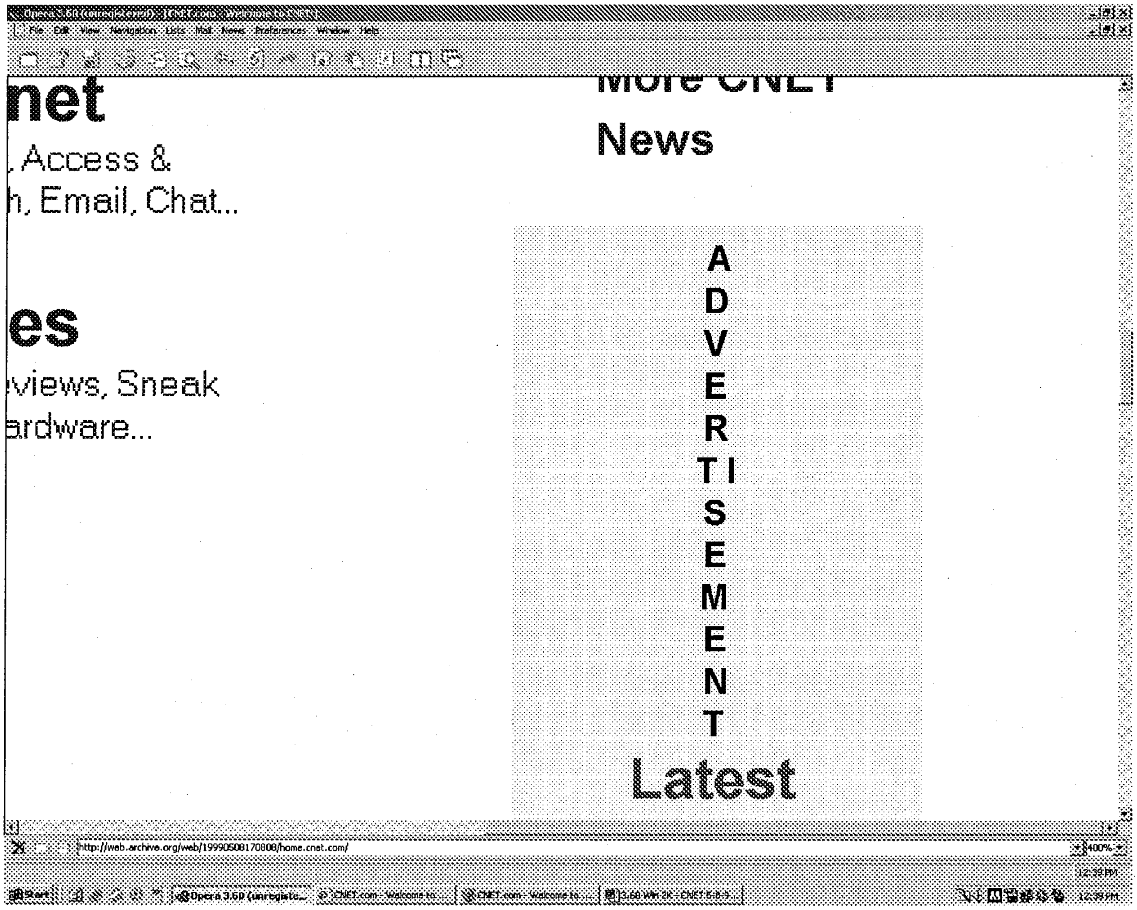
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



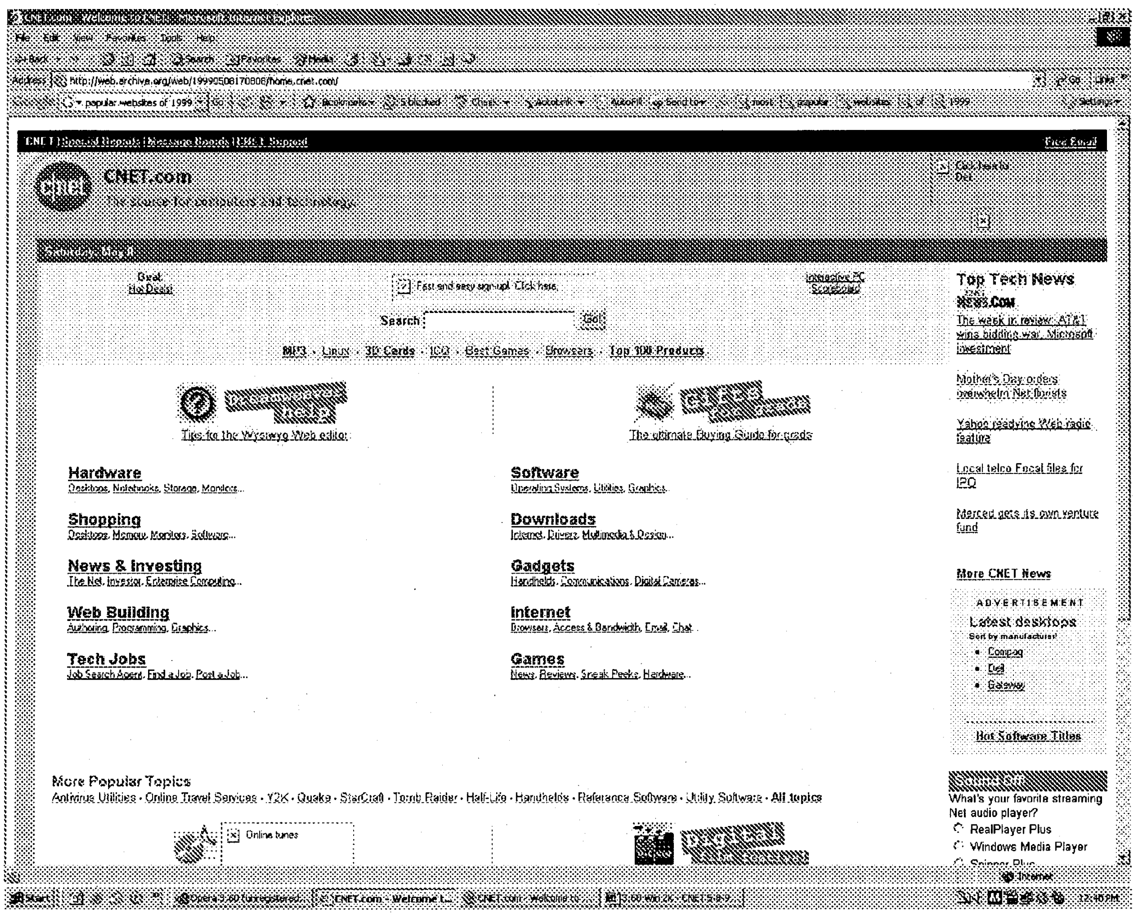
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



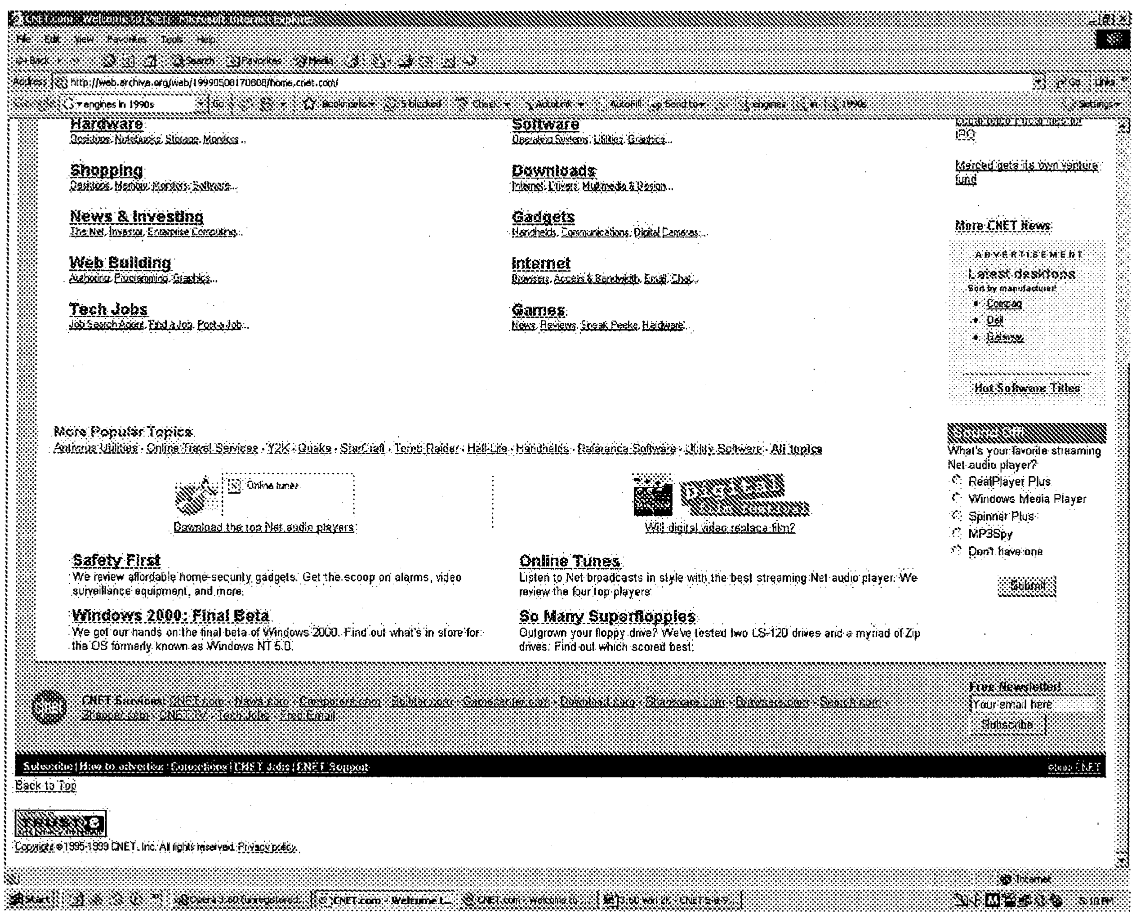
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 400%



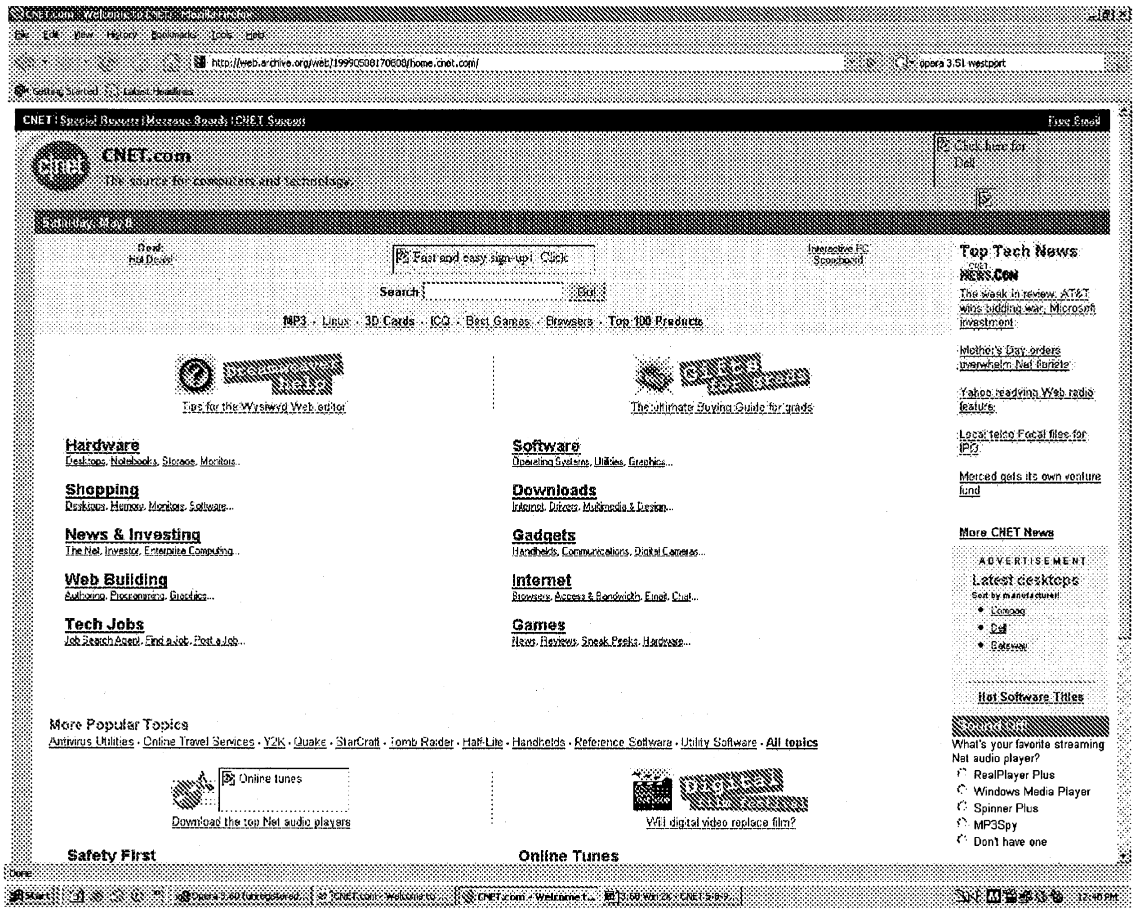
Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



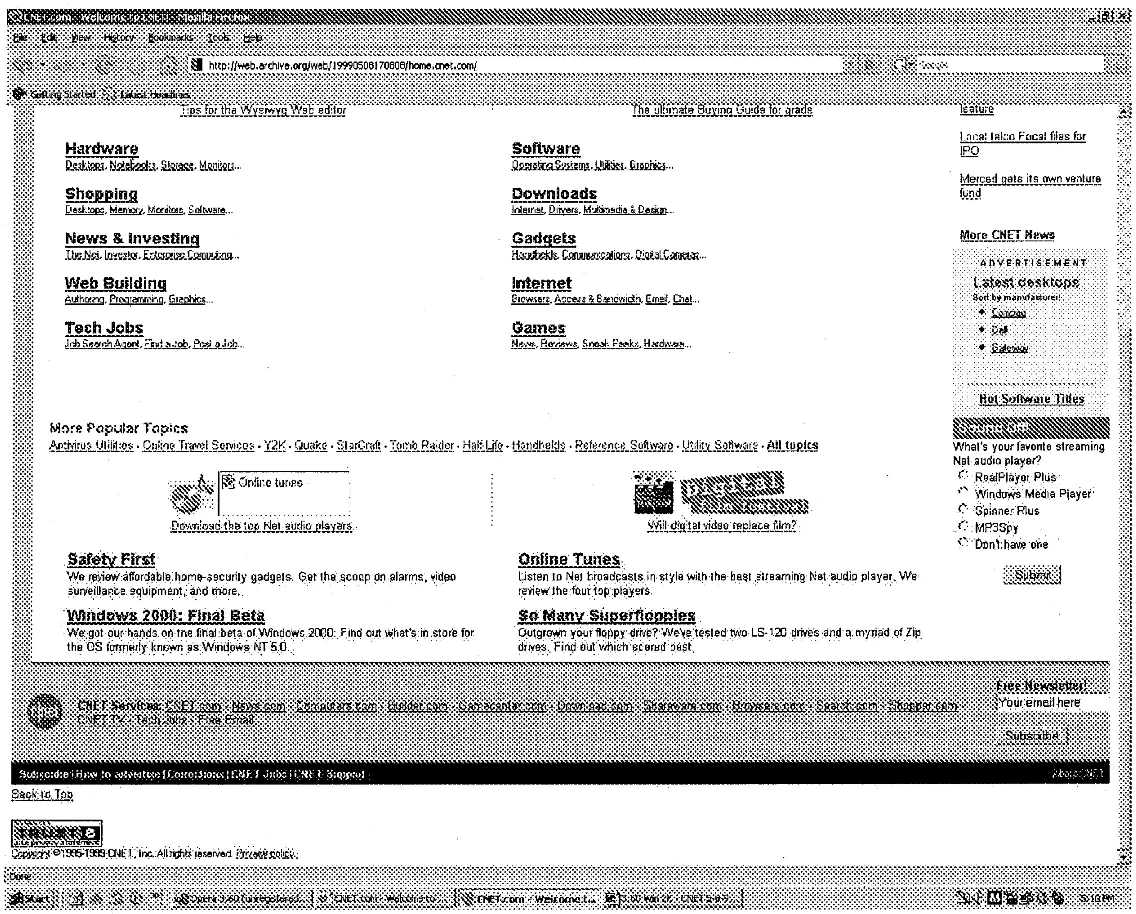
Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



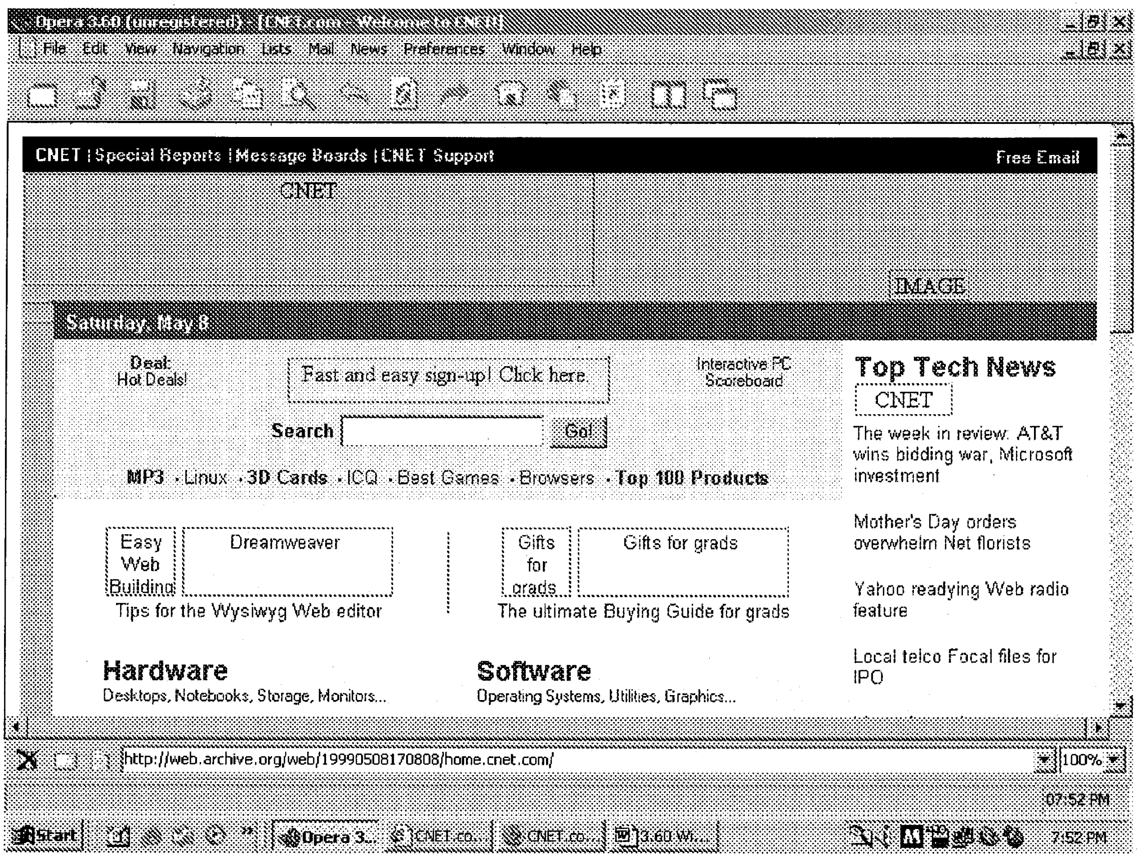
Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



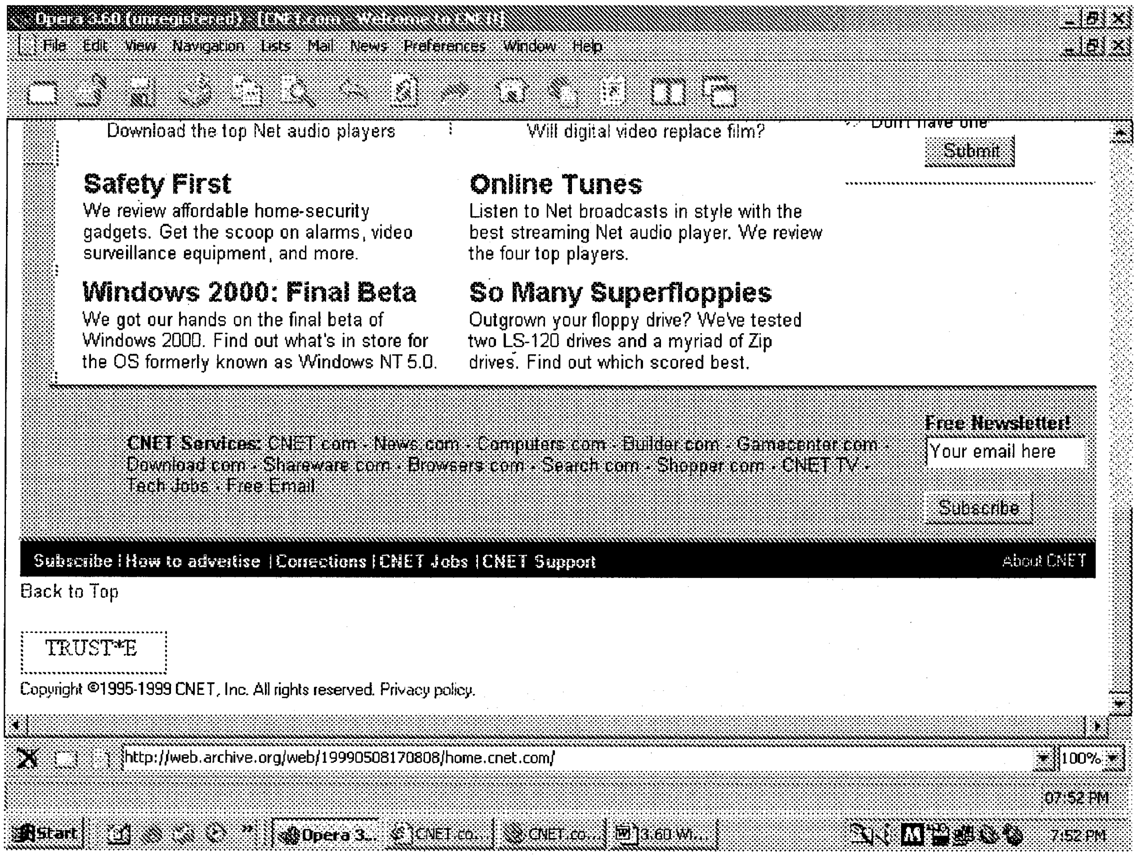
Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



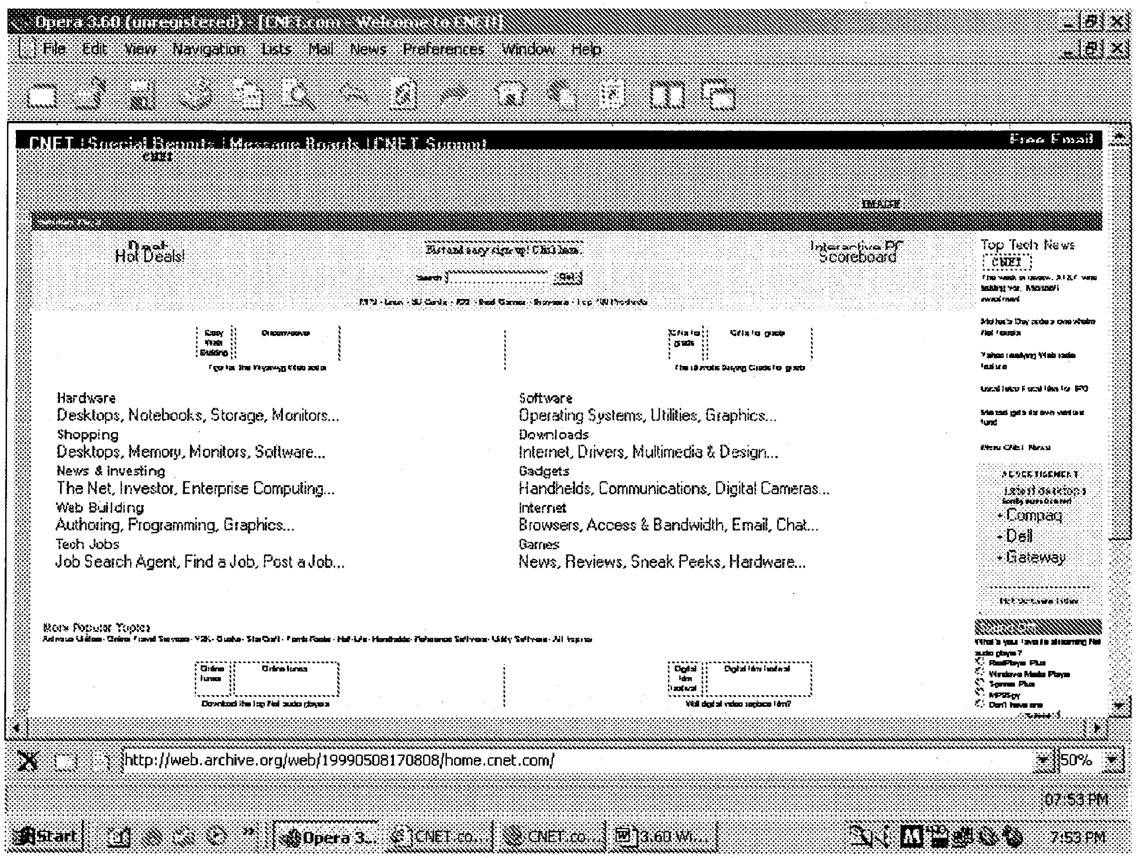
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 100%



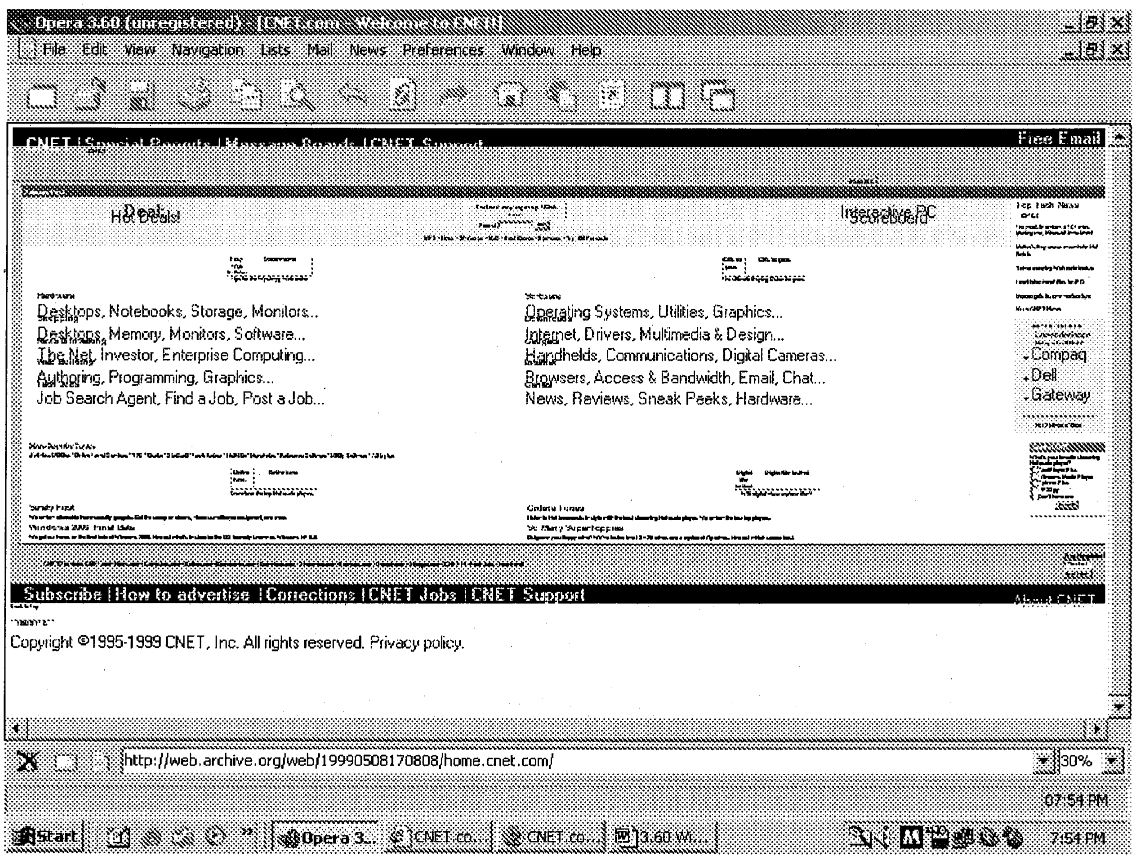
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 100%



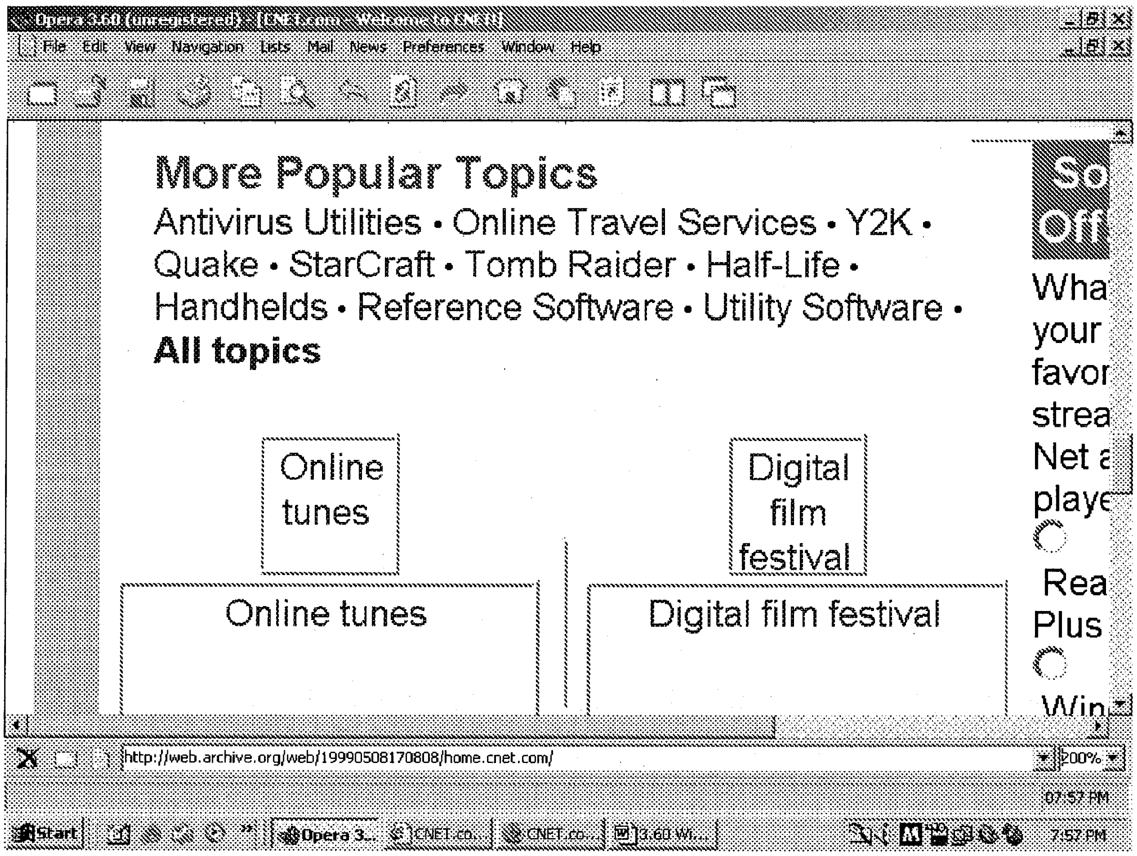
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 50%



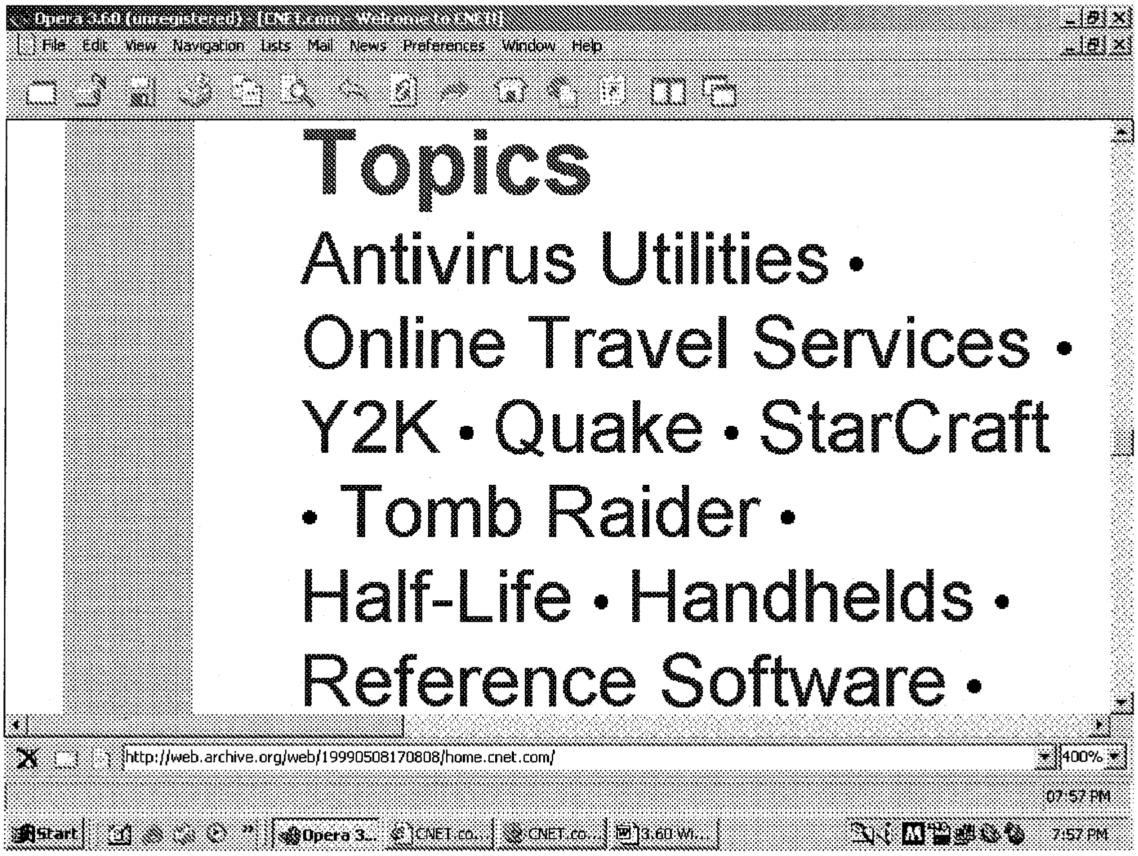
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 30%



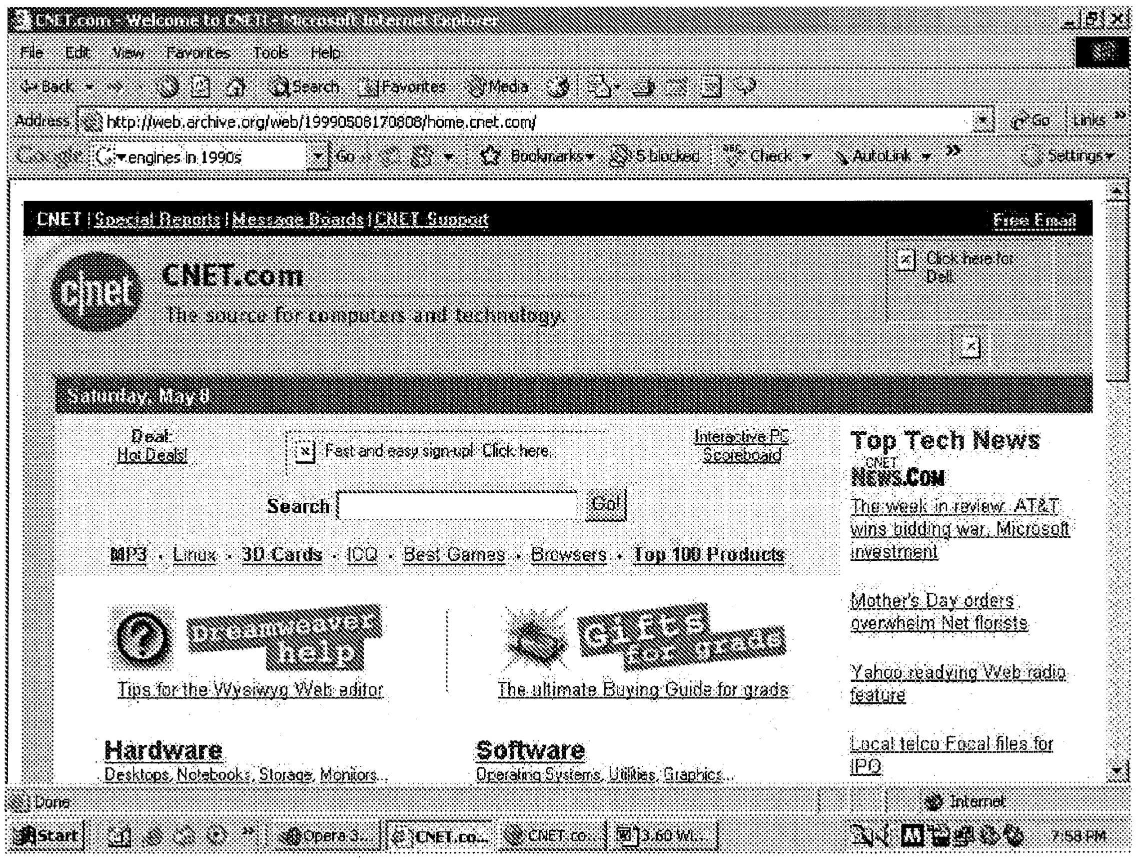
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 200%



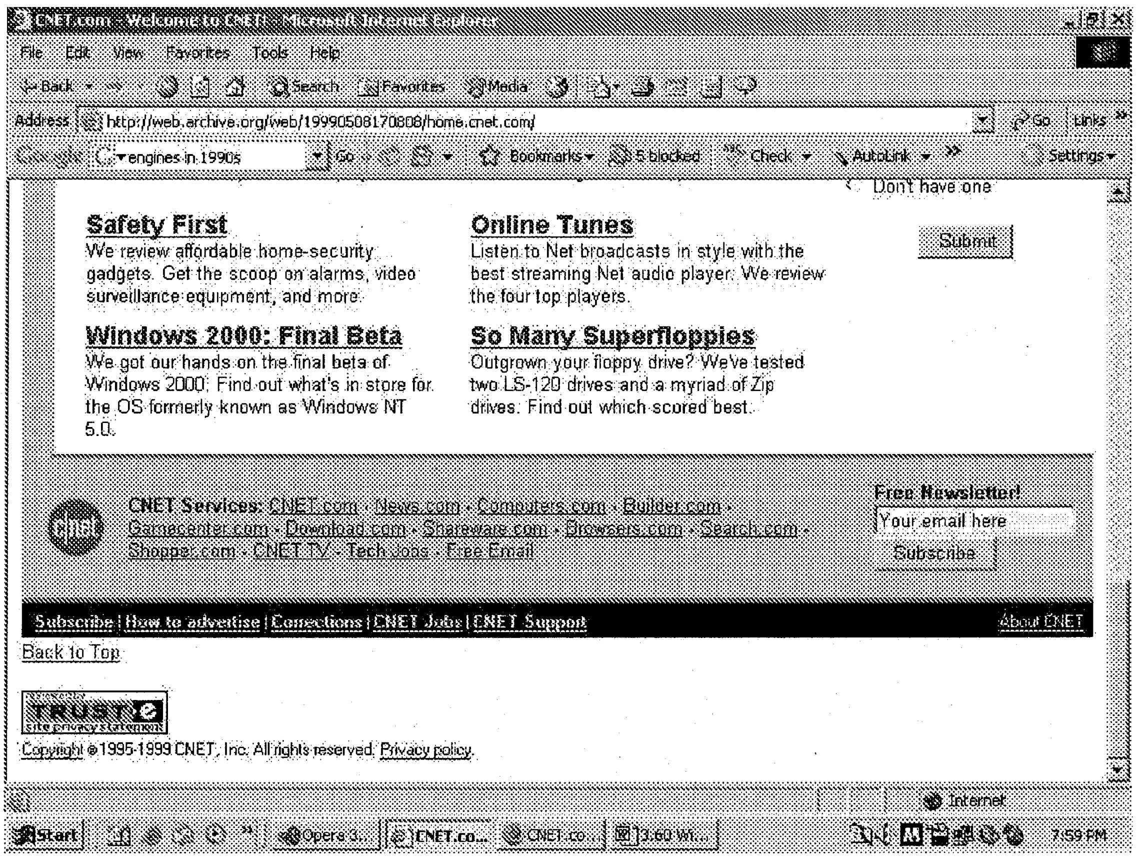
Browser: Opera 3.60
Resolution: 800 x 600
Zoom: 400%



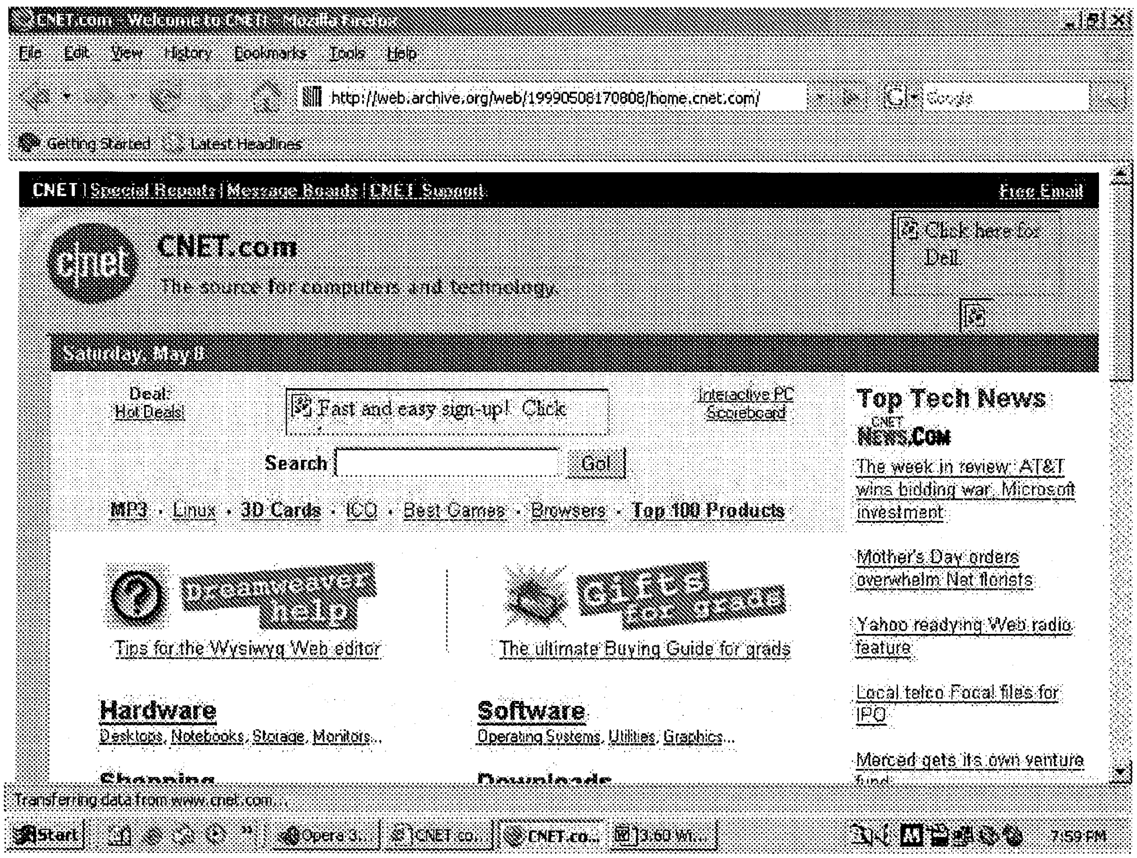
Browser: Internet Explorer 6
Resolution: 800 x 600
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



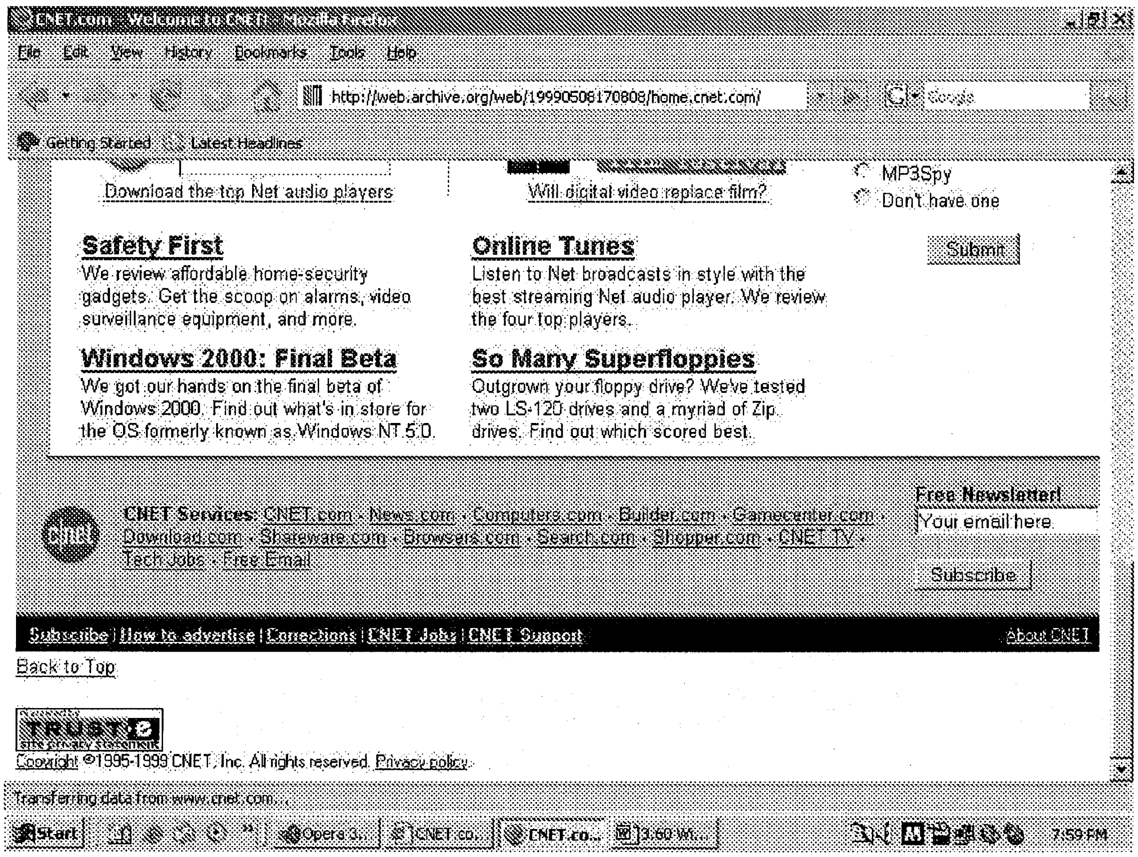
Browser: Internet Explorer 6
Resolution: 800 x 600
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 800 x 600
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 800 x 600
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



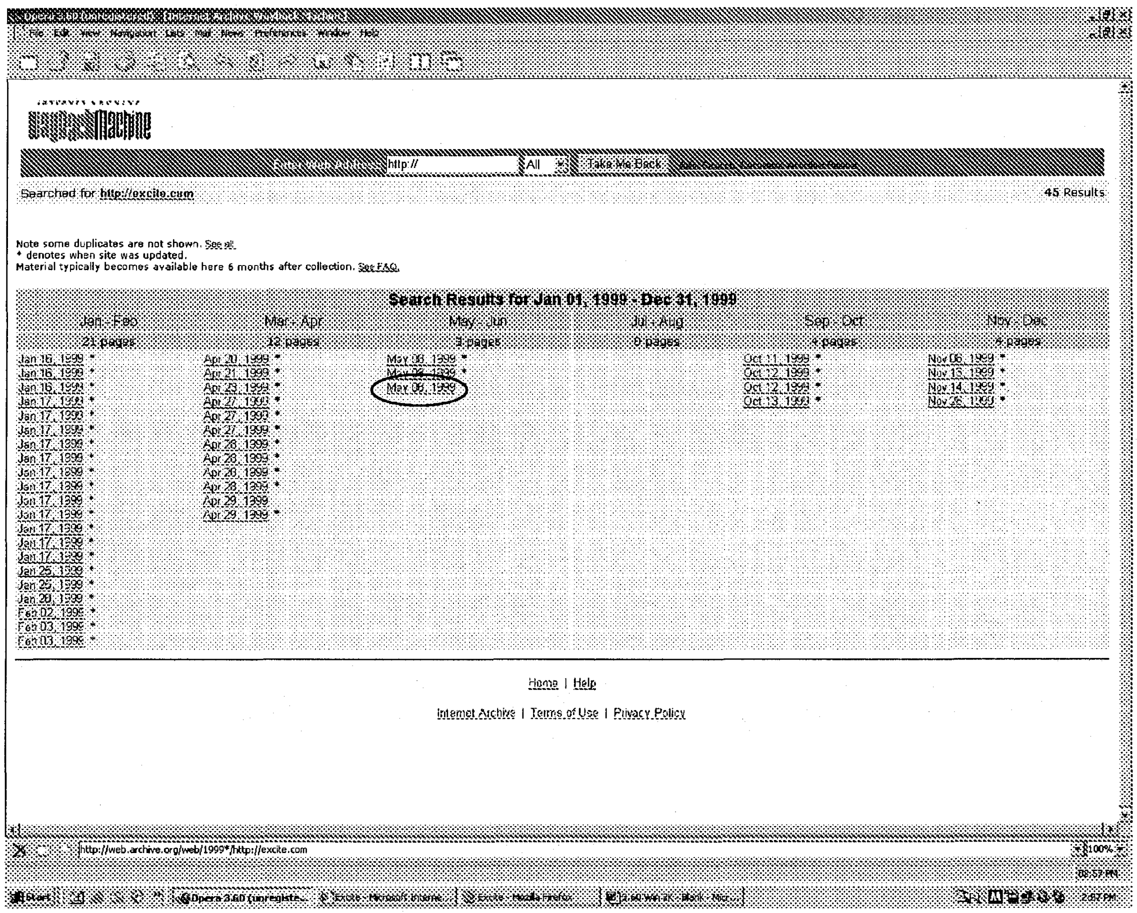
Excite.com – May 8, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990508122330/http://www00.excite.com/

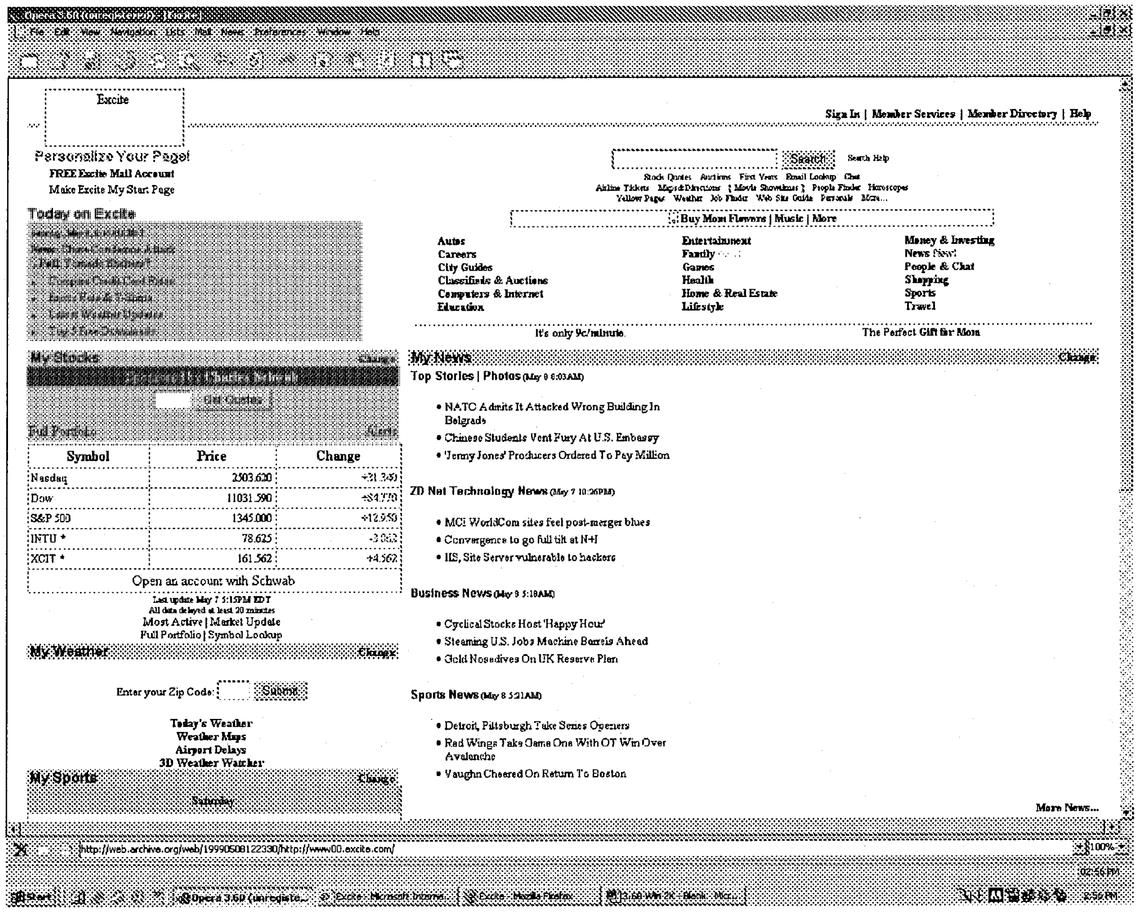
This corresponds to the www.excite.com search page on May 8, 1999, as served by the Wayback Machine Internet Archive site.[1]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional

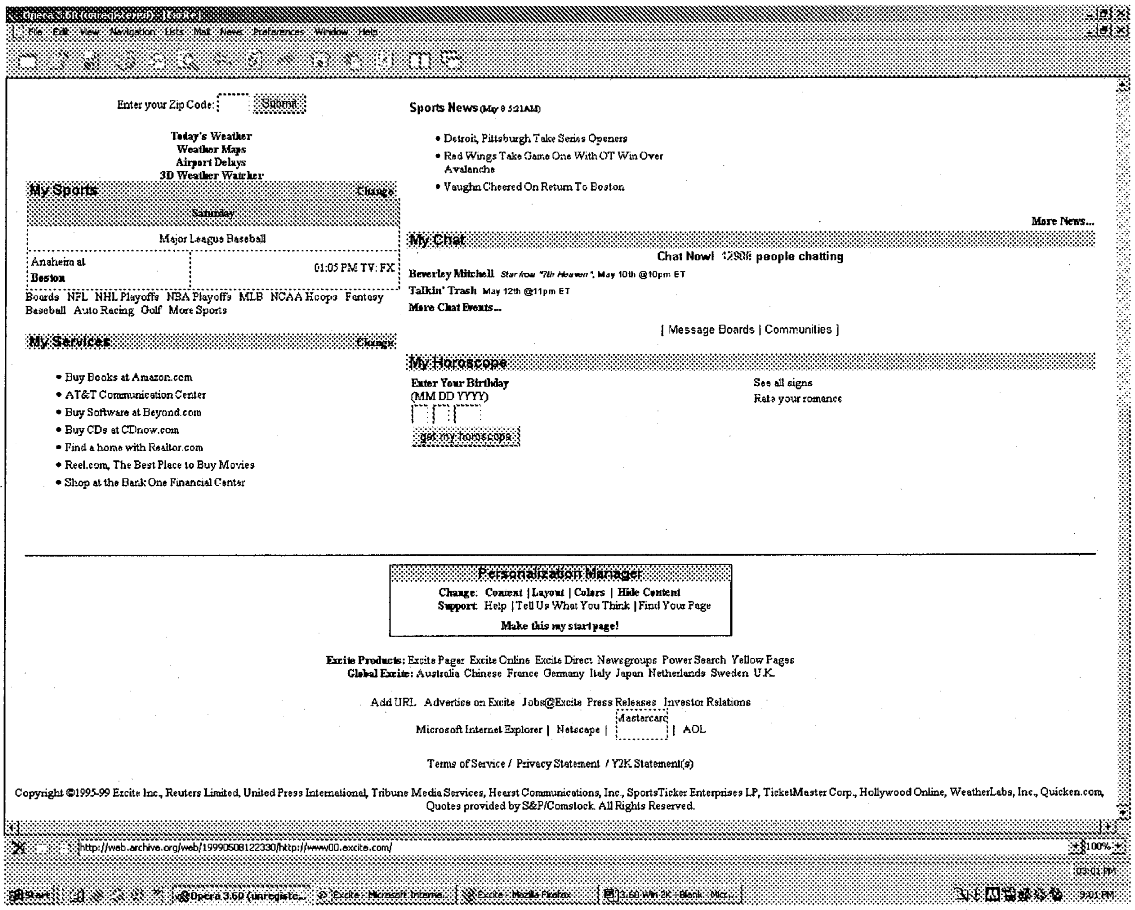


[1] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

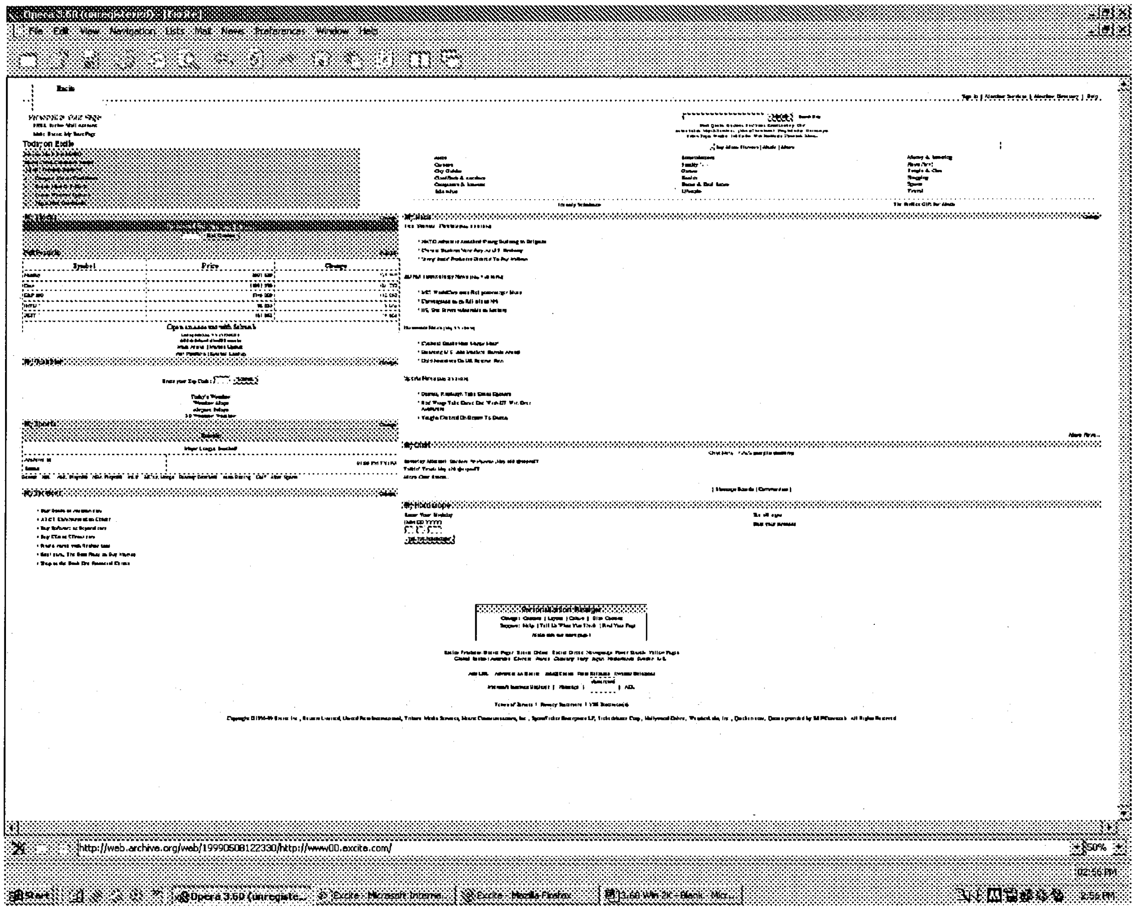
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



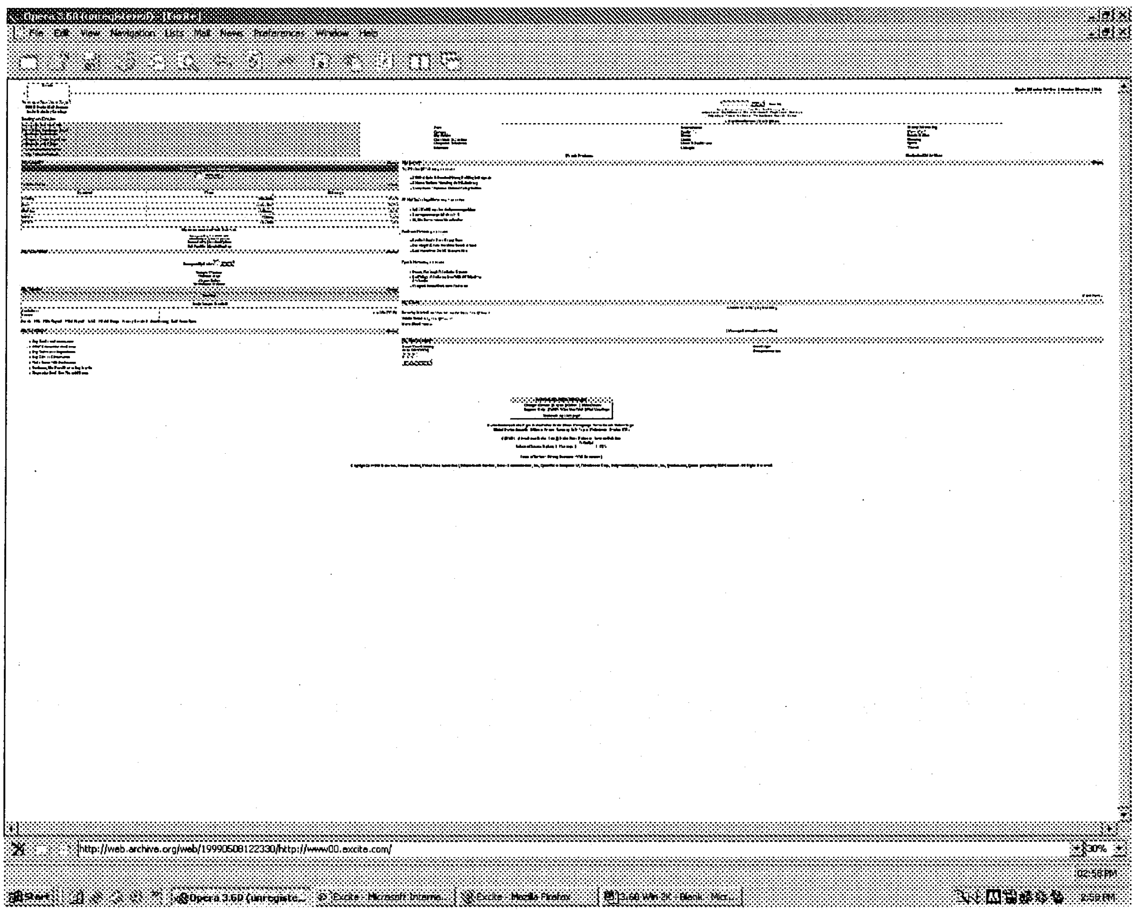
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



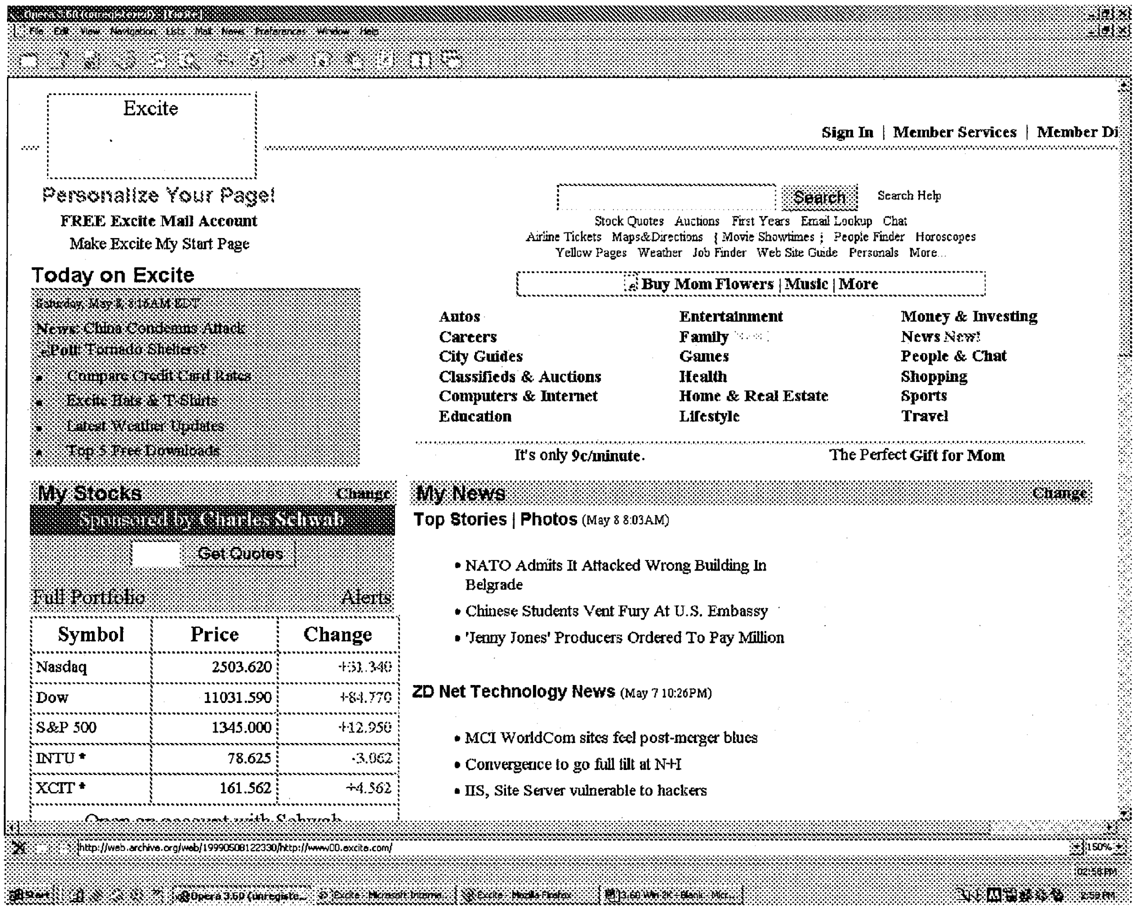
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%


Excite

Sign In | Member Services | Member Di

Personalize Your Page!
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Make Excite My Start Page

Search Search Help
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Airline Tickets Maps&Directions | Movie Showtimes | People Finder Horoscopes
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Today on Excite
Saturday, May 8, 8:16AM EDT
News: China Condemns Attack
Poll: Tornado Shelters?
- Compare Credit Card Rates
- Excite Hats & T-Shirts
- Latest Weather Updates
- Top 5 Free Downloads

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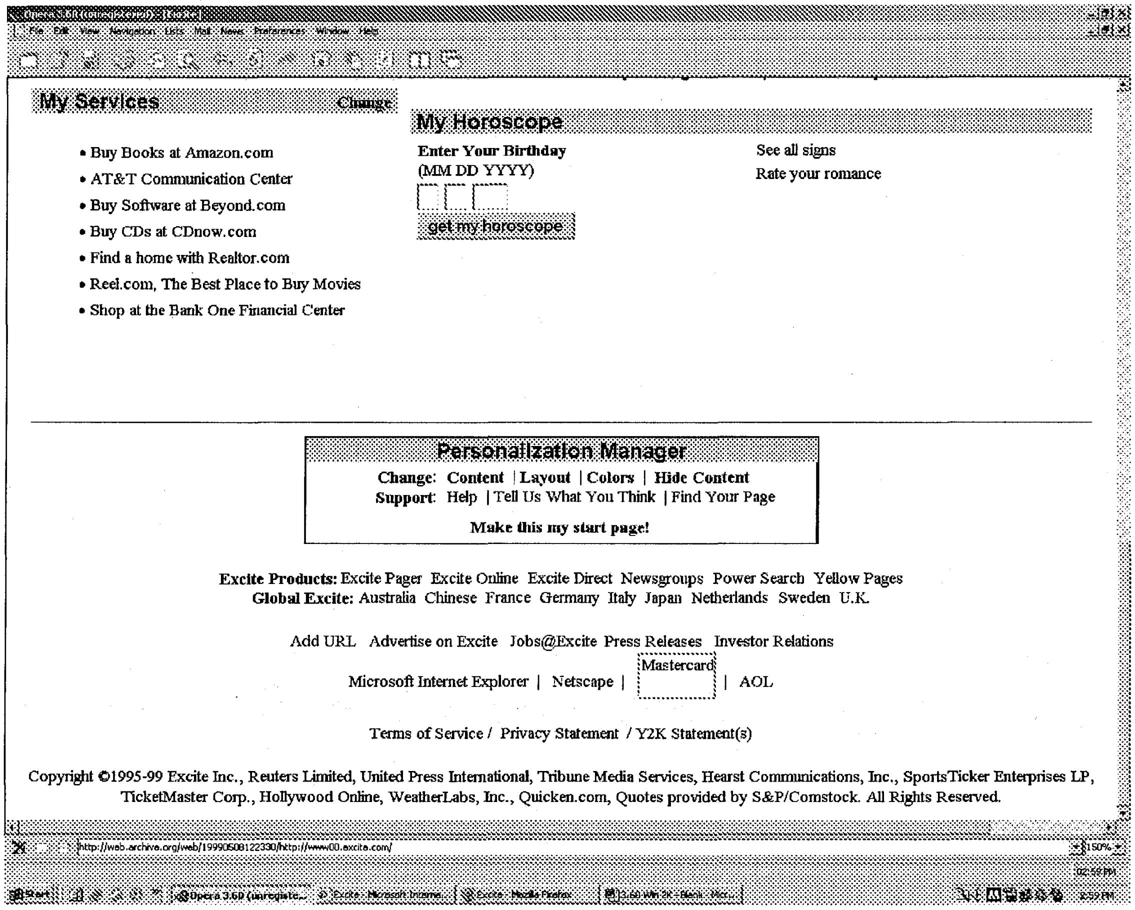
INTU *	78.625	-3.062
XCIT *	161.562	+4.562

My News Change
Top Stories | Photos (May 8 8:03AM)
- NATO Admits It Attacked Wrong Building In Belgrade
- Chinese Students Vent Fury At U.S. Embassy
- 'Jenny Jones' Producers Ordered To Pay Million

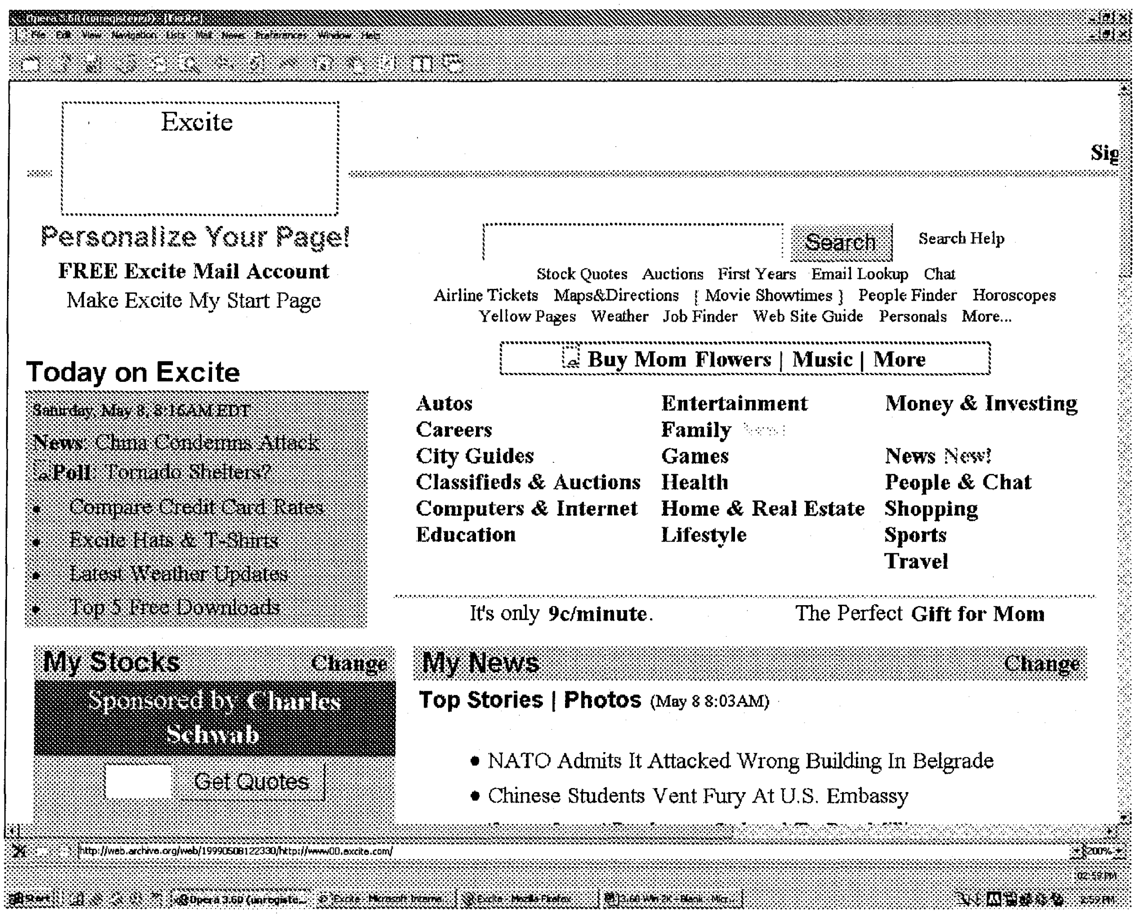
ZD Net Technology News (May 7 10:26PM)
- MCI WorldCom sites feel post-merger blues
- Convergence to go full tilt at N+I
- IIS, Site Server vulnerable to hackers

http://web.archive.org/web/19990508122330/http://www00.excite.com/

Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%

- Shop at the Bank One Financial Center

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Change: **Content** | **Layout** | **Colors** | **Hide Content**
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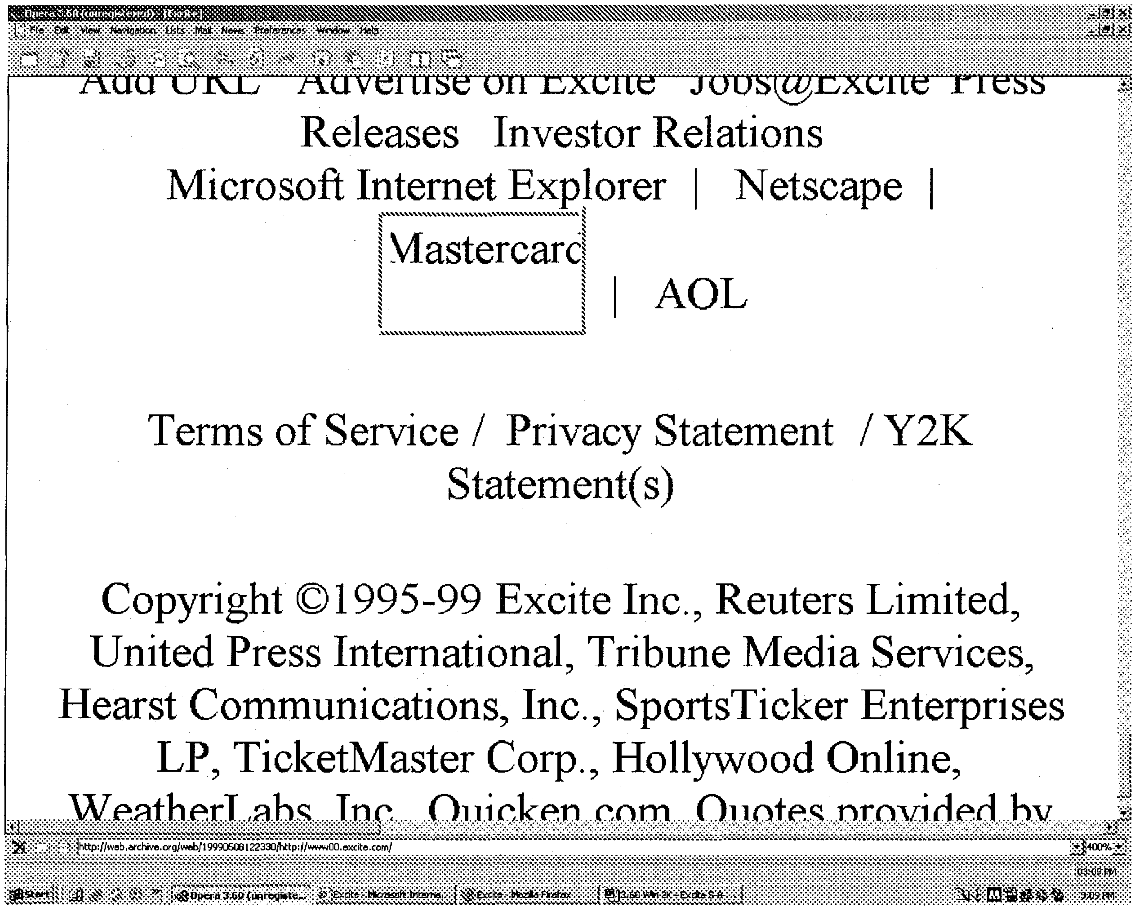
http://web.archive.org/web/19990508122330/http://www00.excite.com/

Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 400%



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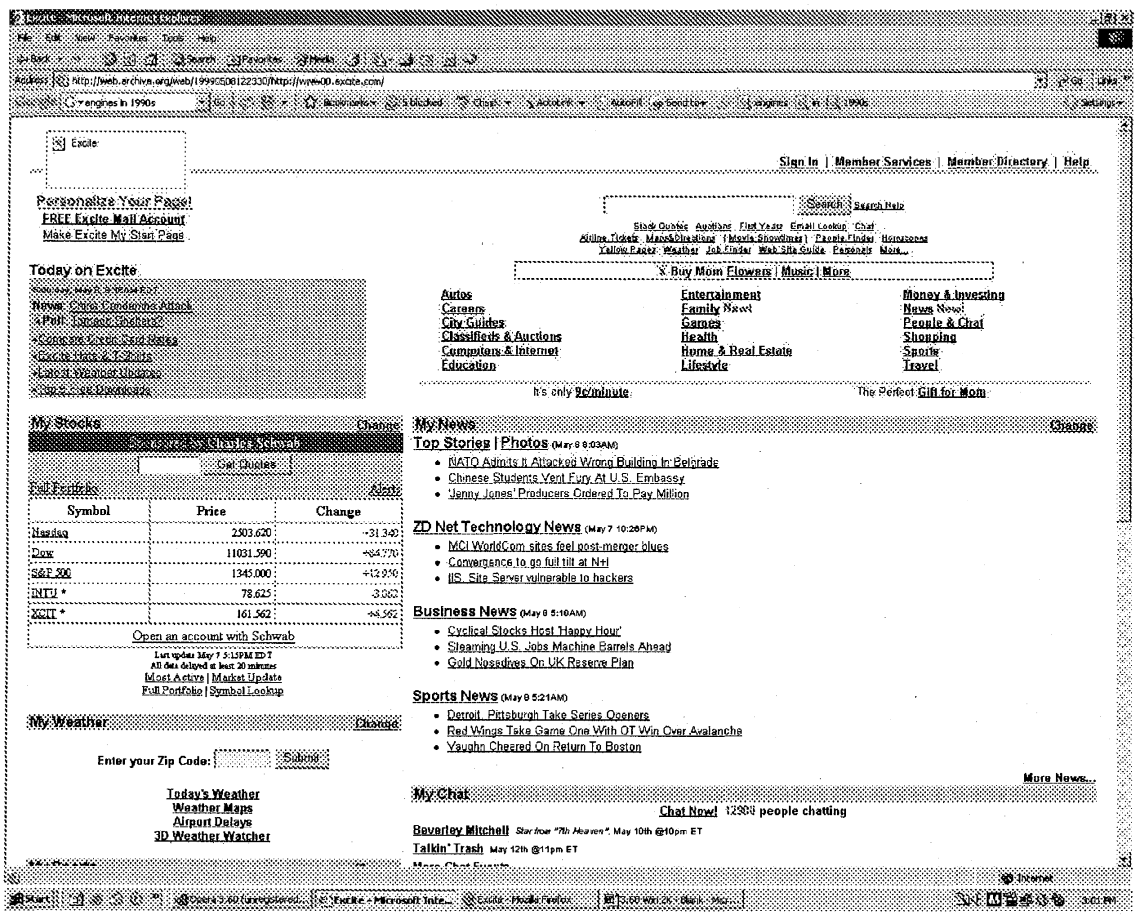
http://web.archive.org/web/19990508122330/http://www00.excite.com/

Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
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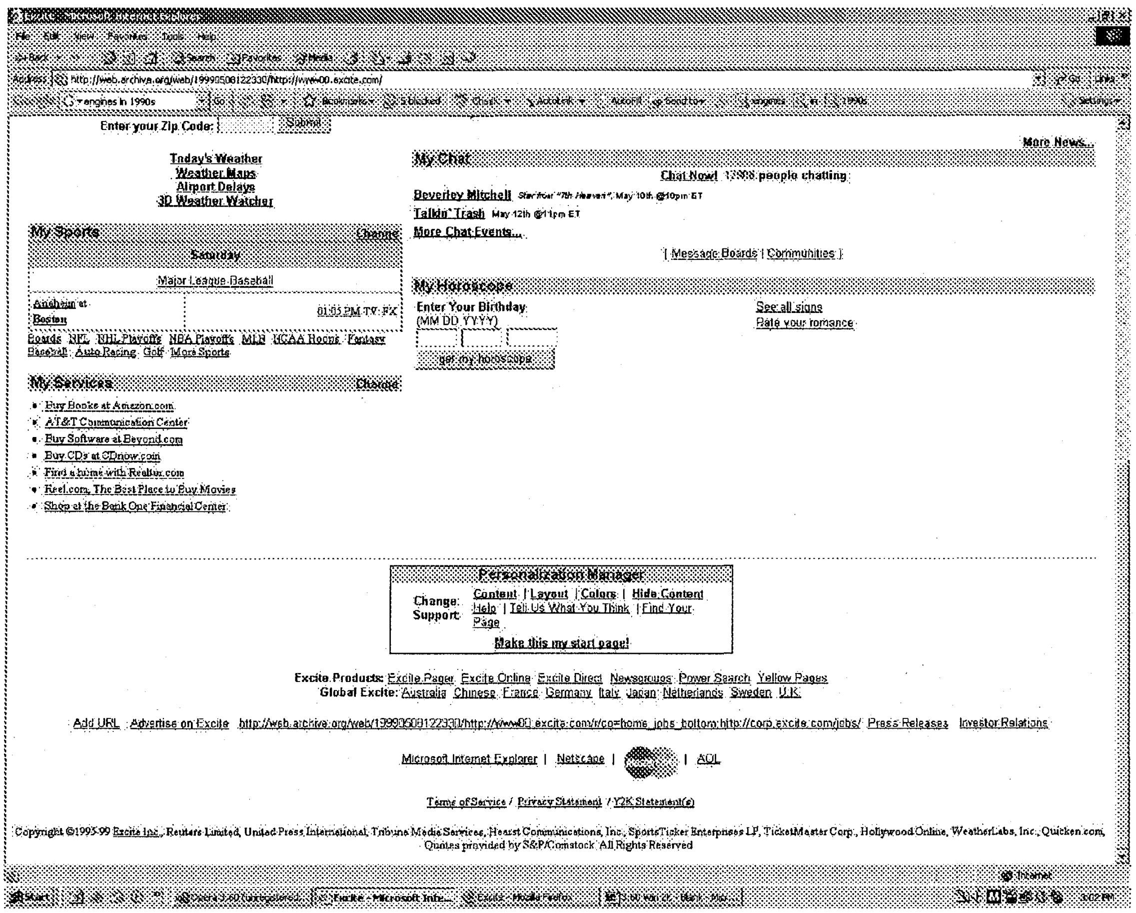

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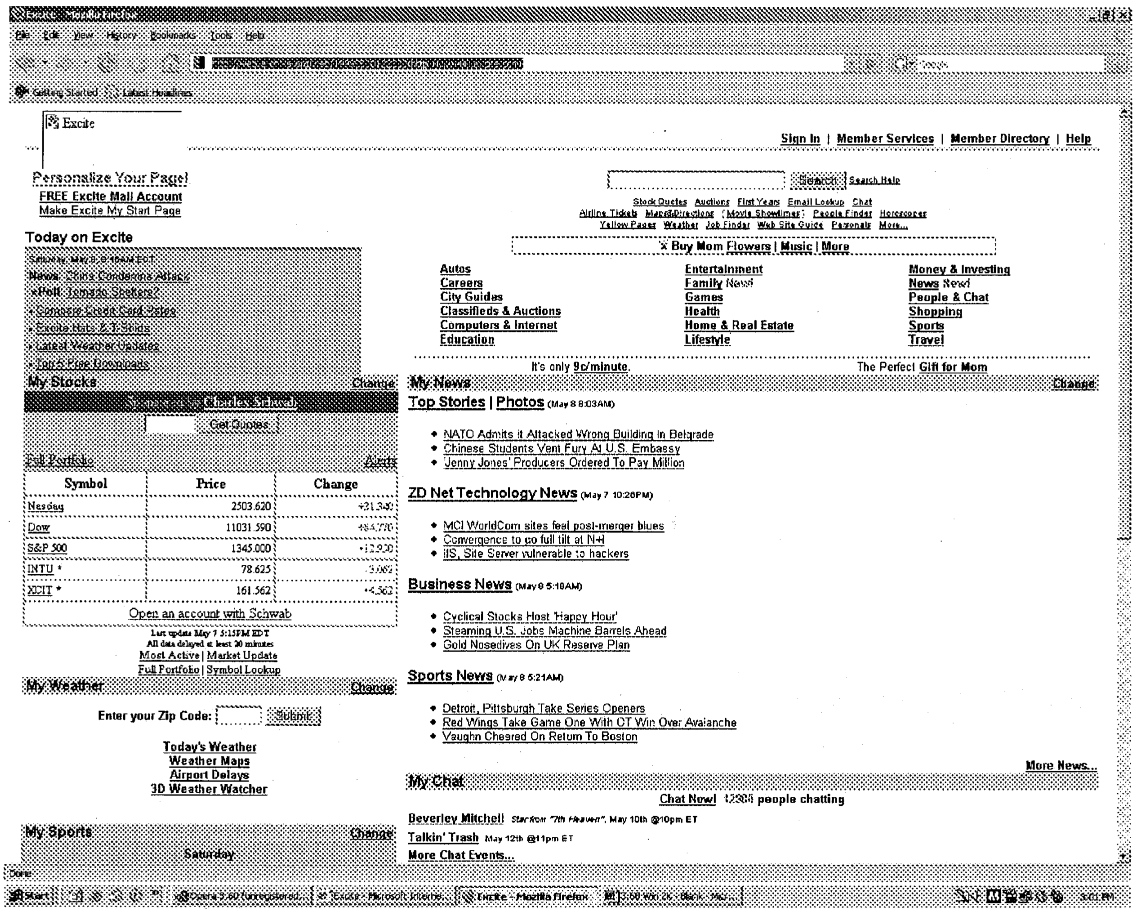

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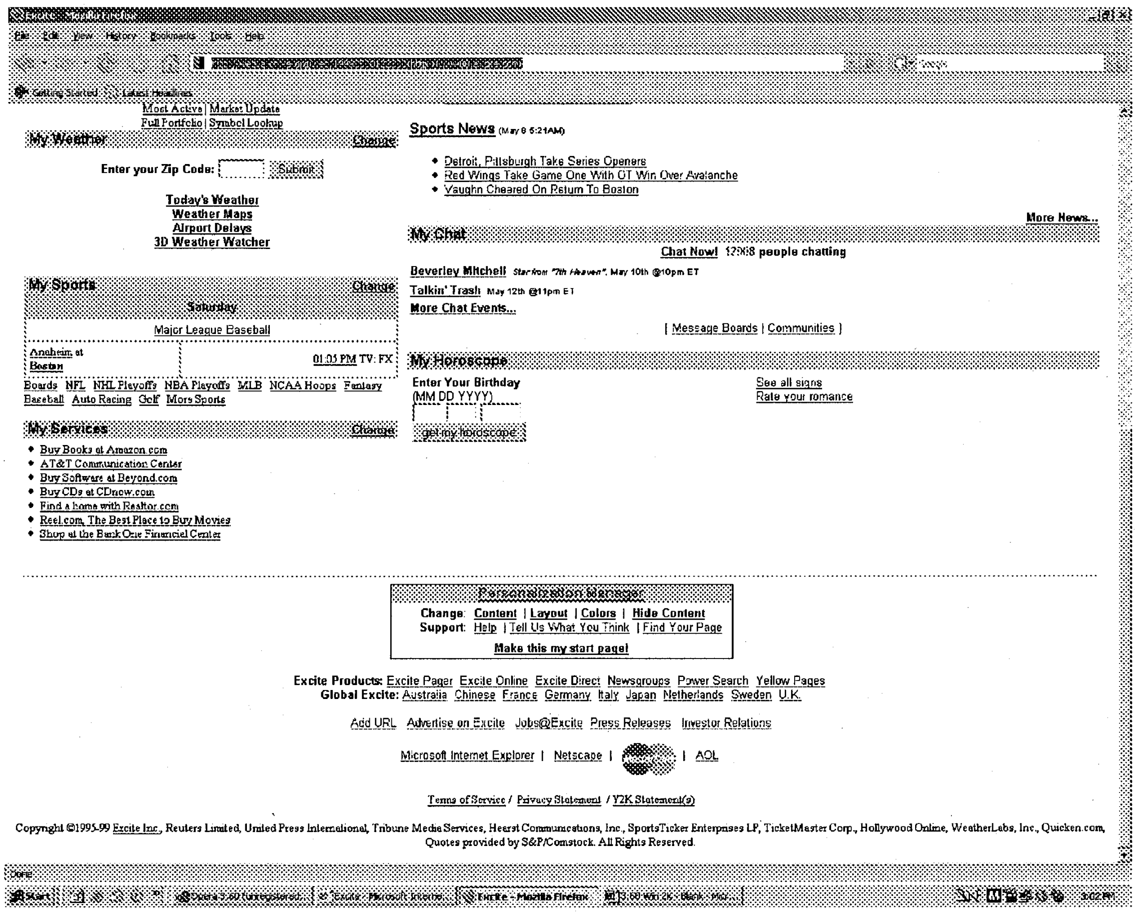


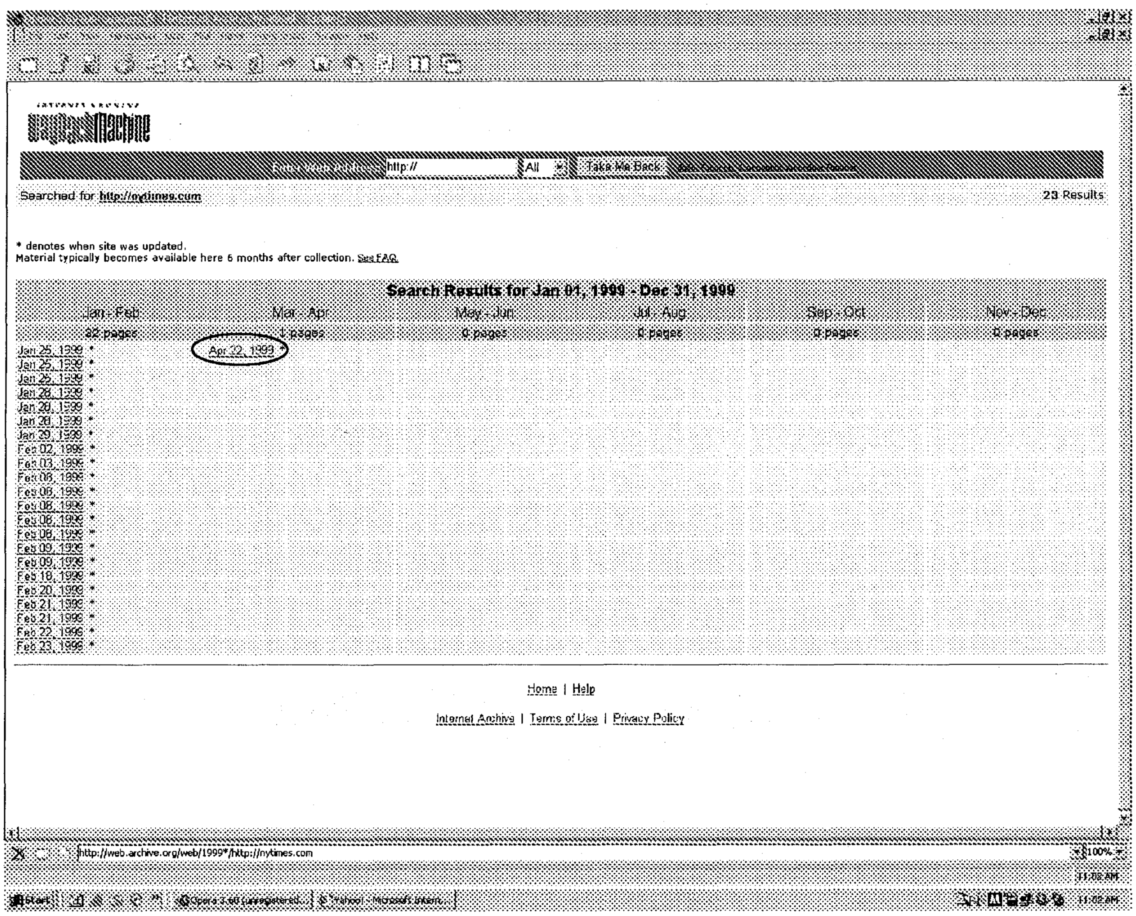
NYTimes.com – April 22, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990422141514/http://www4.nytimes.com/

This corresponds to the www.nytimes.com home page on April 22, 1999, as served by the Wayback Machine Internet Archive site.[1]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional



[1] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

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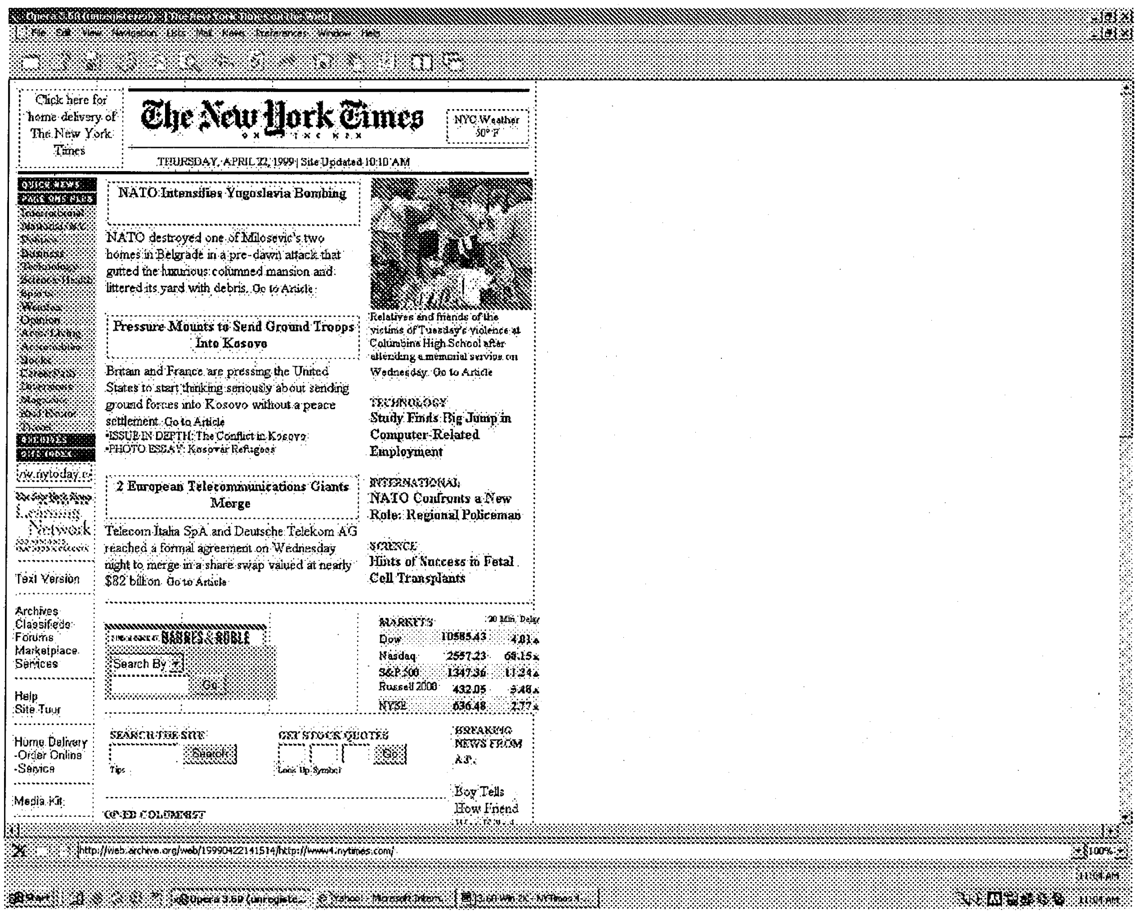
Zoom: 100%



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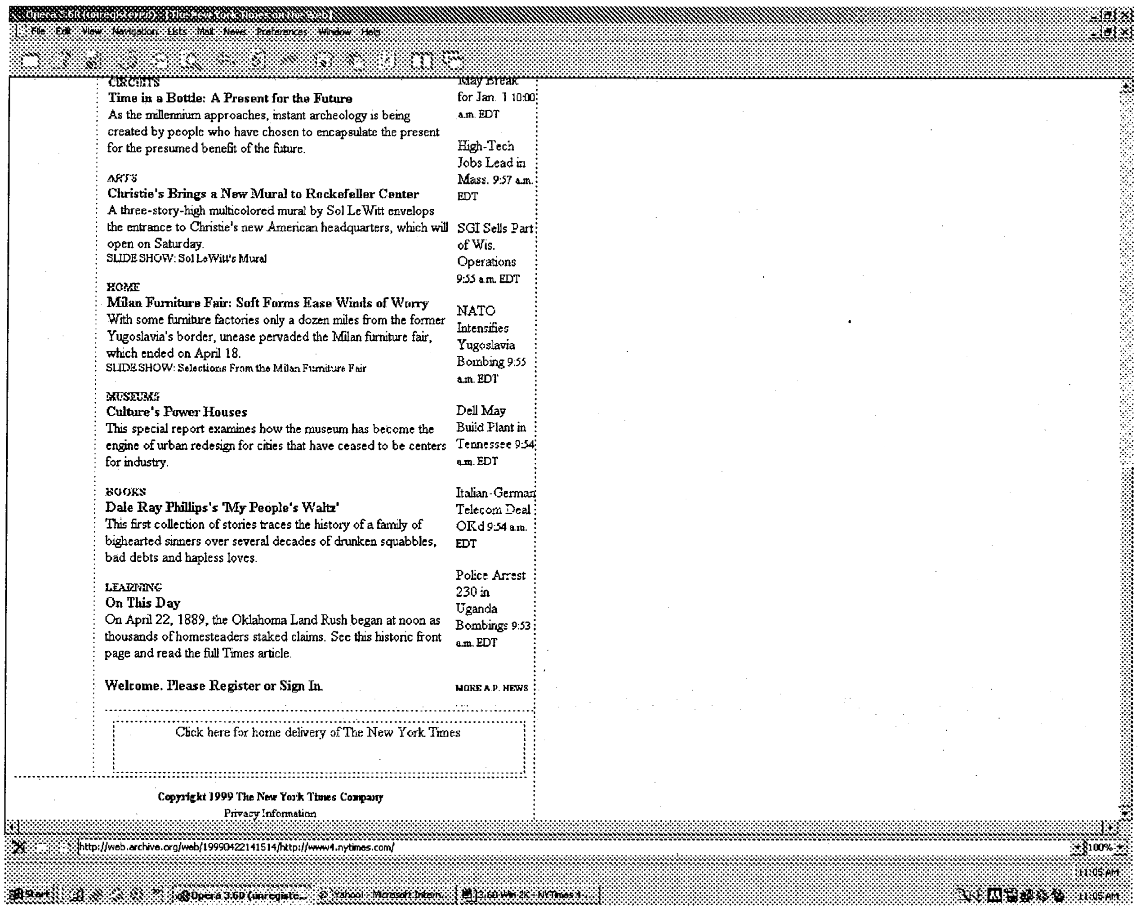

CIRCUITS
Time in a Bottle: A Present for the Future
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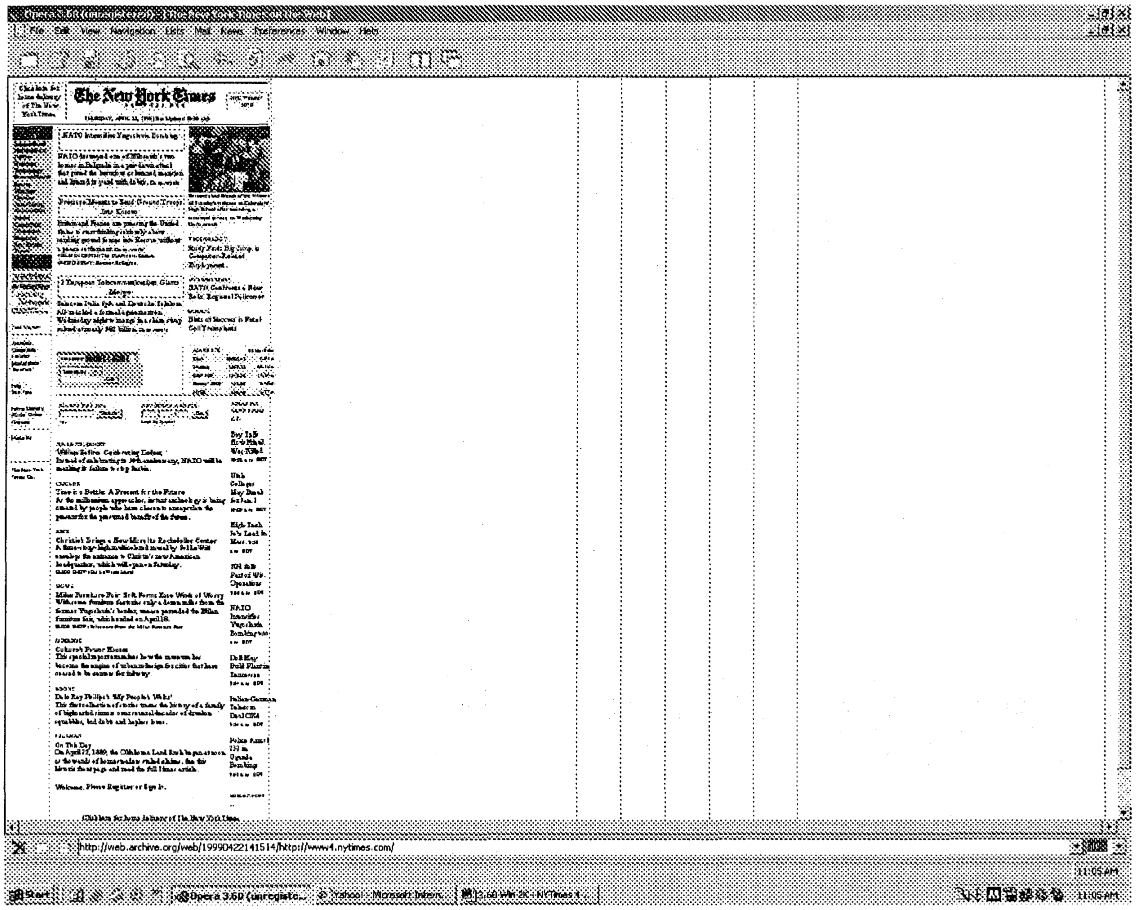

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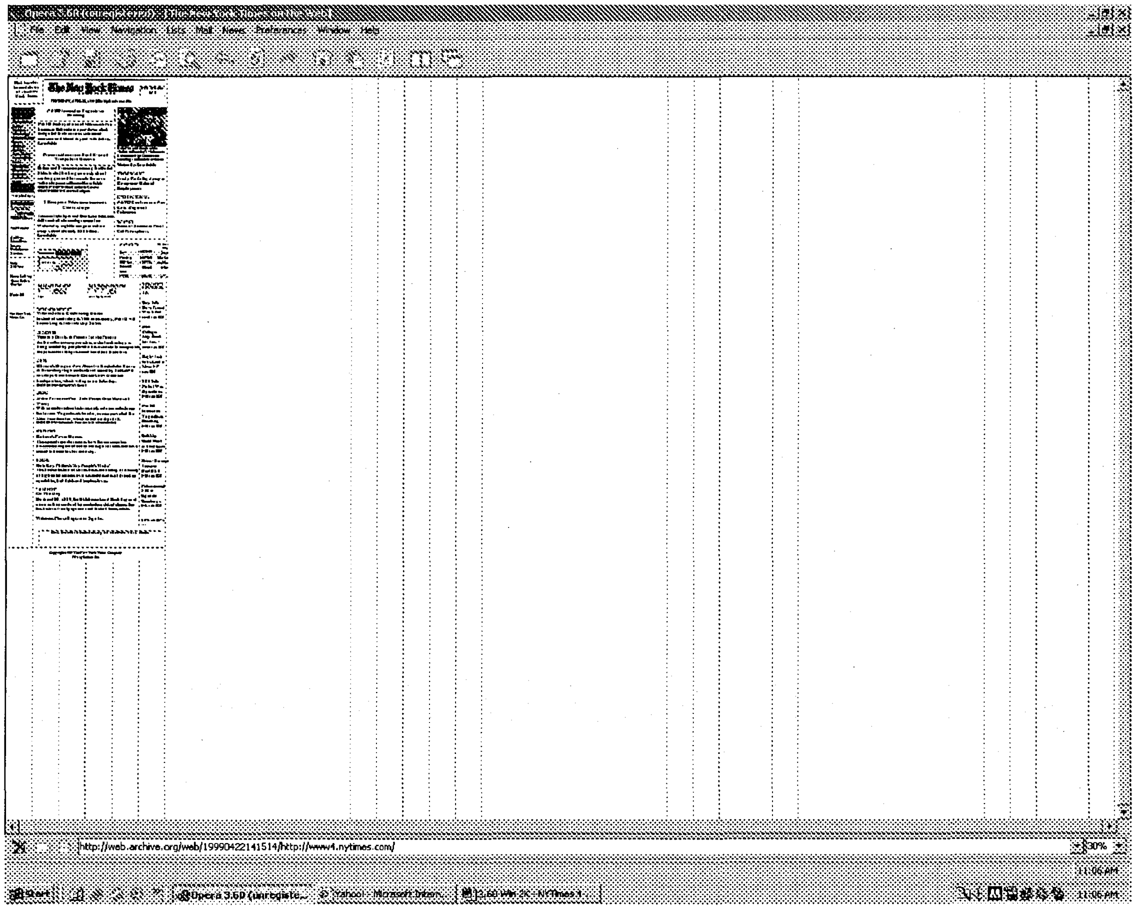

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NATO Intensifies Yugoslavia Bombing

NATO destroyed one of Milosevic's two homes in Belgrade in a pre-dawn attack that gutted the luxurious columned mansion and littered its yard with debris. Go to Article

Pressure Mounts to Send Ground Troops Into Kosovo

Britain and France are pressing the United States to start thinking seriously about sending ground forces into Kosovo without a peace settlement. Go to Article

•ISSUE IN DEPTH: The Conflict in Kosovo
•PHOTO ESSAY: Kosovar Refugees

2 European Telecommunications Giants Merge

Telecom Italia SpA and Deutsche Telekom AG reached a formal agreement on Wednesday night to merge in a share swap

Relatives and friends of the victims of Tuesday's violence at Columbine High School after attending a memorial service on Wednesday. Go to Article

TECHNOLOGY
Study Finds Big Jump in Computer-Related Employment

INTERNATIONAL
NATO Confronts a New Role: Regional Policeman

SCIENCE
Hints of Success in Fetal

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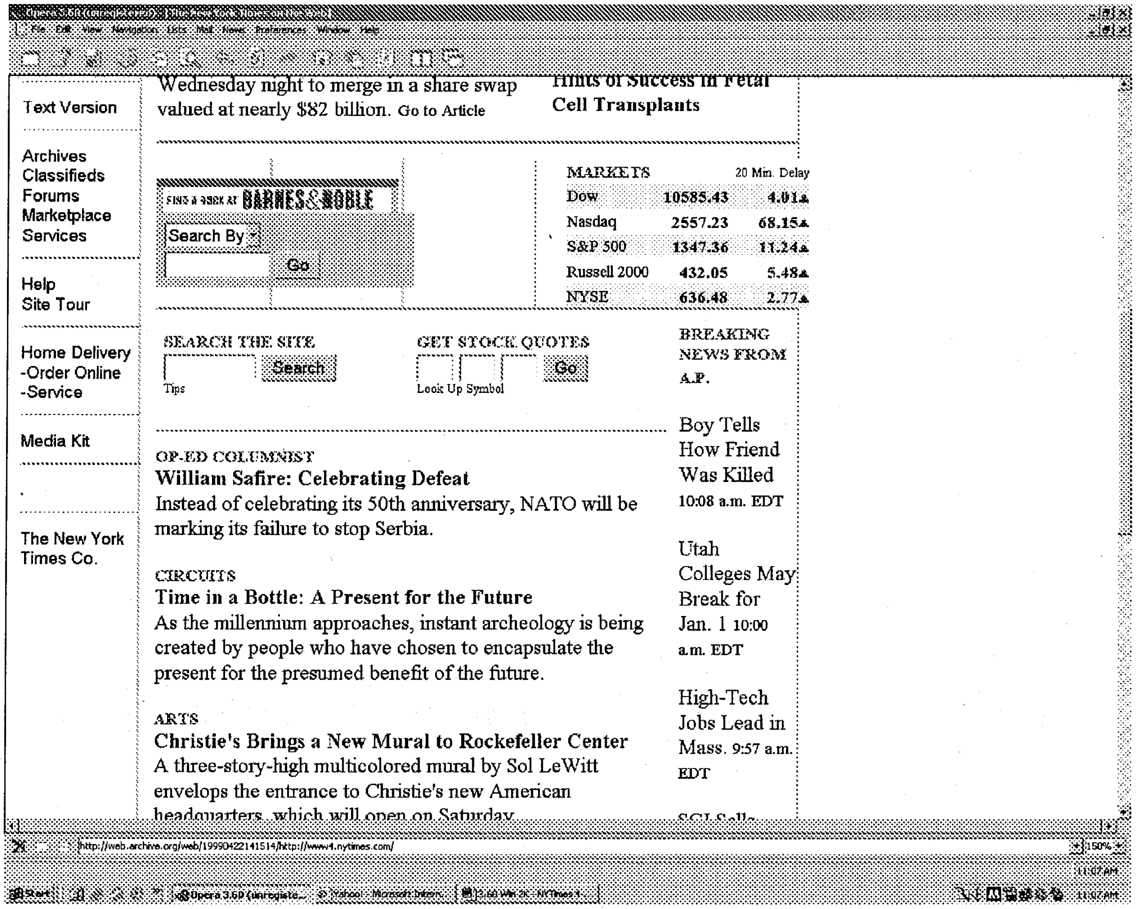
Wednesday night to merge in a share swap valued at nearly $82 billion. Go to Article

Hints of Success in Fetal Cell Transplants

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BREAKING NEWS FROM A.P.

Boy Tells How Friend Was Killed 10:08 a.m. EDT

Utah Colleges May Break for Jan. 1 10:00 a.m. EDT

High-Tech Jobs Lead in Mass. 9:57 a.m. EDT

OP-ED COLUMNIST
William Safire: Celebrating Defeat
Instead of celebrating its 50th anniversary, NATO will be marking its failure to stop Serbia.

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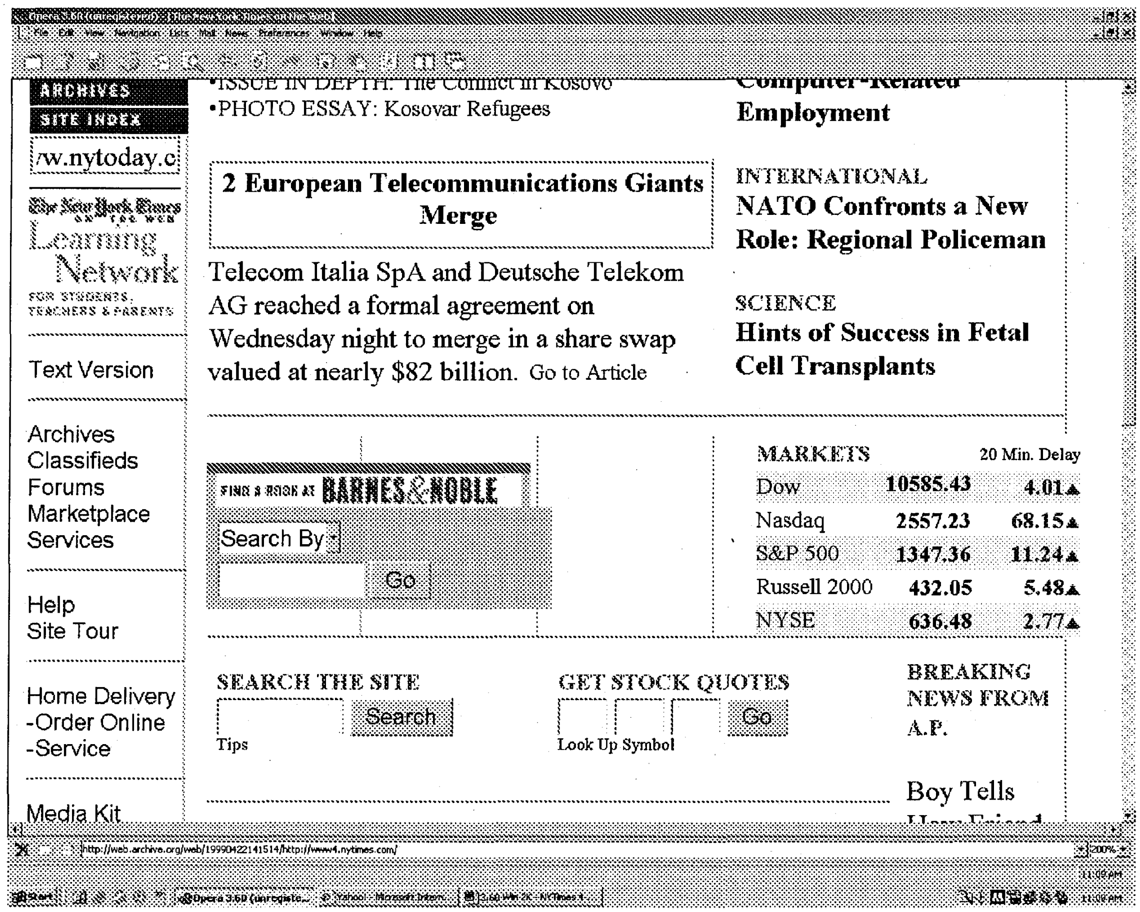

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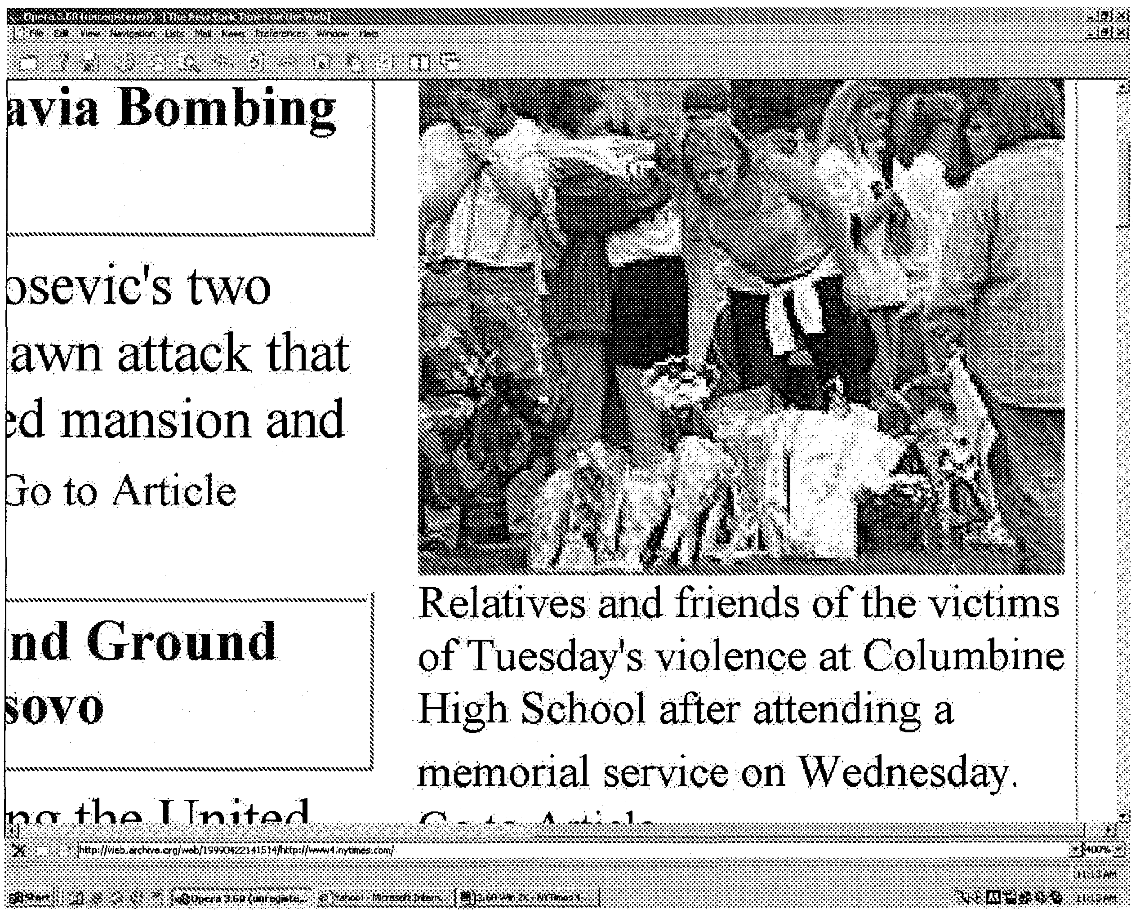

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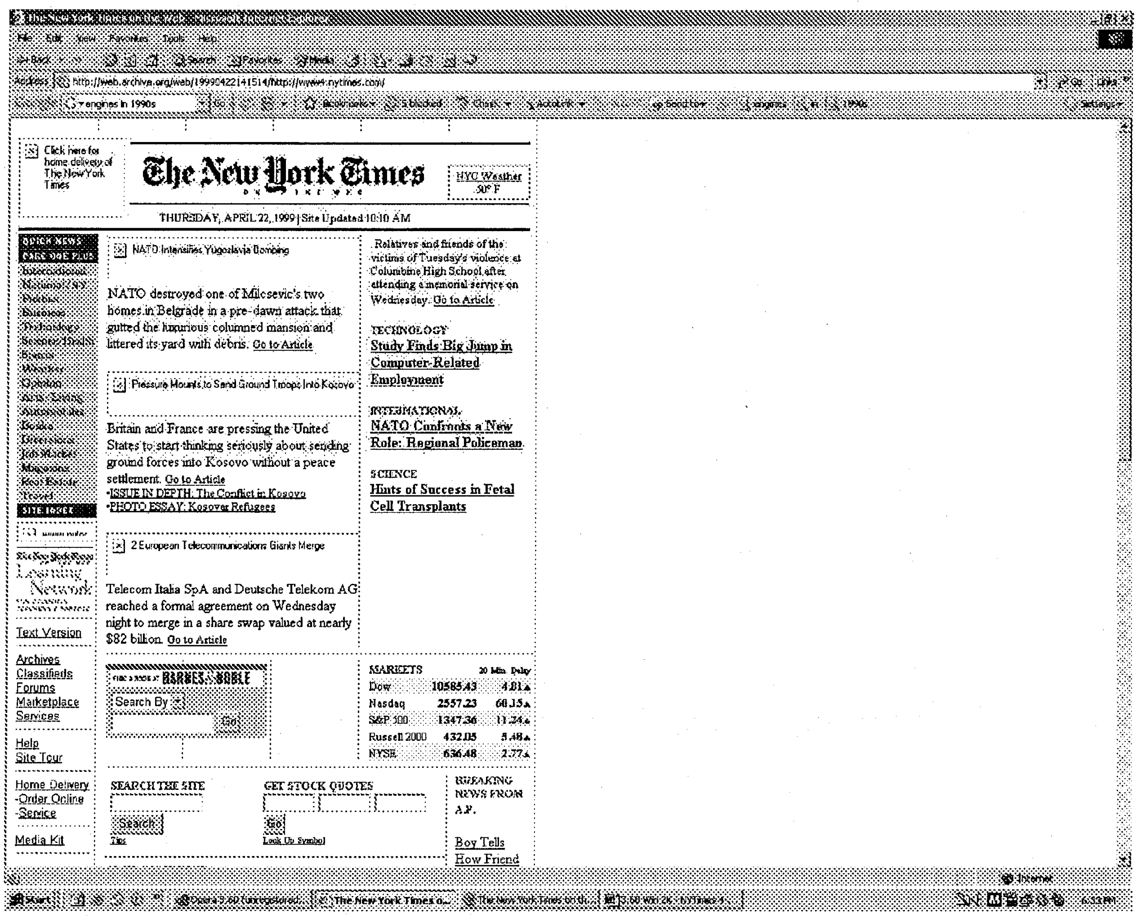

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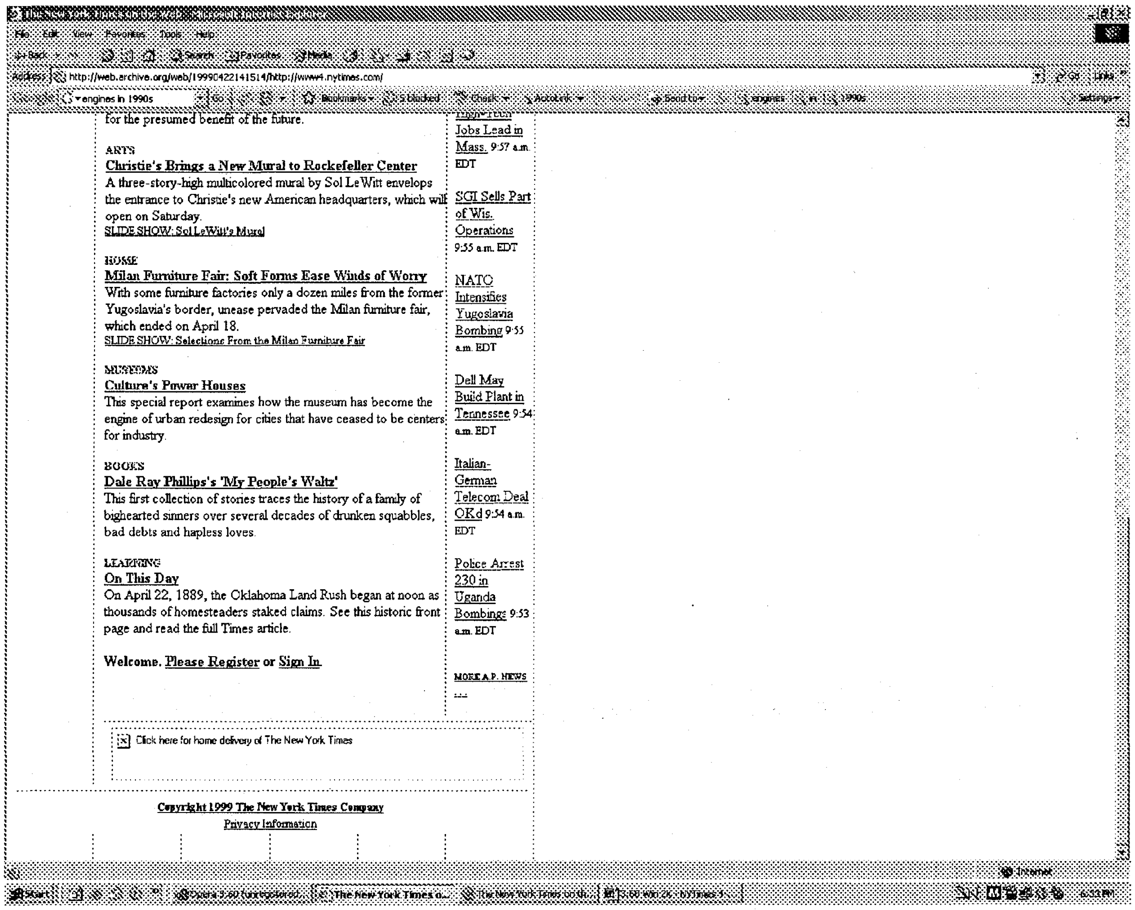
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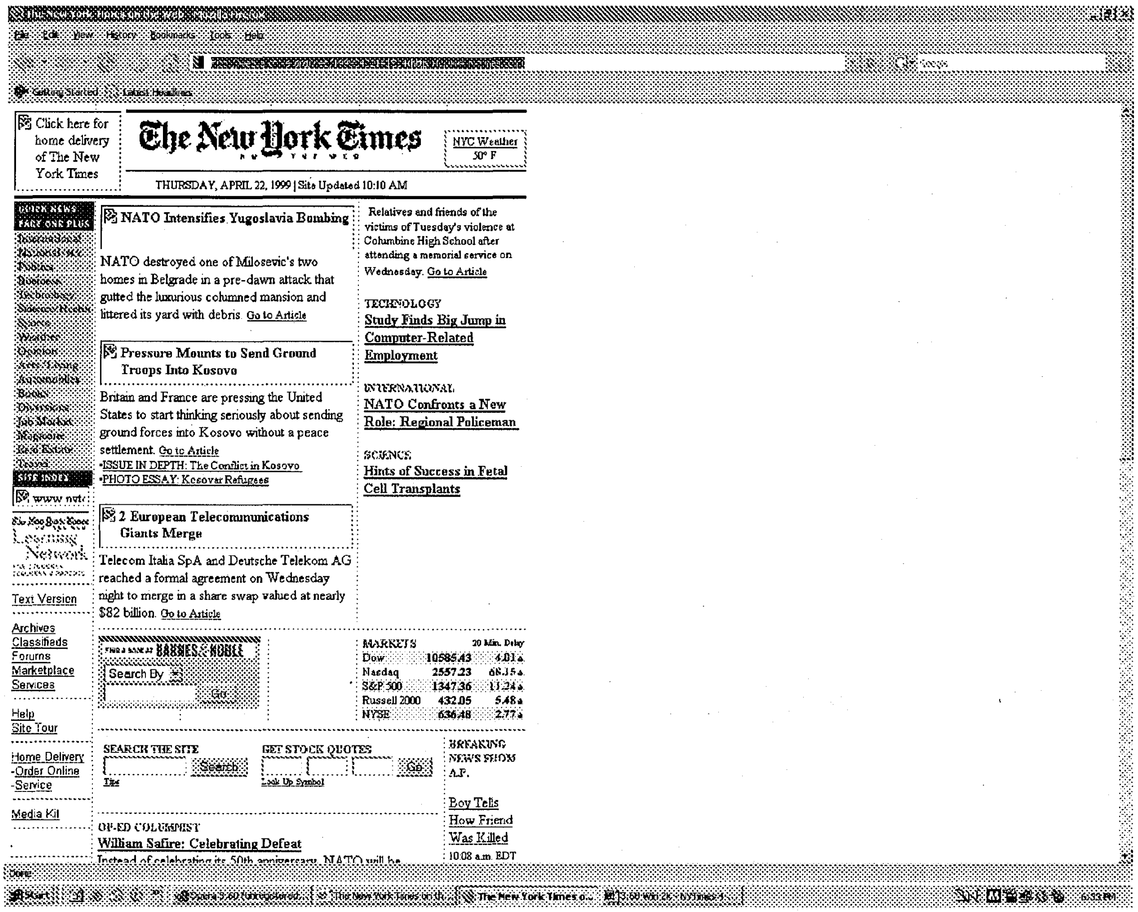

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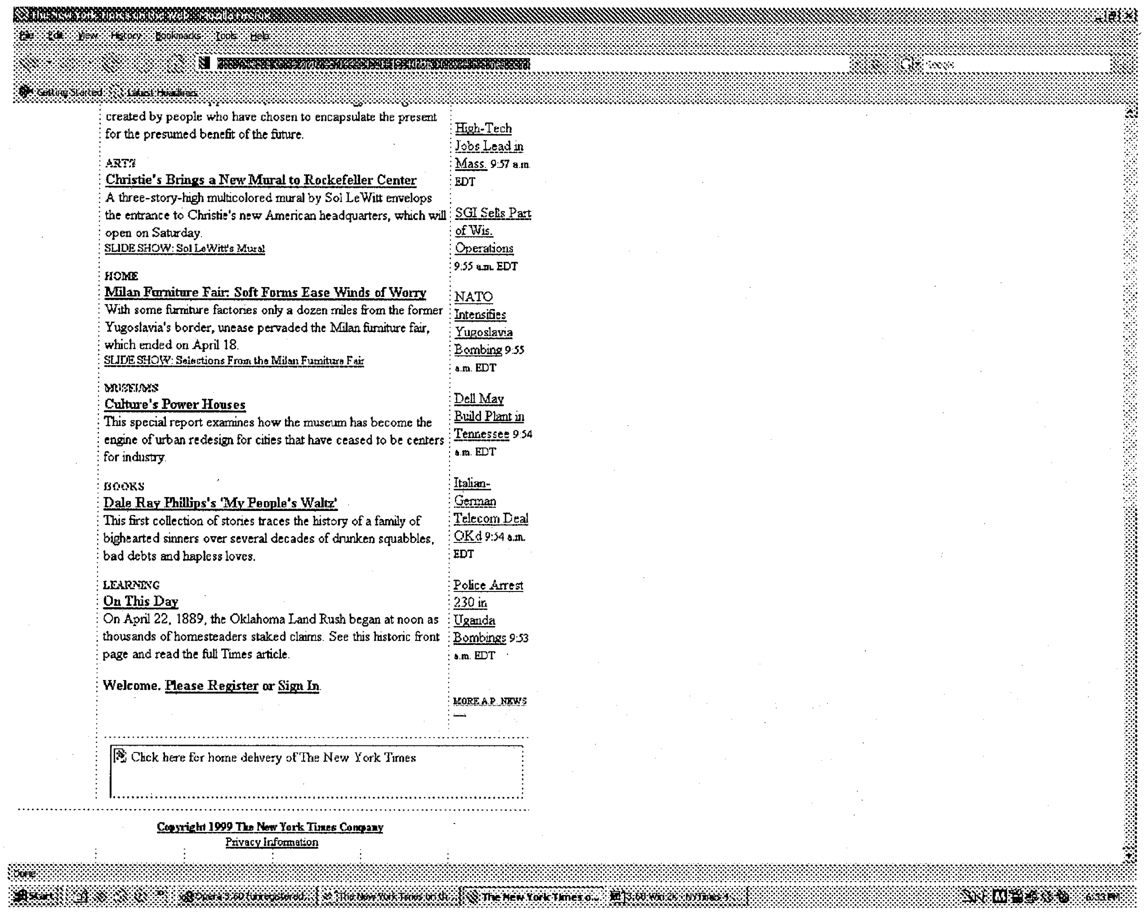

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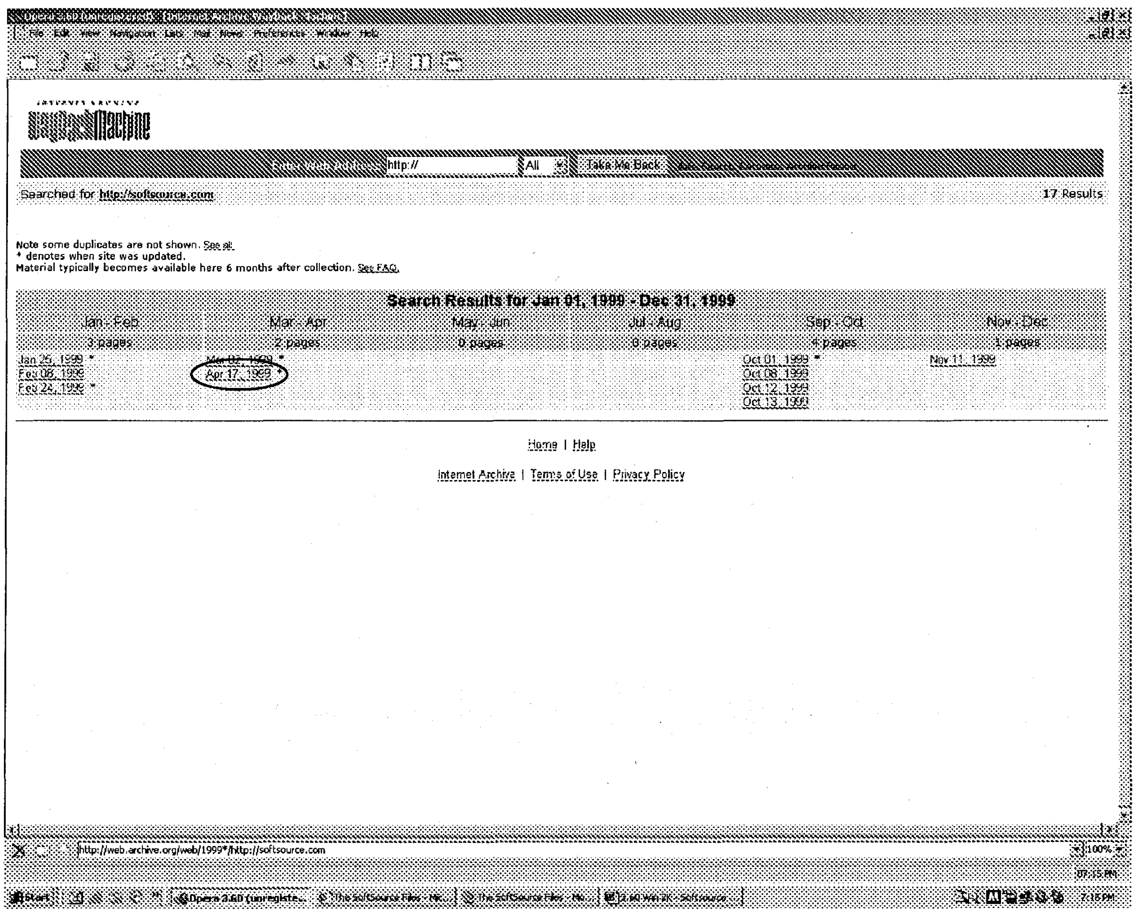
Softsource.com – April 17, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990417201455/http://www.softsource.com/

This corresponds to the www.softsource.com[1] home page on April 17, 1999, as served by the Wayback Machine Internet Archive site.[2]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional



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[1] Inventor Gary Rohrabaugh's Company.
[2] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

Browser: Opera 3.60
Resolution: 1280 x 1024
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The SoftSource Files

Vdraft
CAD System - Viewer - Plugins

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Entertainment

If you're in the mood for entertainment, we have an assortment of interesting topics and diversions, all designed with our tools:

- SVF Mystery, a puzzle designed in Vdraft, our new CAD system, that also takes advantage of our SVF plug-in's navigational and hyperlink power
- 3-D stereograms
- Topographical pictures generated using USGS data
- Fractal images
- Poker variants

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Here's how to get information & reviews concerning the following SoftSource products:

- Our two Netscape plug-ins, one for dynamically viewing AutoCAD drawings (DWG files) and DXF files(commercial version only), and the other for files in SVF (Simple Vector Format), which, in addition to dynamic viewing, features HTML hyperlink navigation
- DRAWING Librarian displays, translates, and prints AutoCAD R2.5 - R12 drawing/DXF files as well as several other formats. We also have versions which are customizable/programmable. DRAWING Librarian is available under DOS, Windows. This product is limited to Release 2.5 - 12 of AutoCAD.
- BLOCK Librarian allows AutoCAD users to graphically organize and retrieve blocks. This product is currently limited to Release 2.5 - 12 of AutoCAD
- Recent Press Releases

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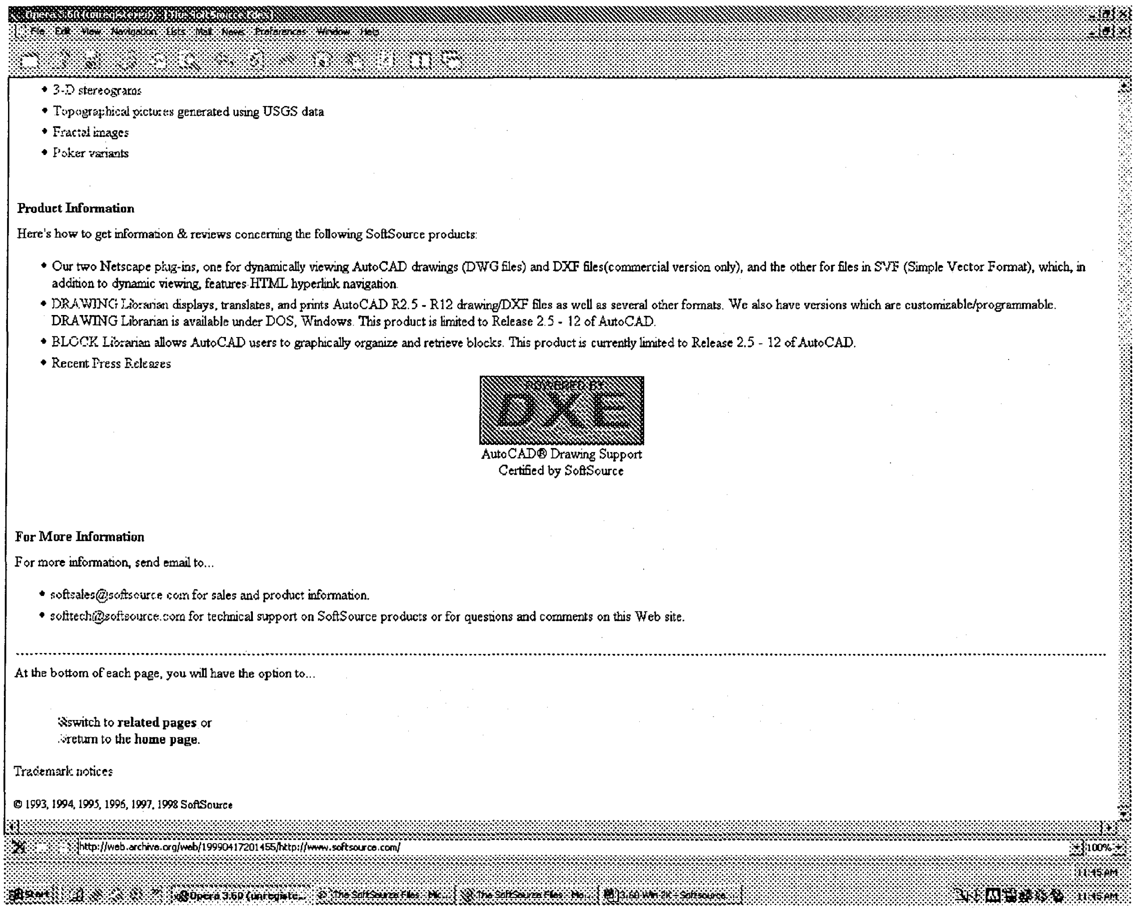

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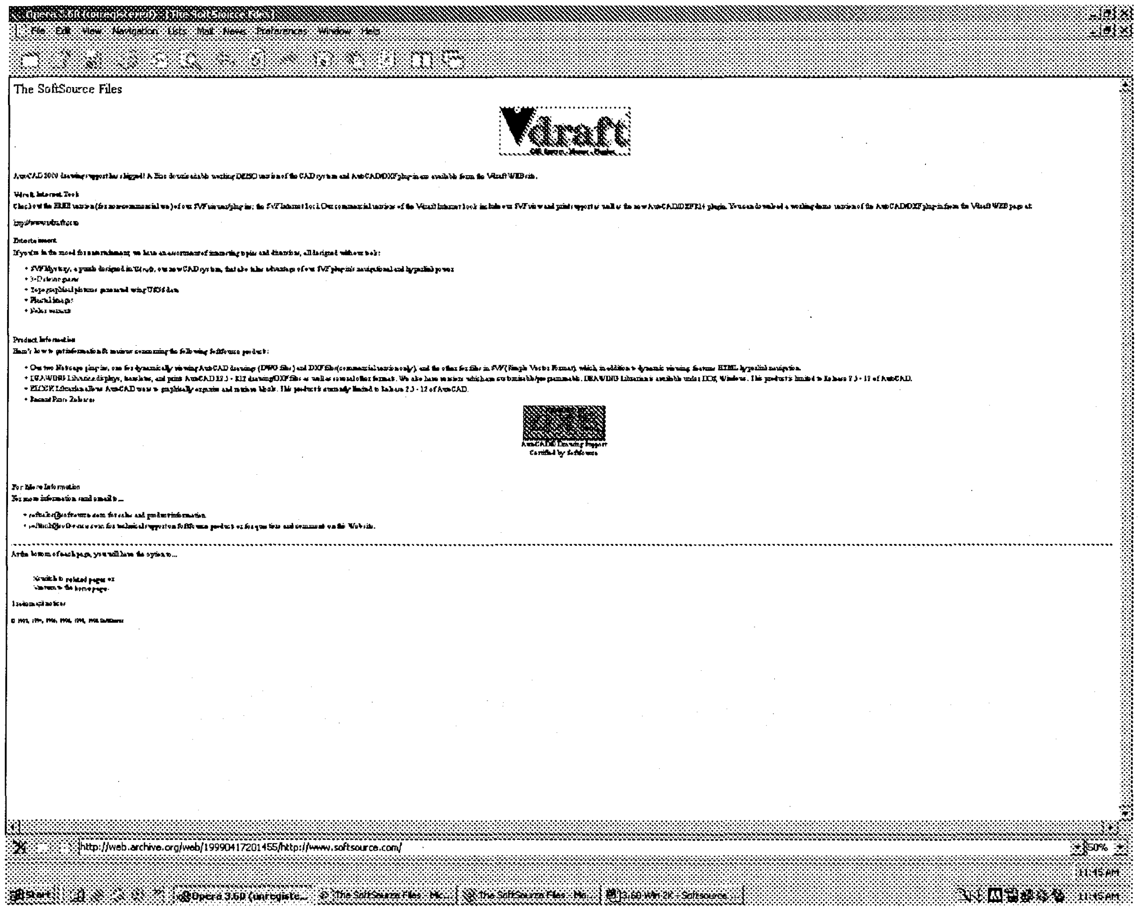

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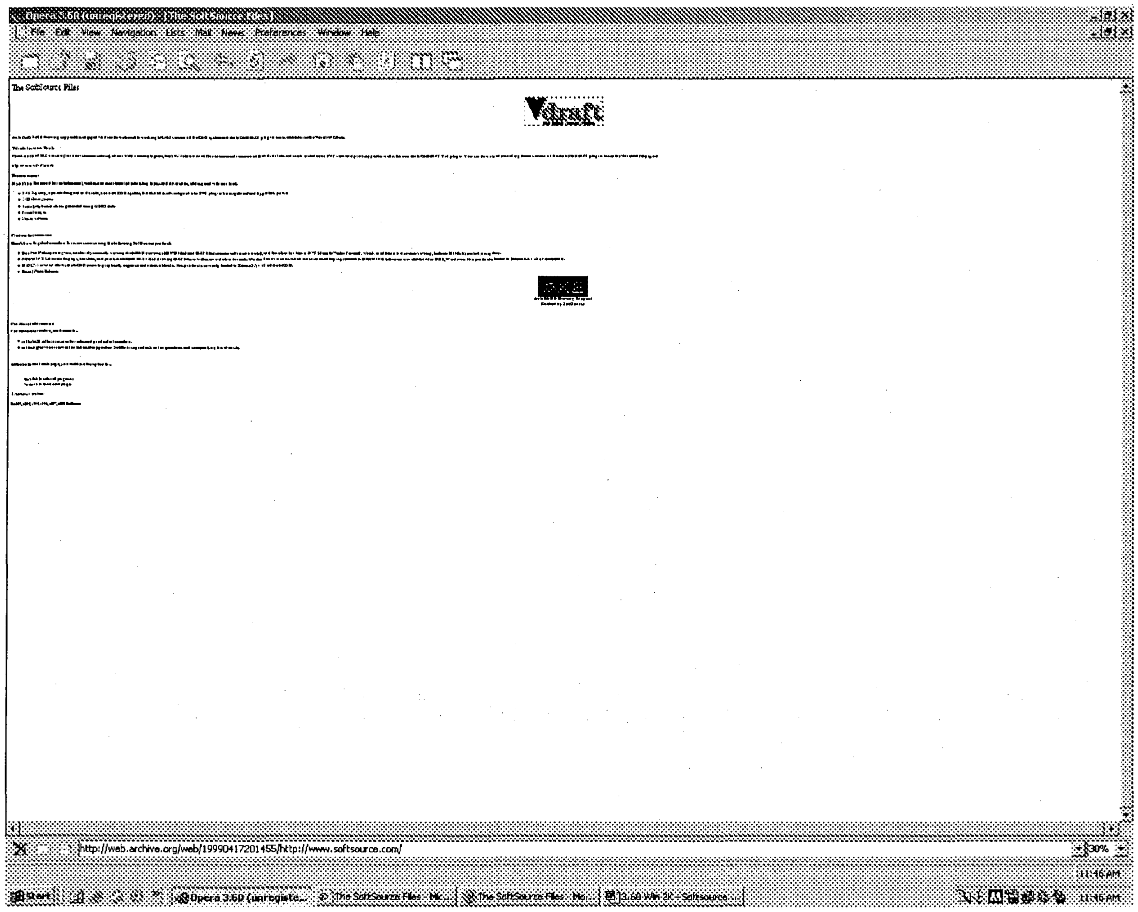

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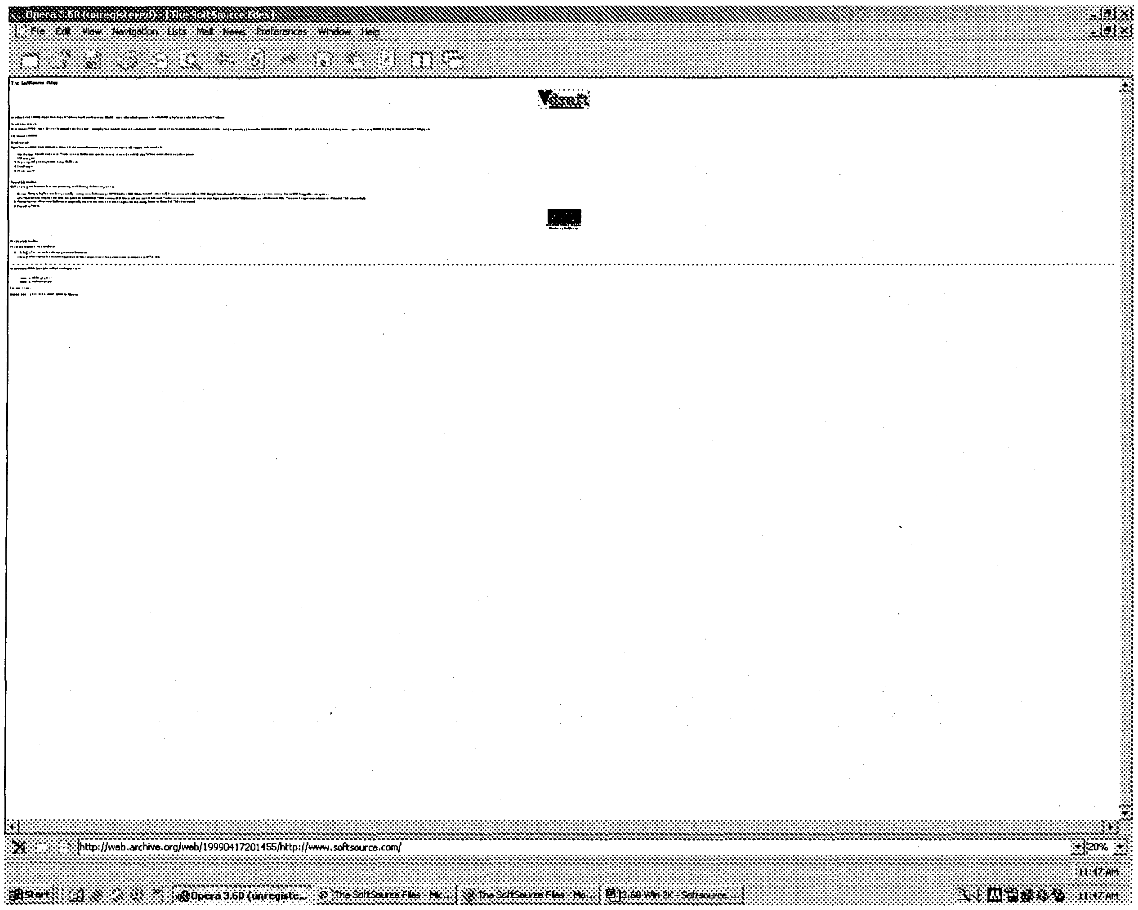

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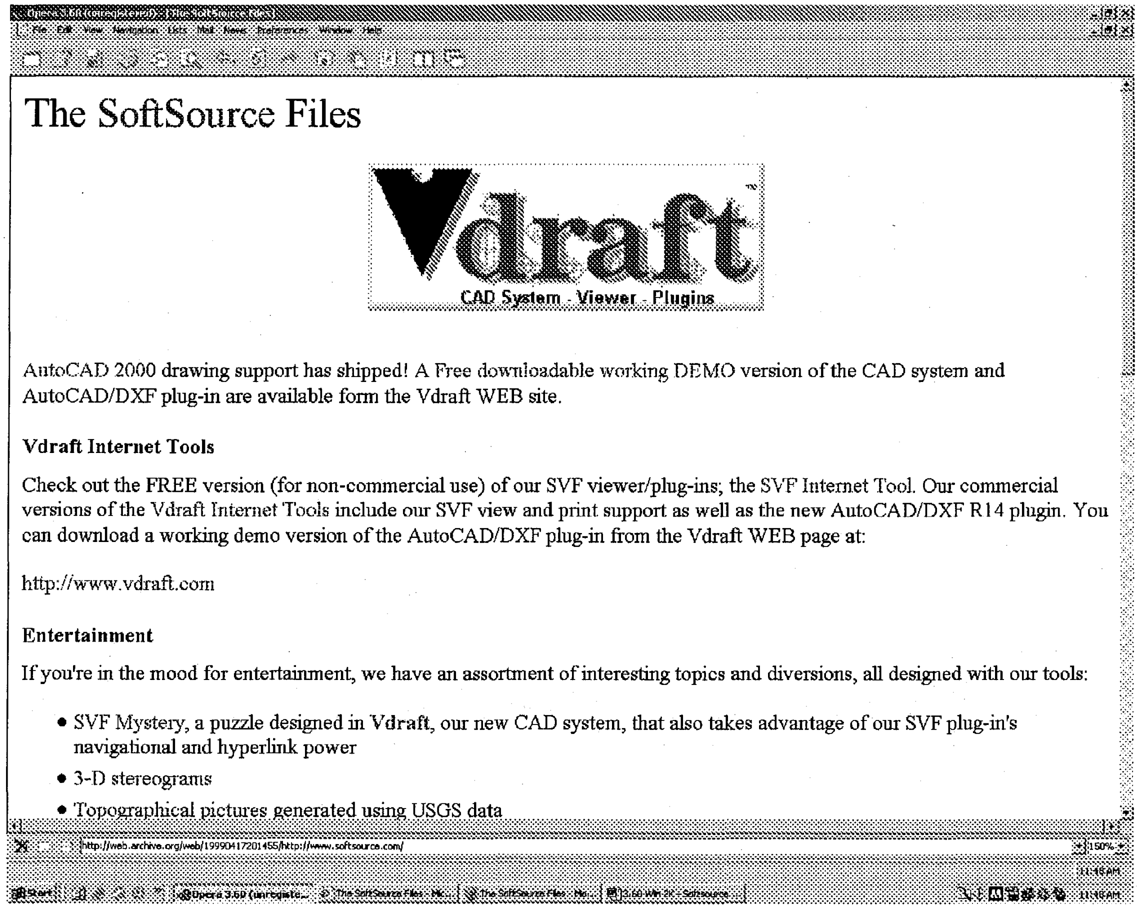

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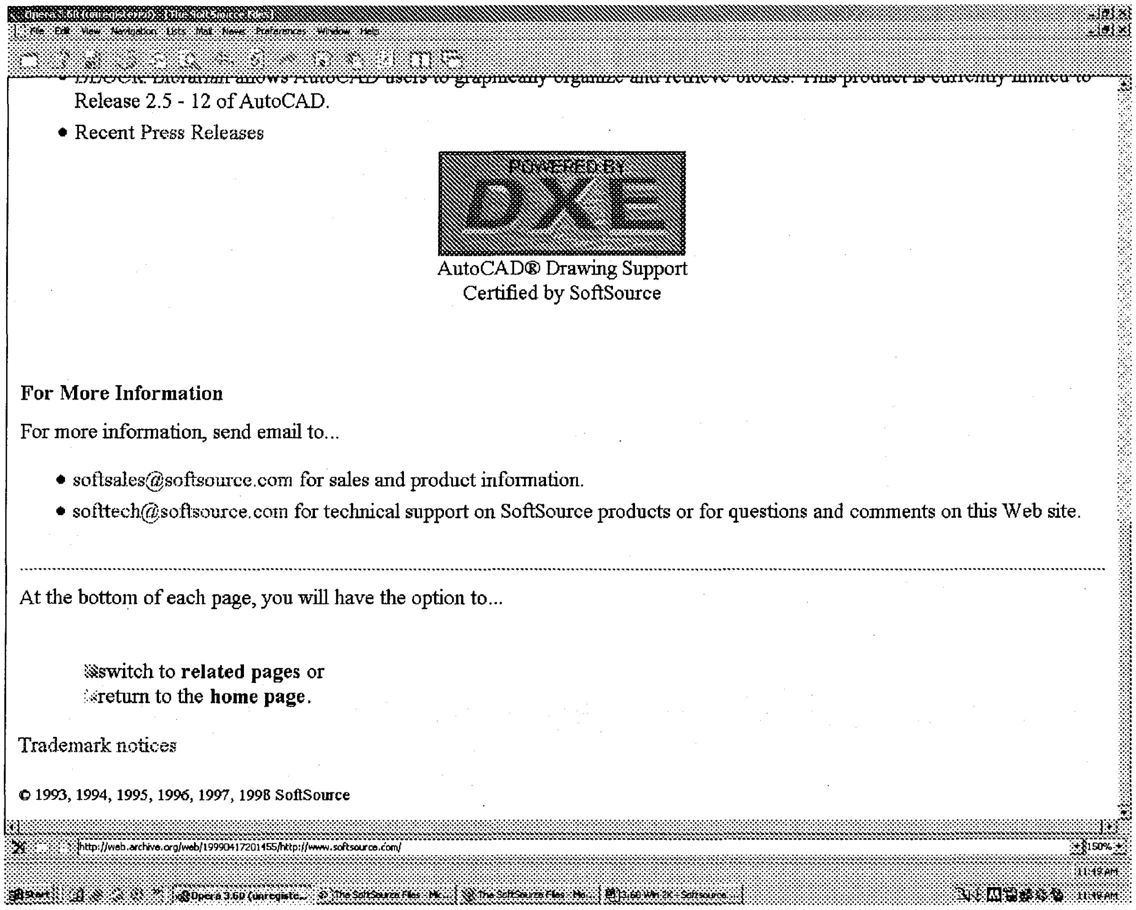

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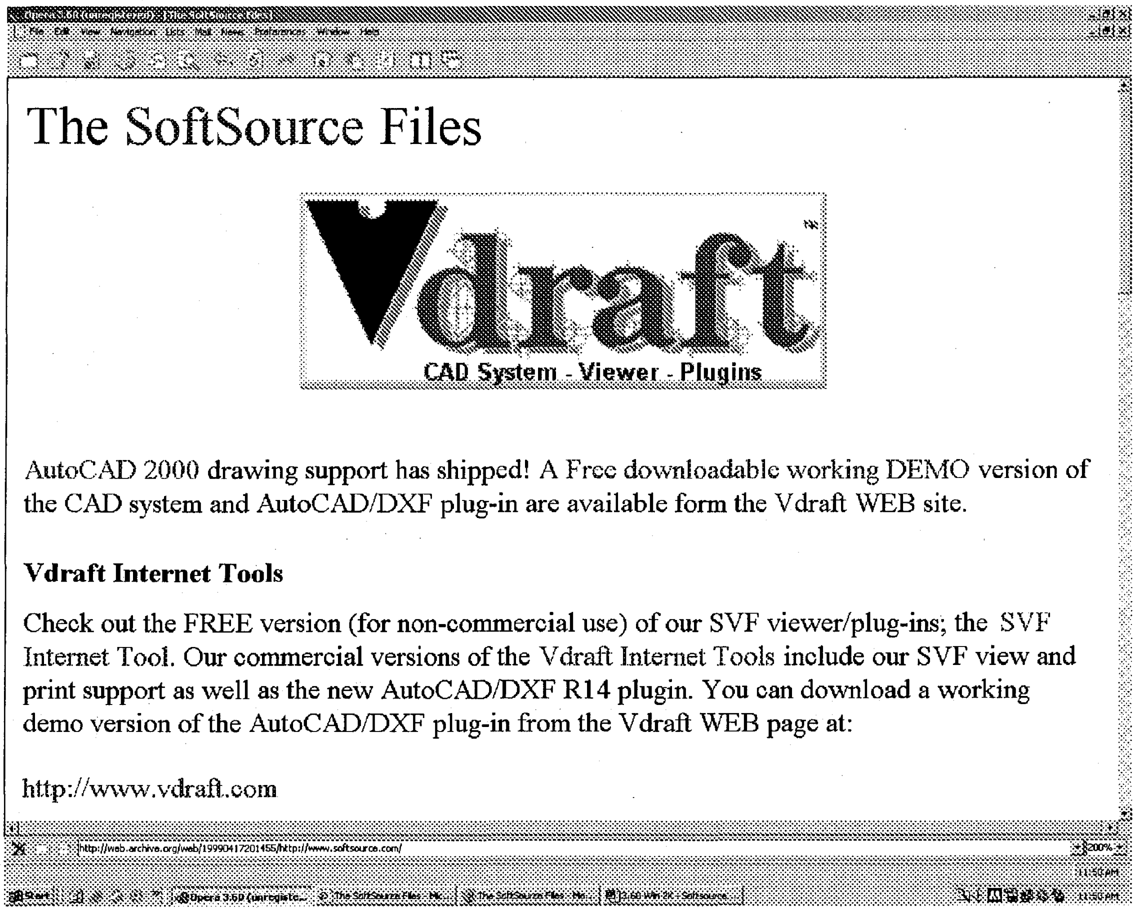

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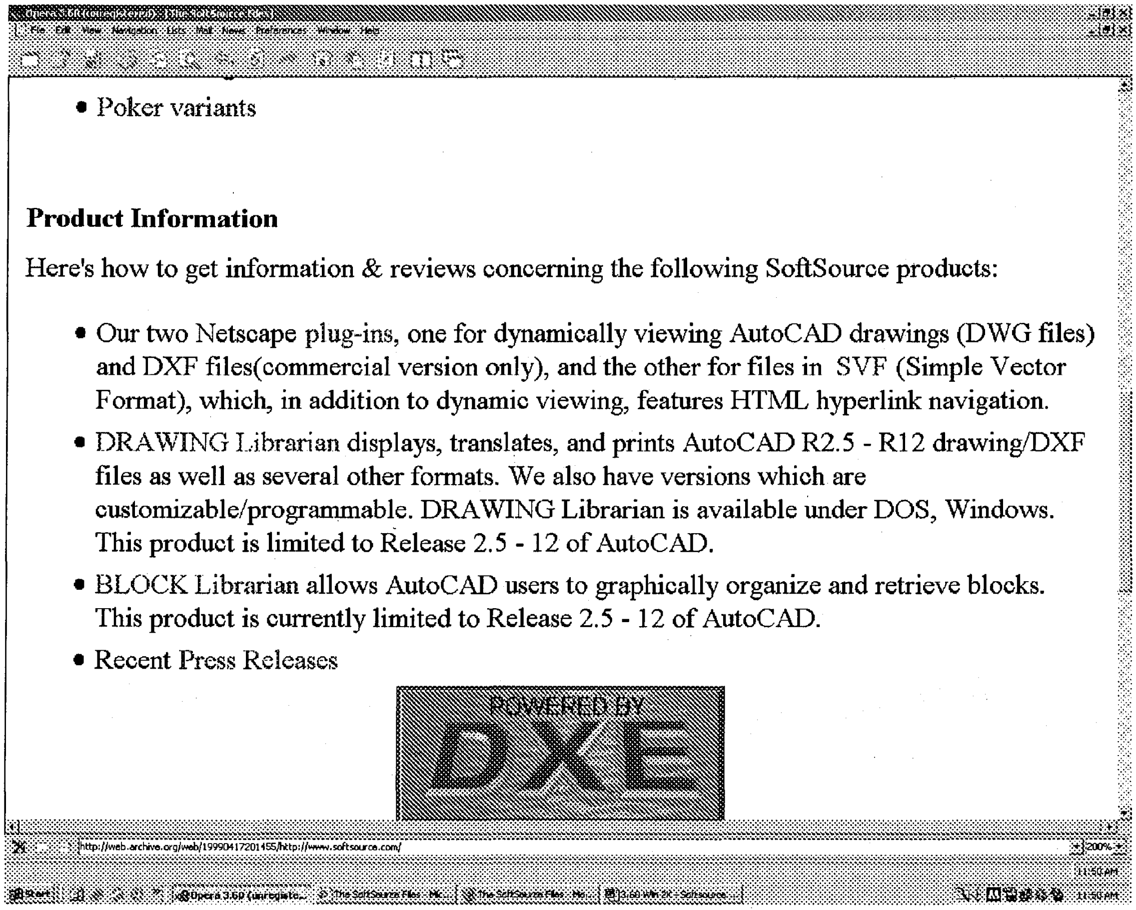

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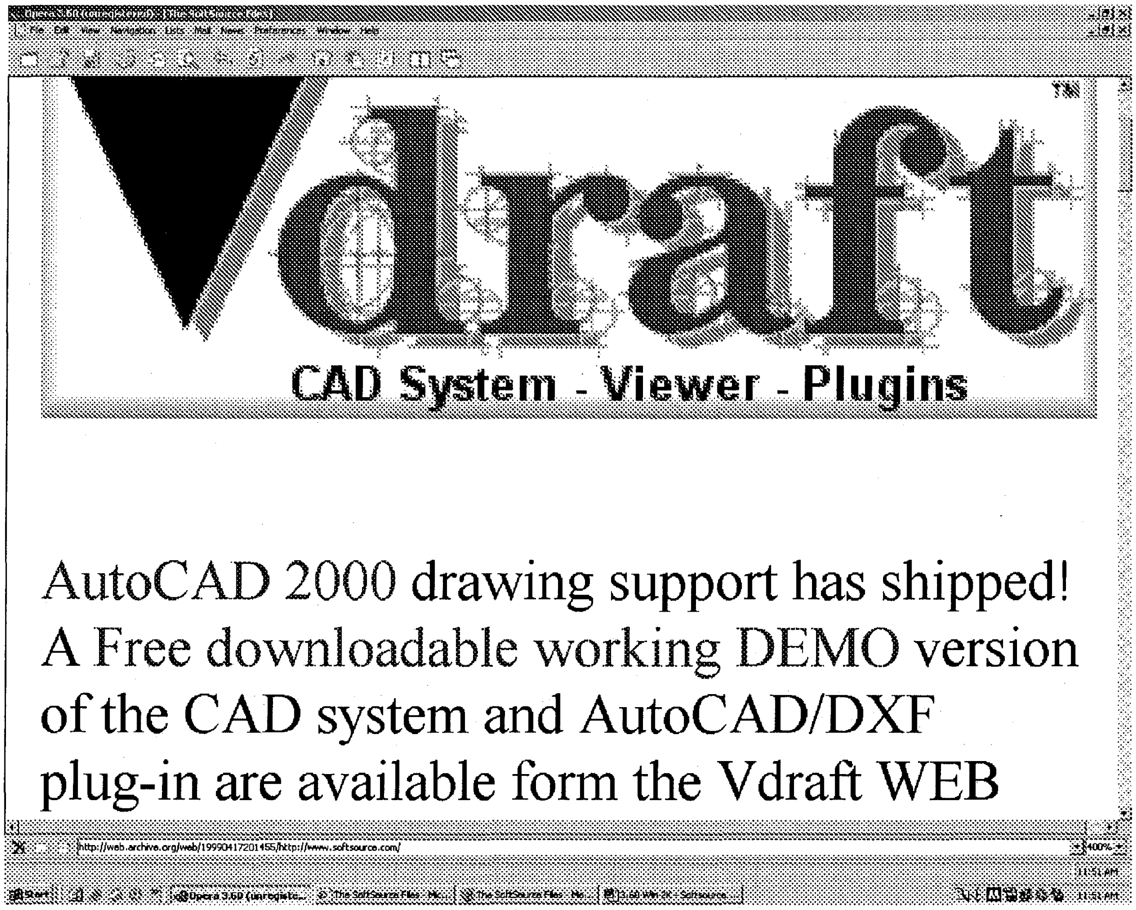

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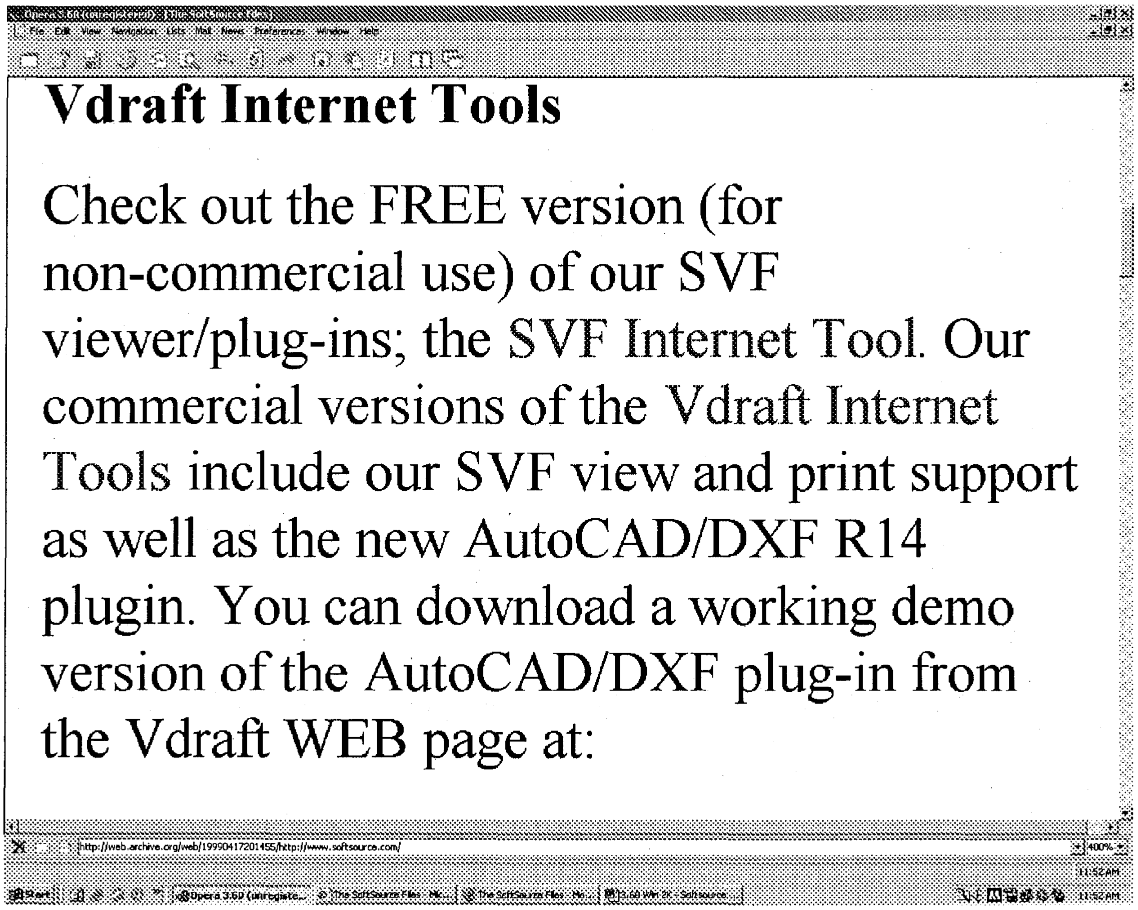

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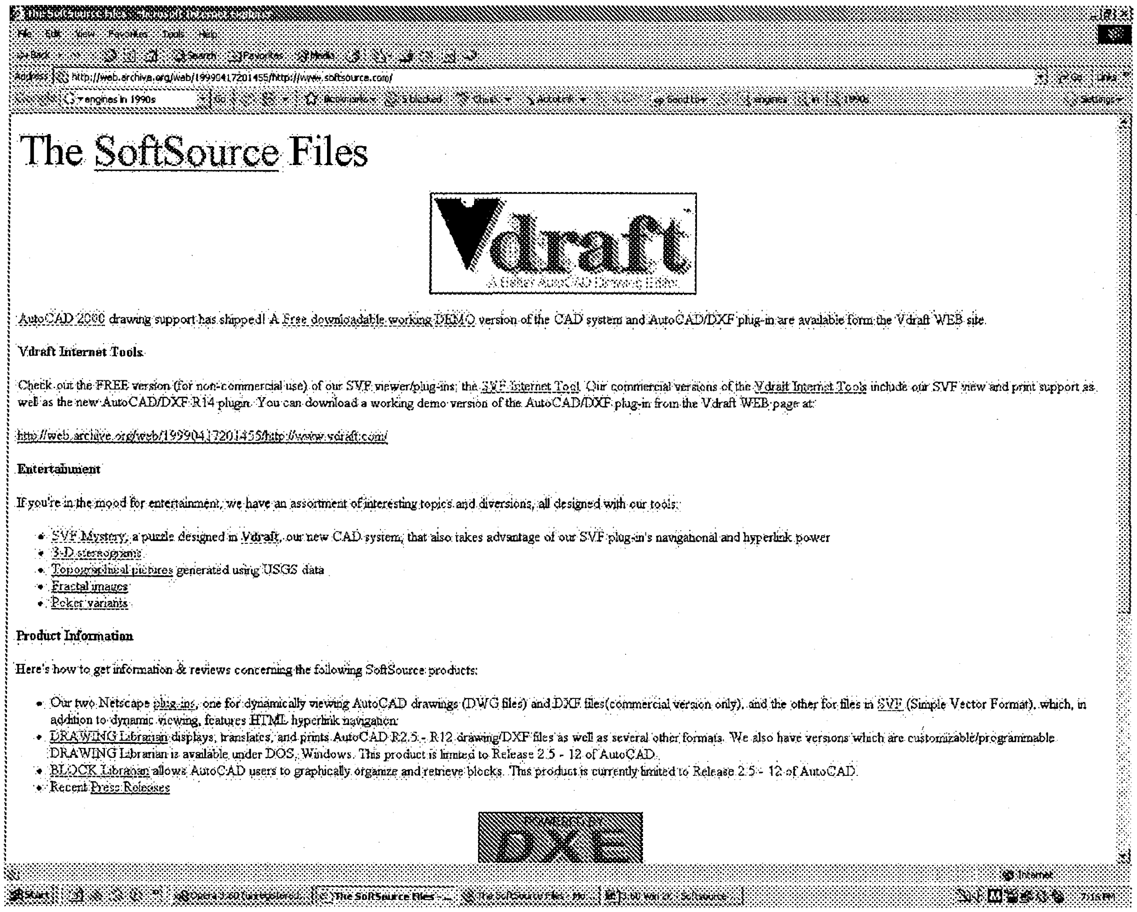

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Entertainment

If you're in the mood for entertainment, we have an assortment of interesting topics and diversions, all designed with our tools:

- SVF Mystery, a puzzle designed in Vdraft, our new CAD system, that also takes advantage of our SVF plug-in's navigational and hyperlink power
- 3-D stereograms
- Topographical pictures generated using USGS data
- Fractal images
- Poker variants

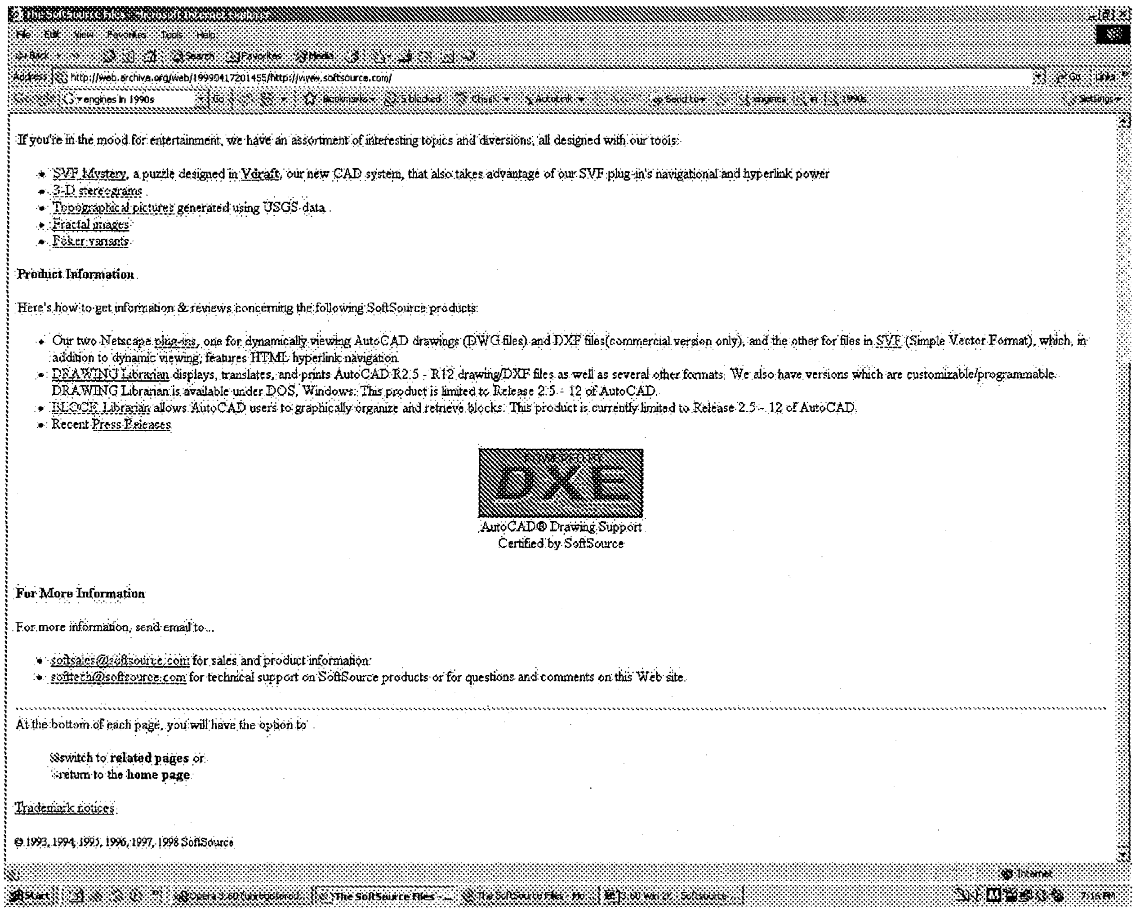
Product Information

Here's how to get information & reviews concerning the following SoftSource products:

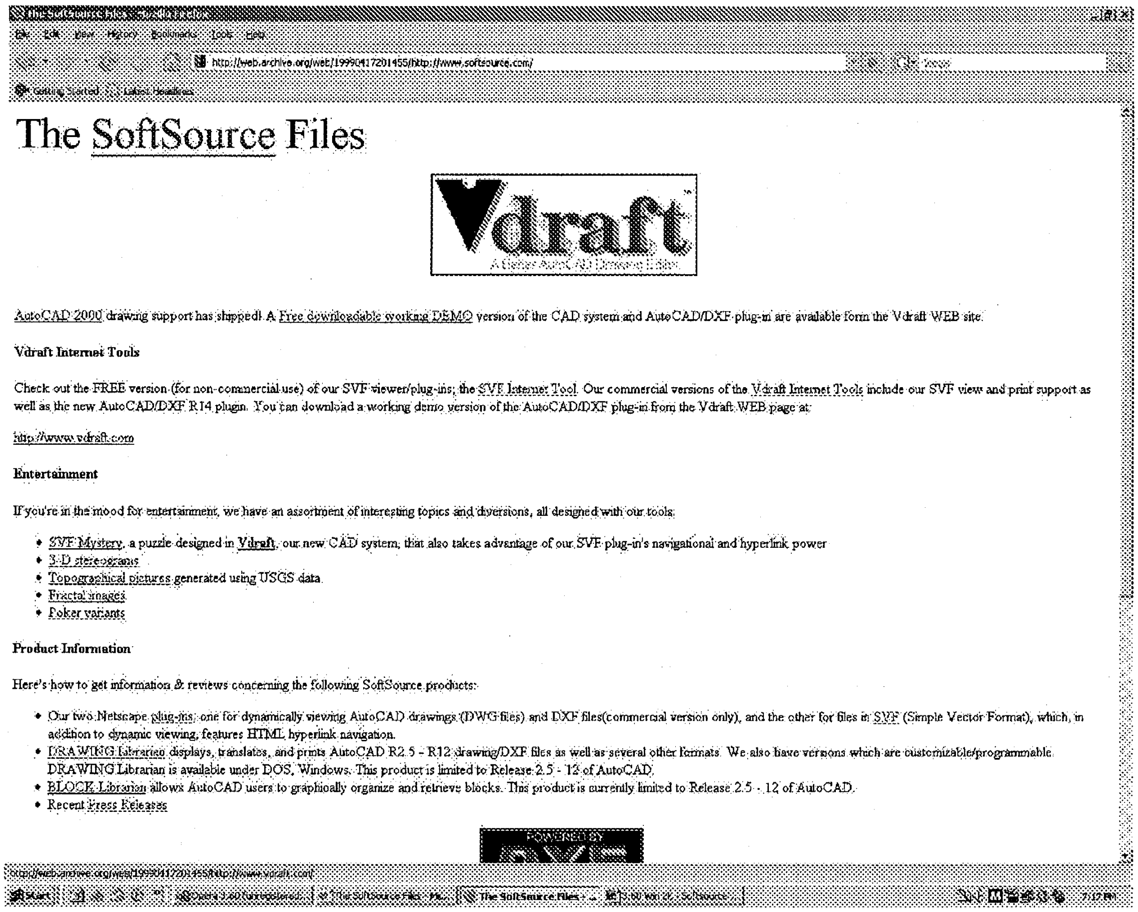
- Our two Netscape plug-ins, one for dynamically viewing AutoCAD drawings (DWG files) and DXF files(commercial version only), and the other for files in SVF (Simple Vector Format), which, in addition to dynamic viewing, features HTML hyperlink navigation.
- DRAWING Librarian displays, translates, and prints AutoCAD R2.5 - R12 drawing/DXF files as well as several other formats. We also have versions which are customizable/programmable. DRAWING Librarian is available under DOS, Windows. This product is limited to Release 2.5 - 12 of AutoCAD.
- BLOCK Librarian allows AutoCAD users to graphically organize and retrieve blocks. This product is currently limited to Release 2.5 - 12 of AutoCAD.
- Recent Press Releases

DXF

Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



The SoftSource Files

AutoCAD 2000 drawing support has shipped! A Free downloadable working DEMO version of the CAD system and AutoCAD/DXF plug-in are available form the Vdraft WEB site.

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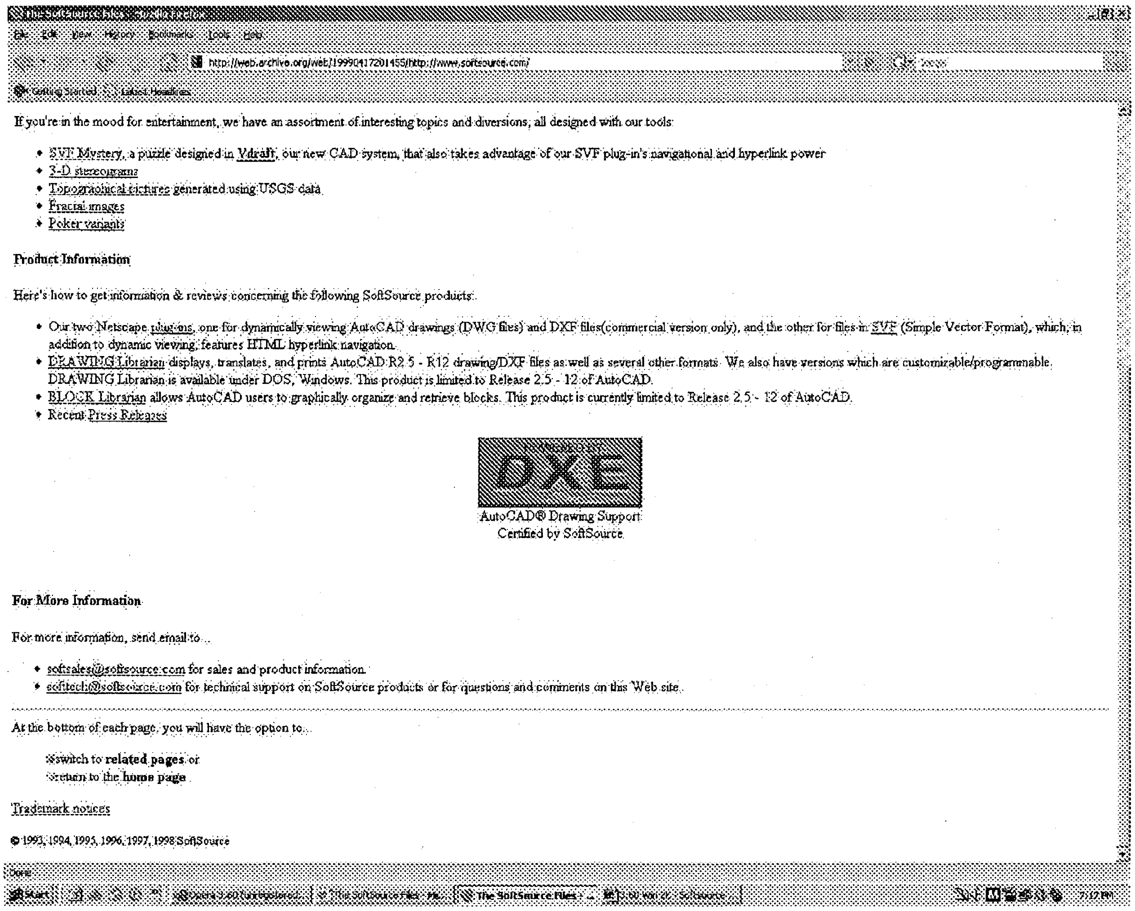
Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



http://web.archive.org/web/19990417201455/http://www.softsource.com/

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- Recent Press Releases

AutoCAD® Drawing Support
Certified by SoftSource

For More Information

For more information, send email to ...

- softsales@softsource.com for sales and product information.
- softtech@softsource.com for technical support on SoftSource products or for questions and comments on this Web site.

At the bottom of each page, you will have the option to...

switch to **related pages** or
return to the **home page**.

Trademark notices

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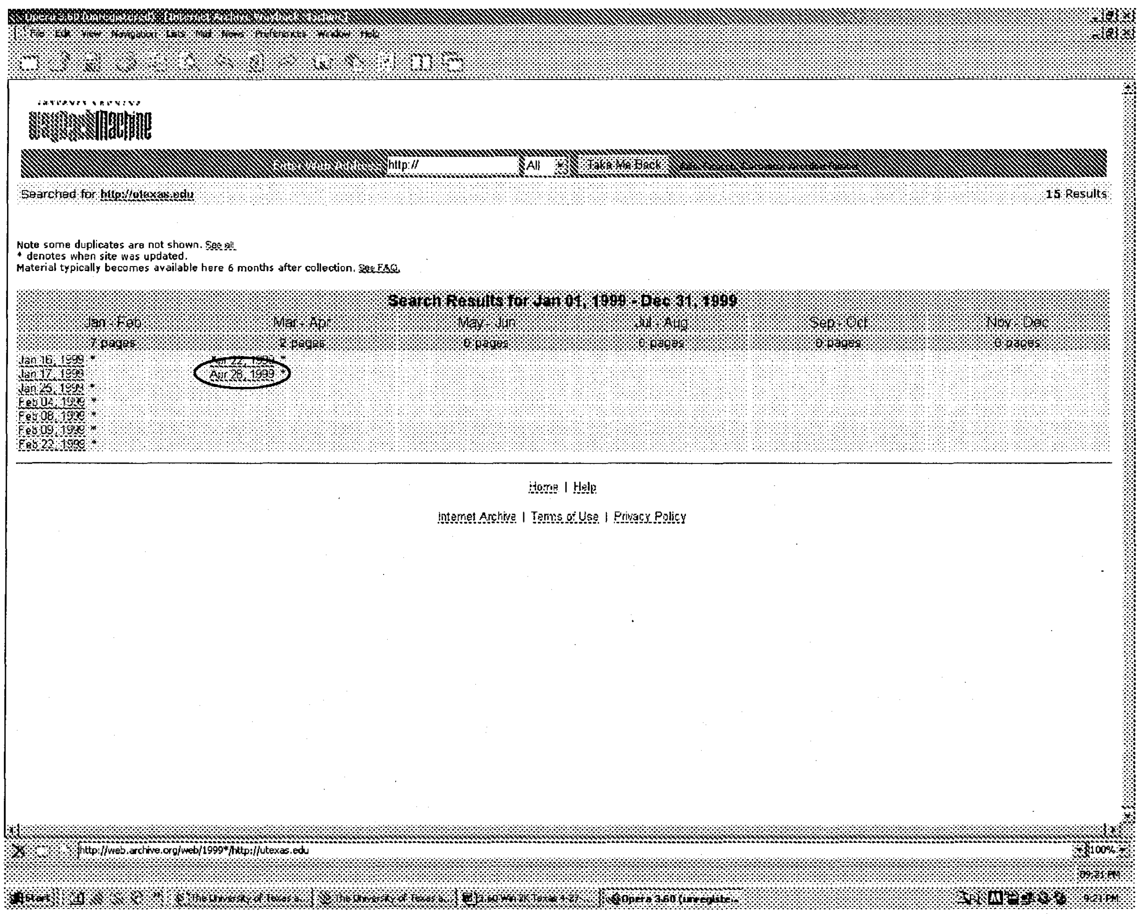
uTexas.edu – April 27, 1999

The following screenshots are of the page:

http://web.archive.org/web/19991010025744/http://www.opera.com/

This corresponds to the etexas.edu (University of Texas) home page on April 27, 1999[1], as served by the Wayback Machine Internet Archive site.[2]

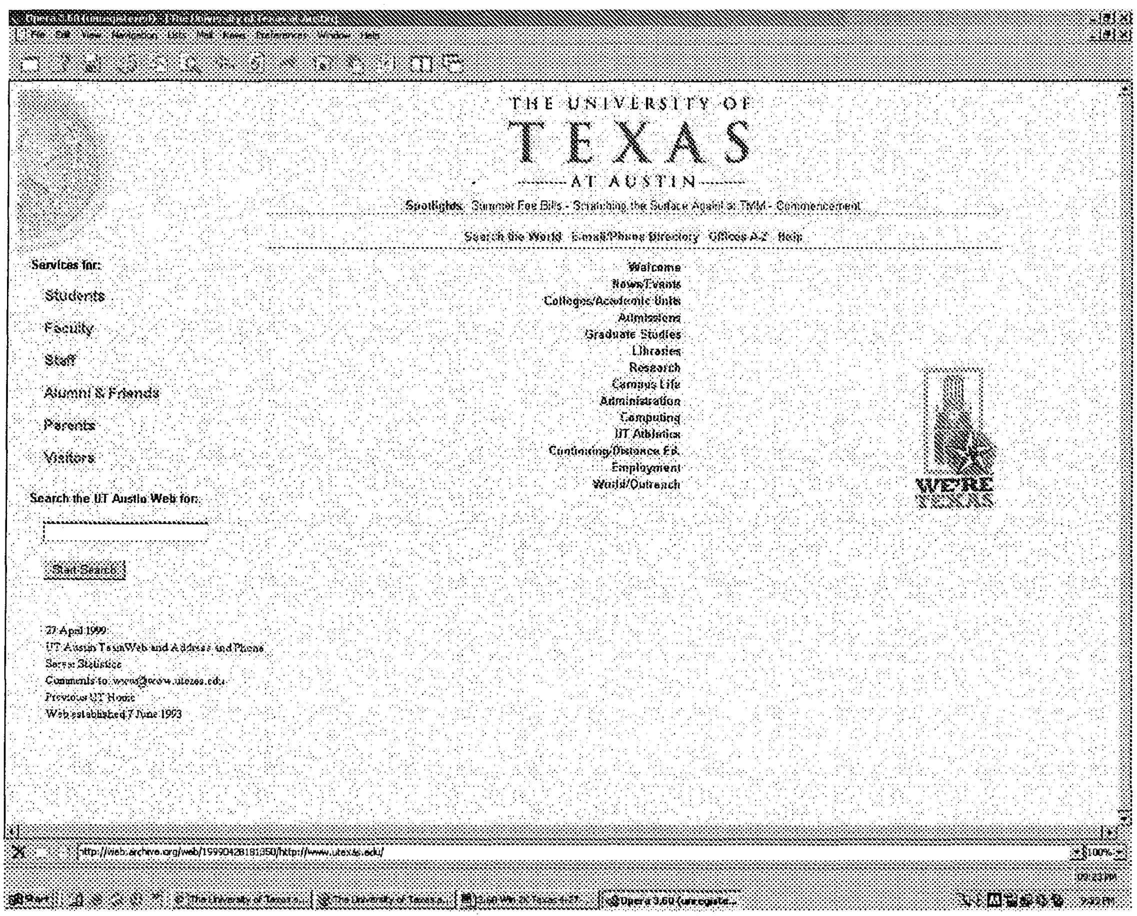
Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional



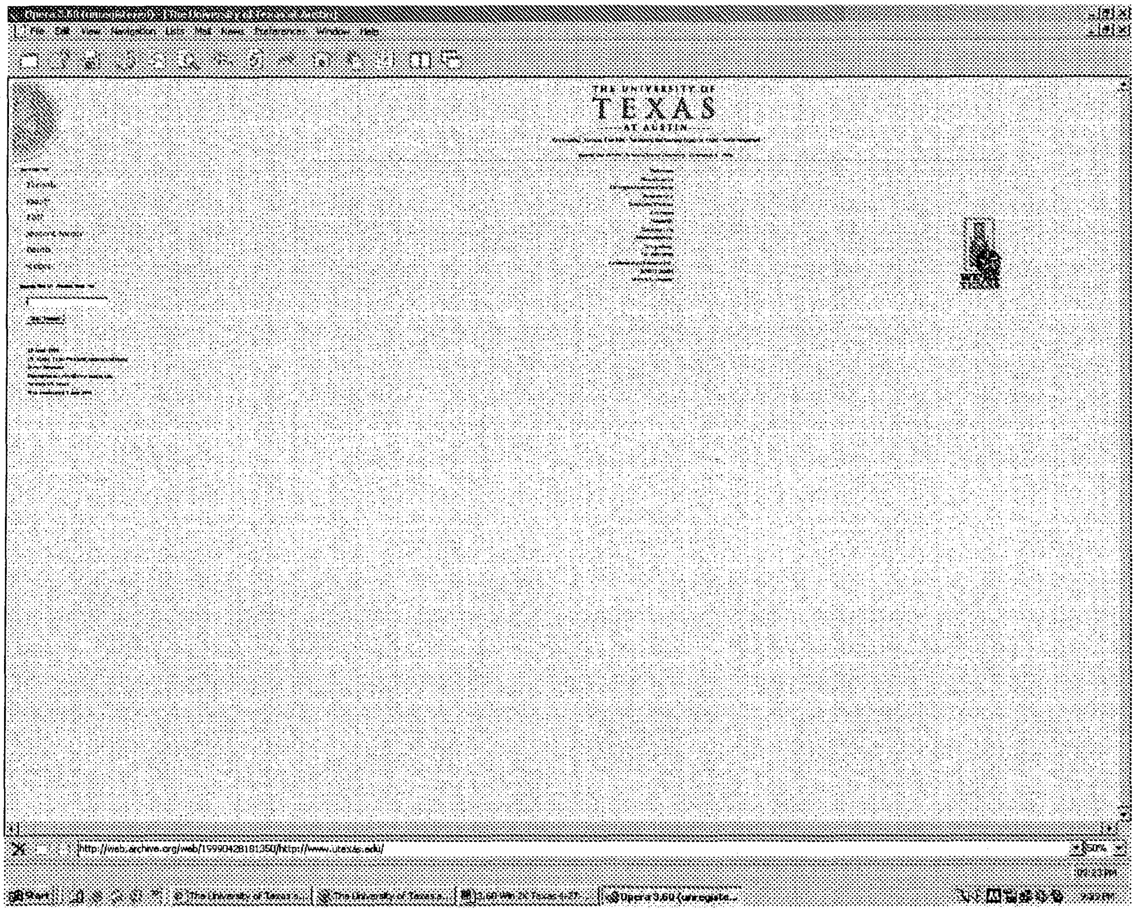
[1] The Wayback Machine link erroneously lists Apr 28, 1999.

[2] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

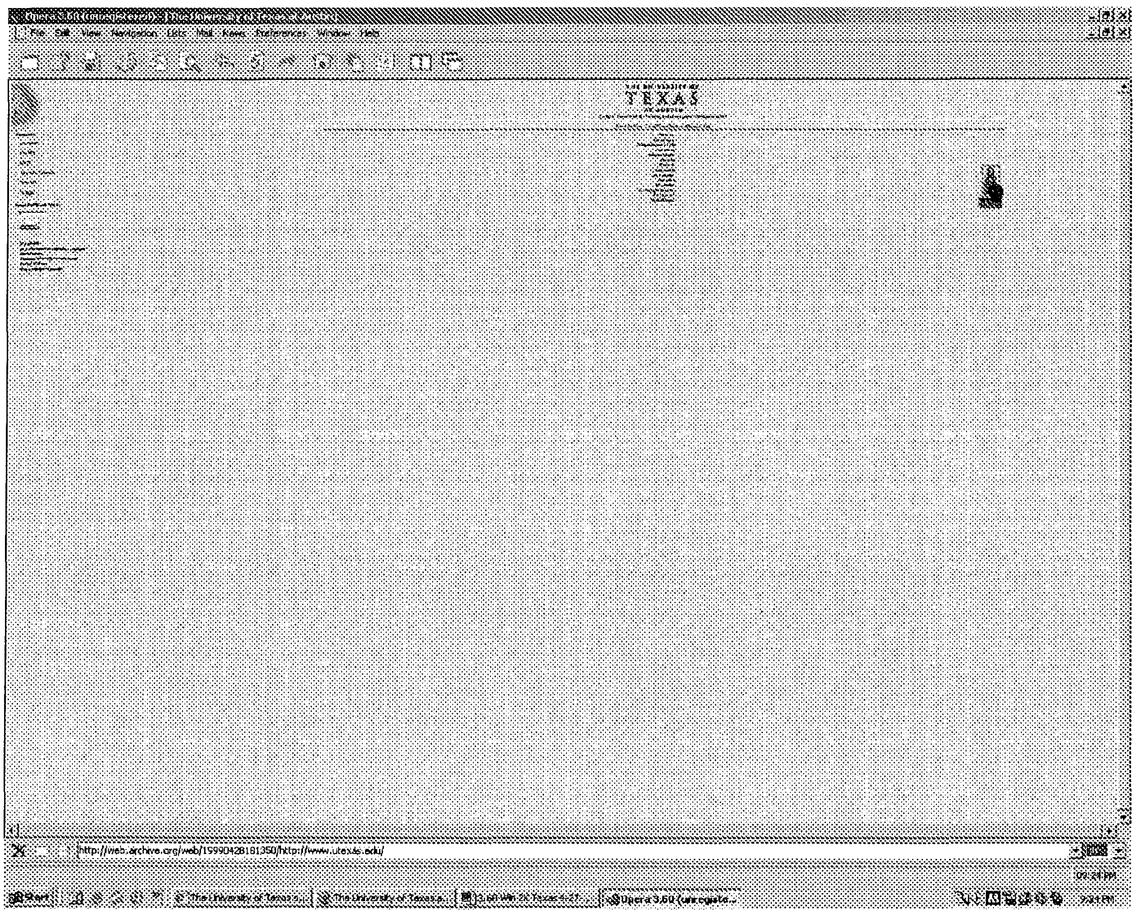
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



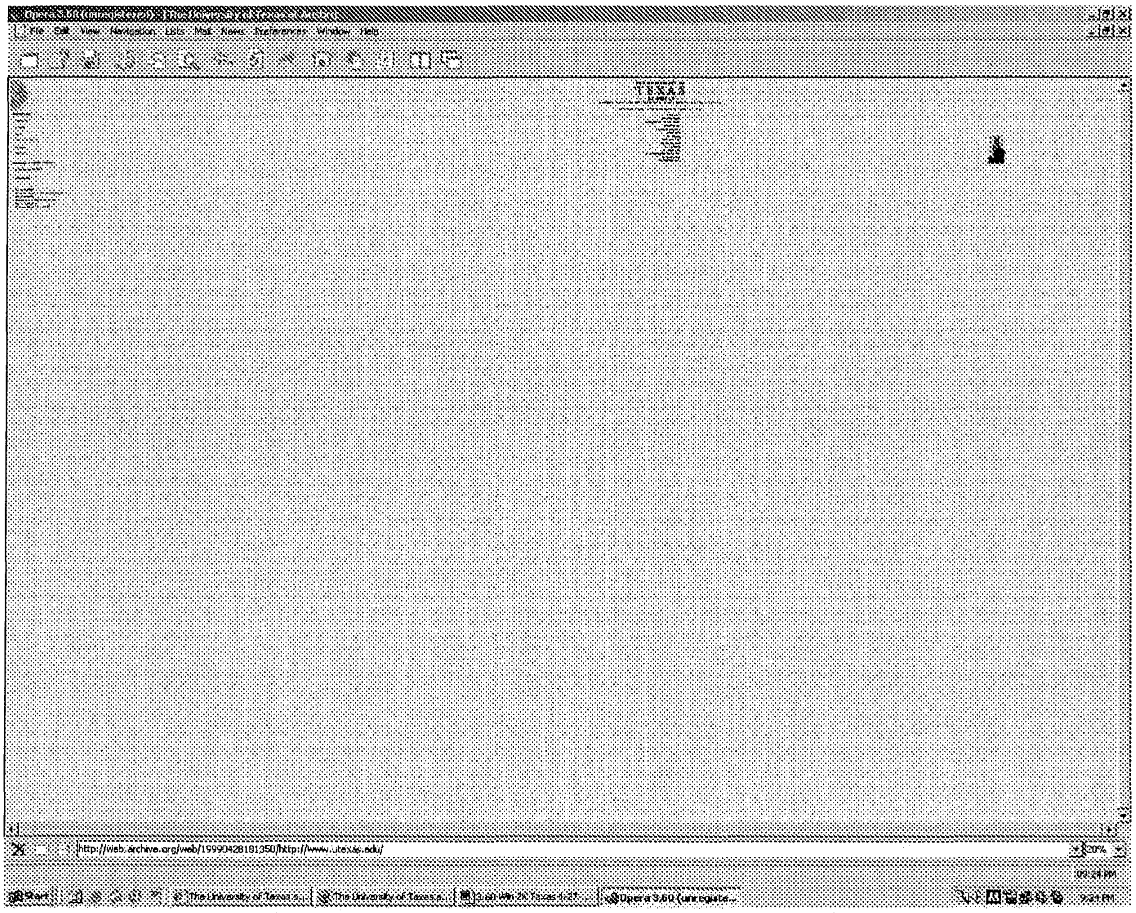
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



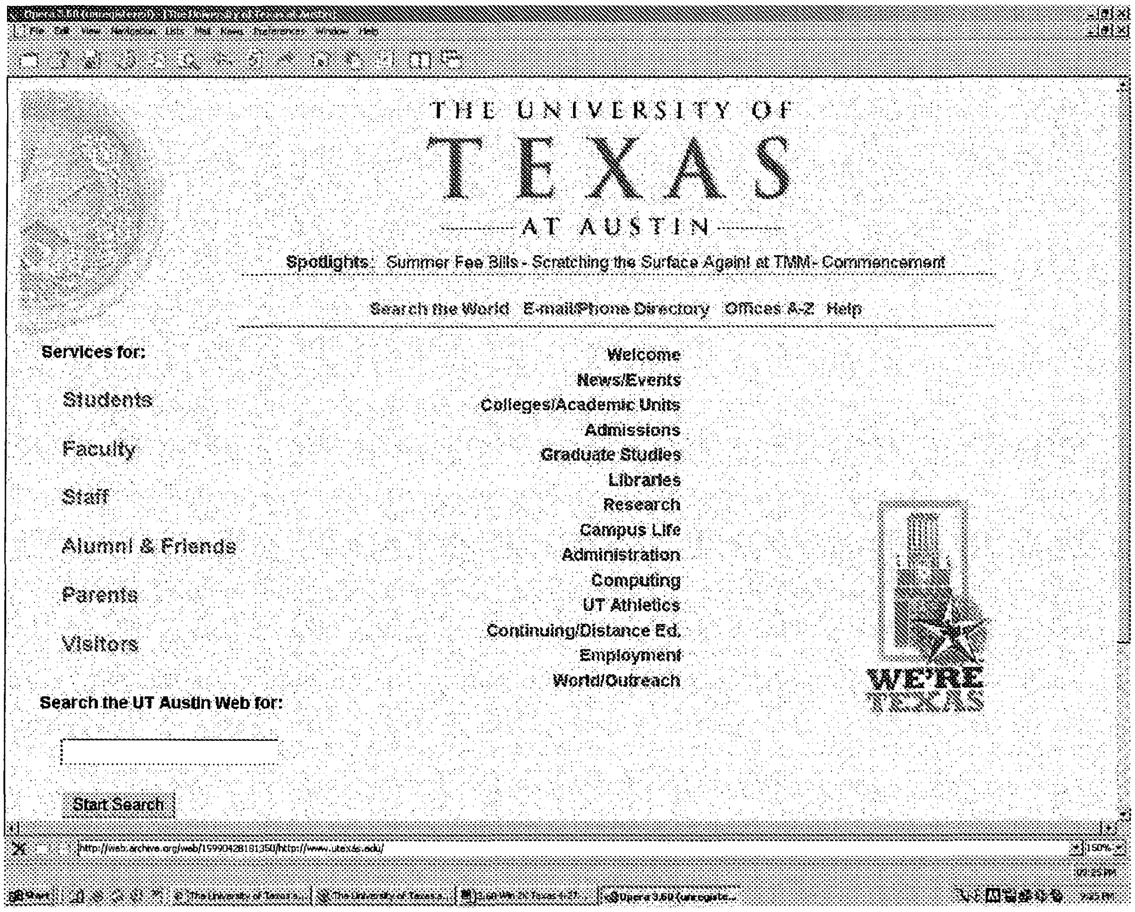
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



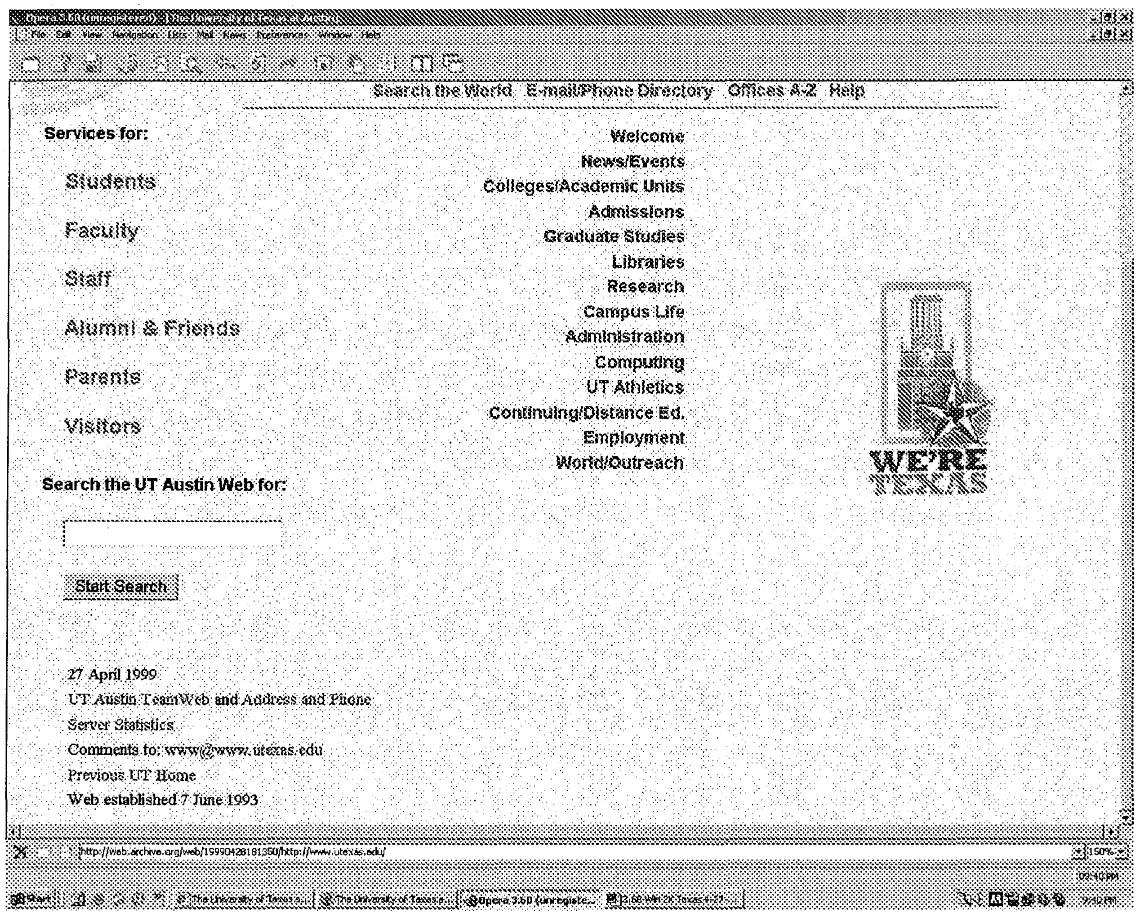
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 20%



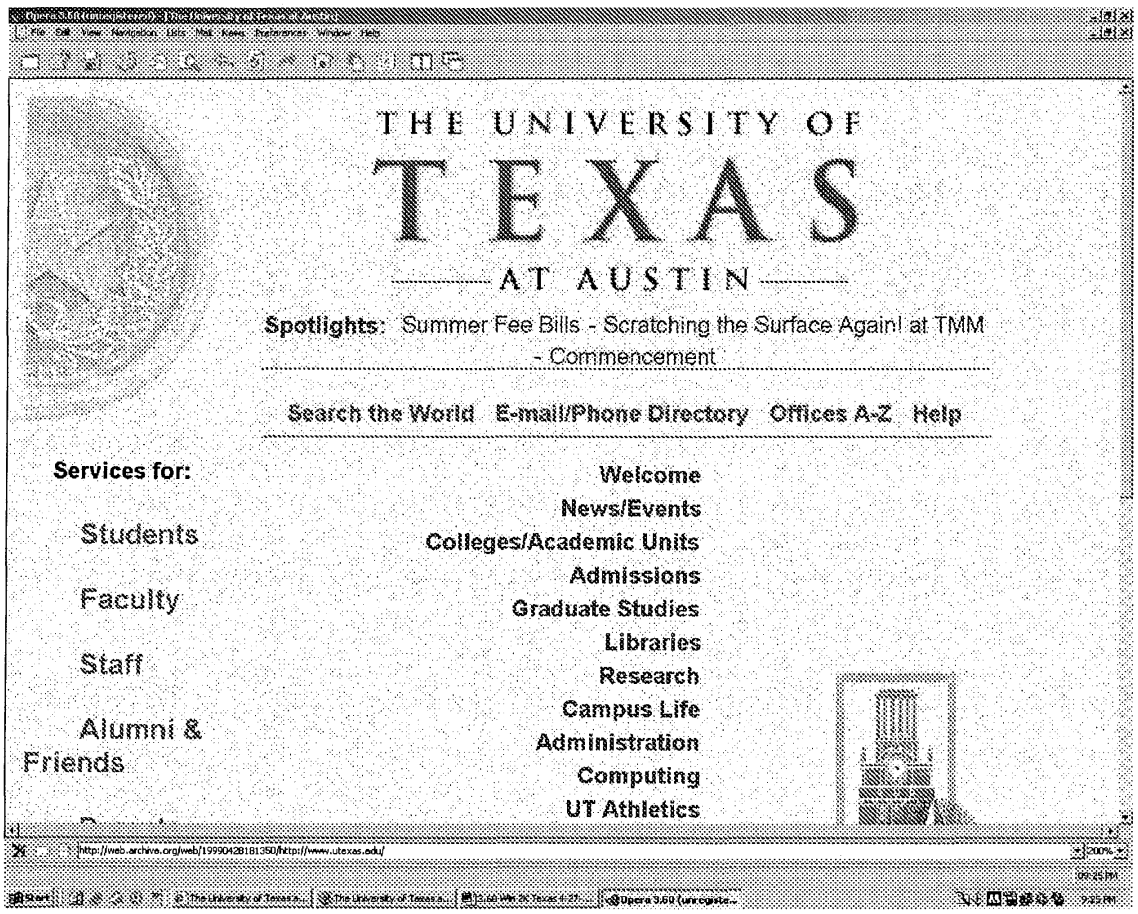
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



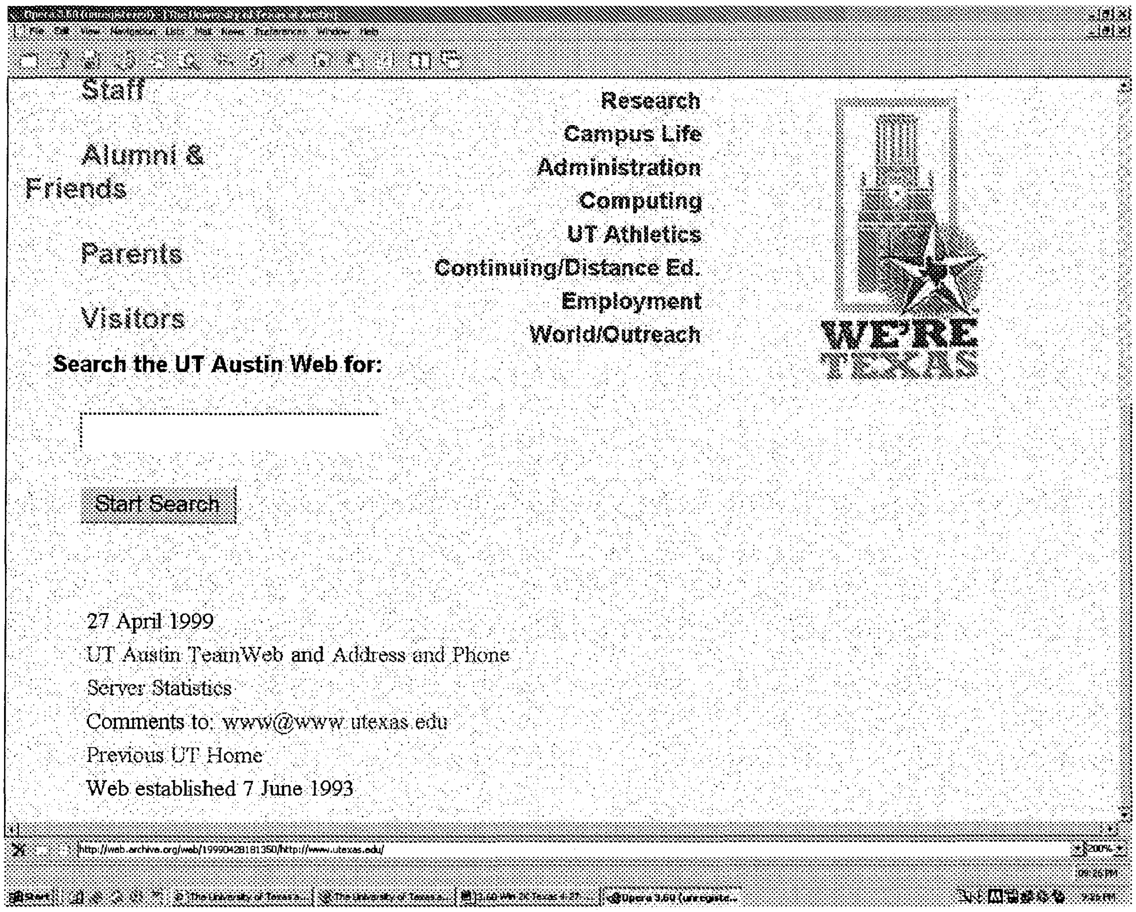
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



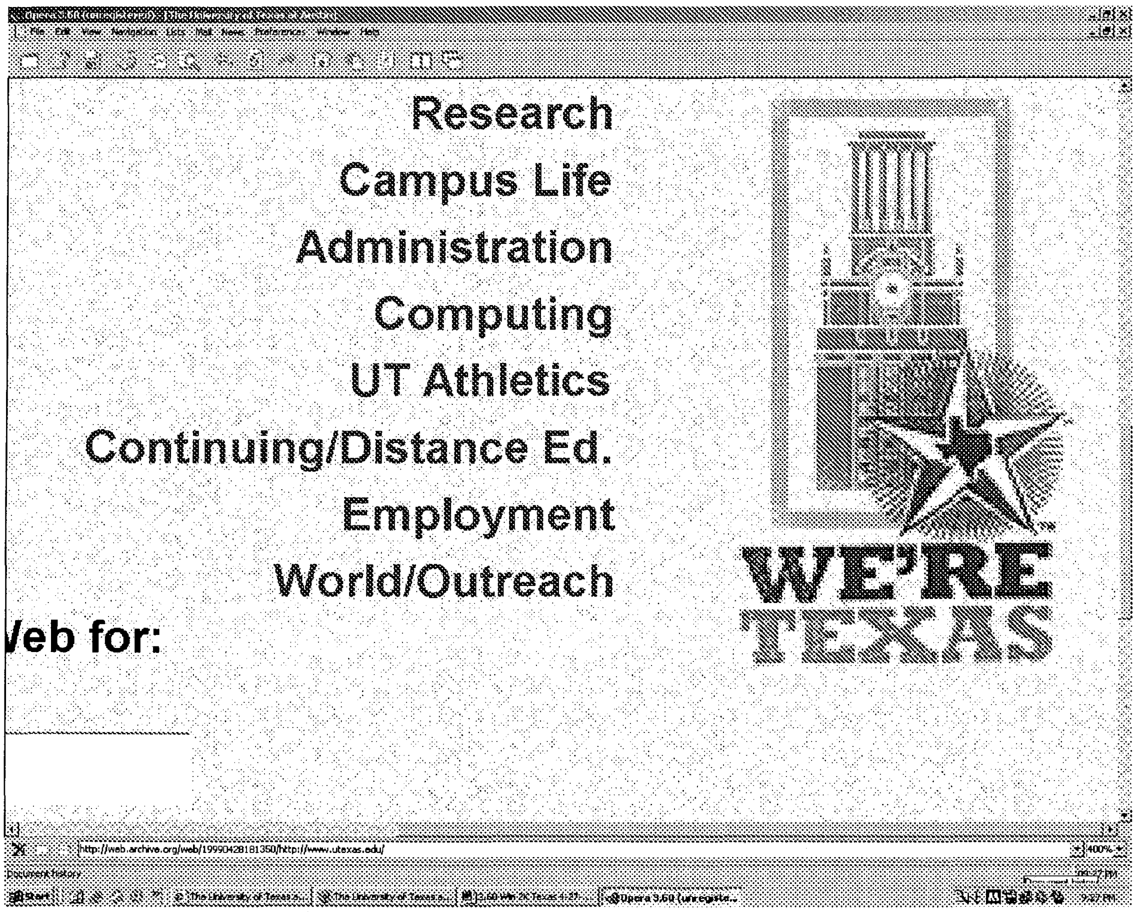
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



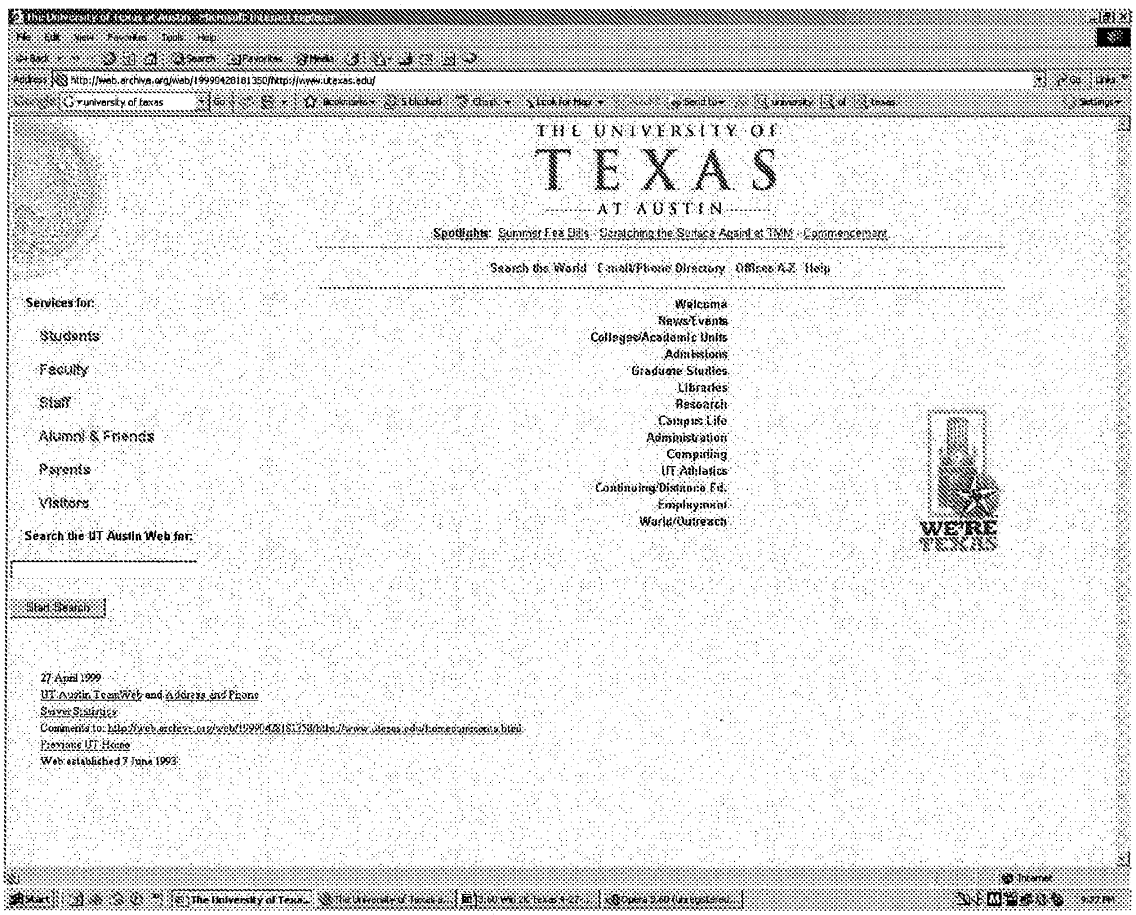
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



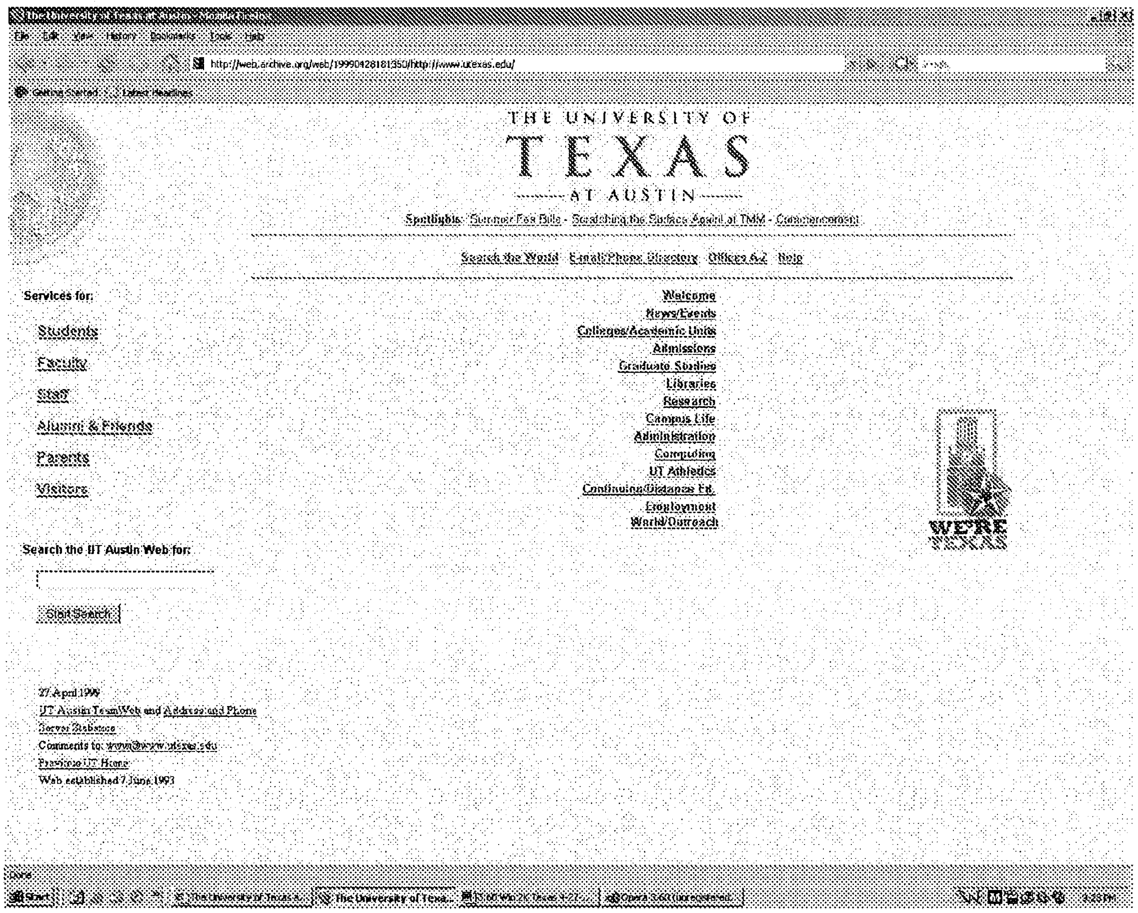
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 400%



Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



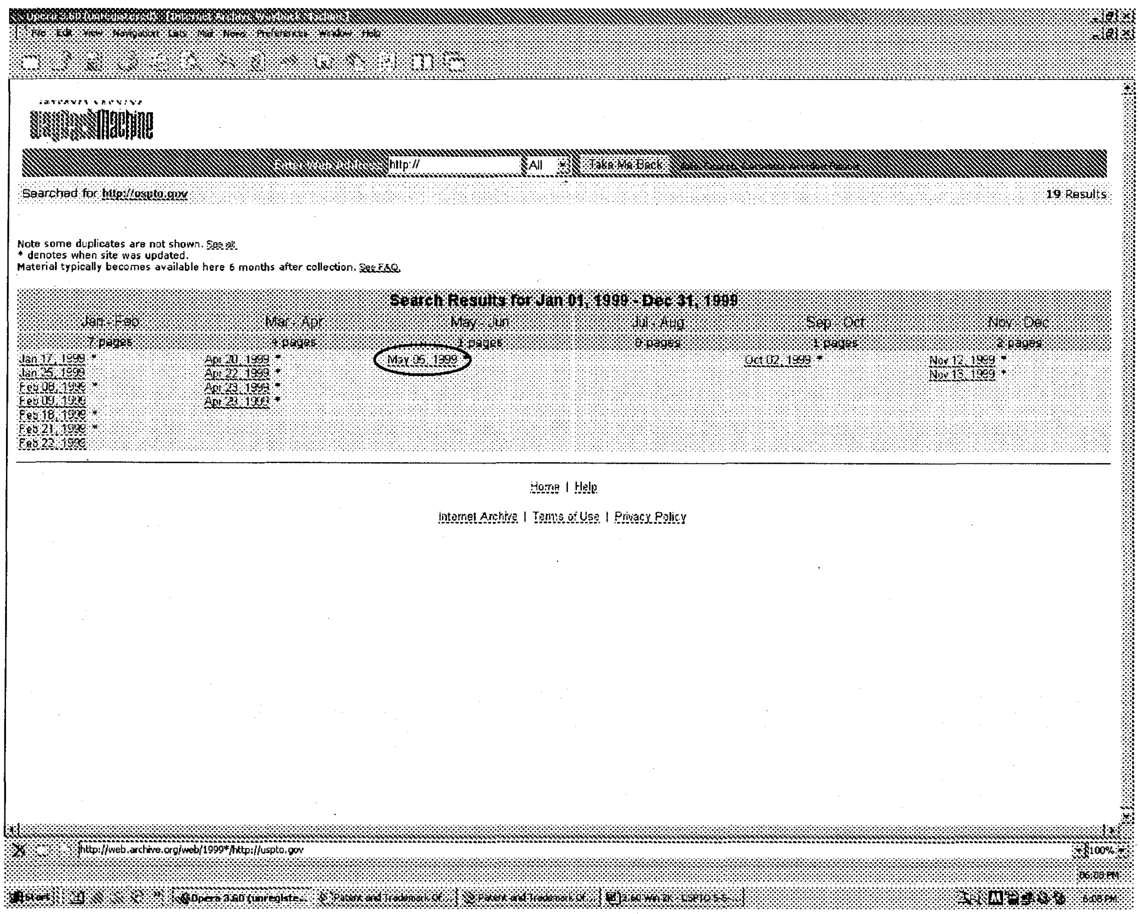
USPTO.gov – May 5, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990505222816/http://www1.uspto.gov/index.html

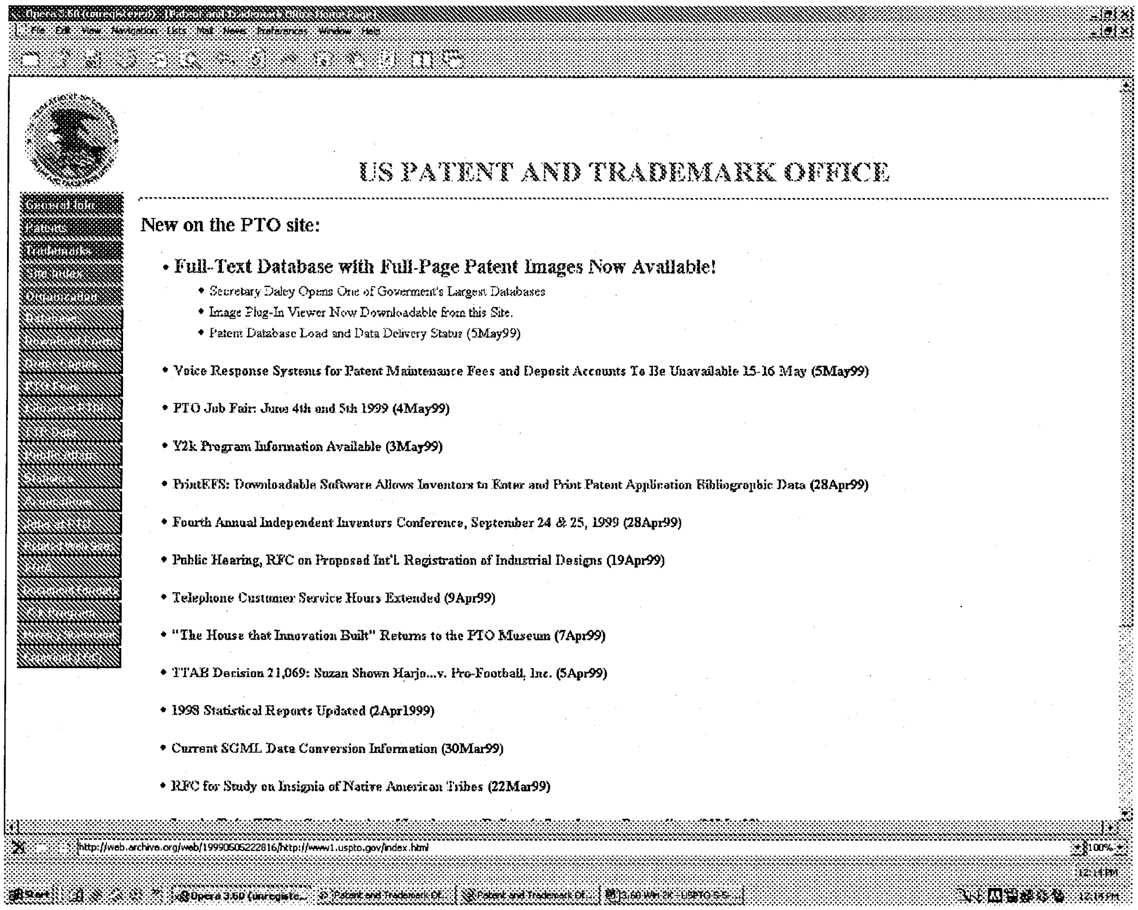
This corresponds to the www.uspto.gov page on May 5, 1999, as served by the Wayback Machine Internet Archive site.[1]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional

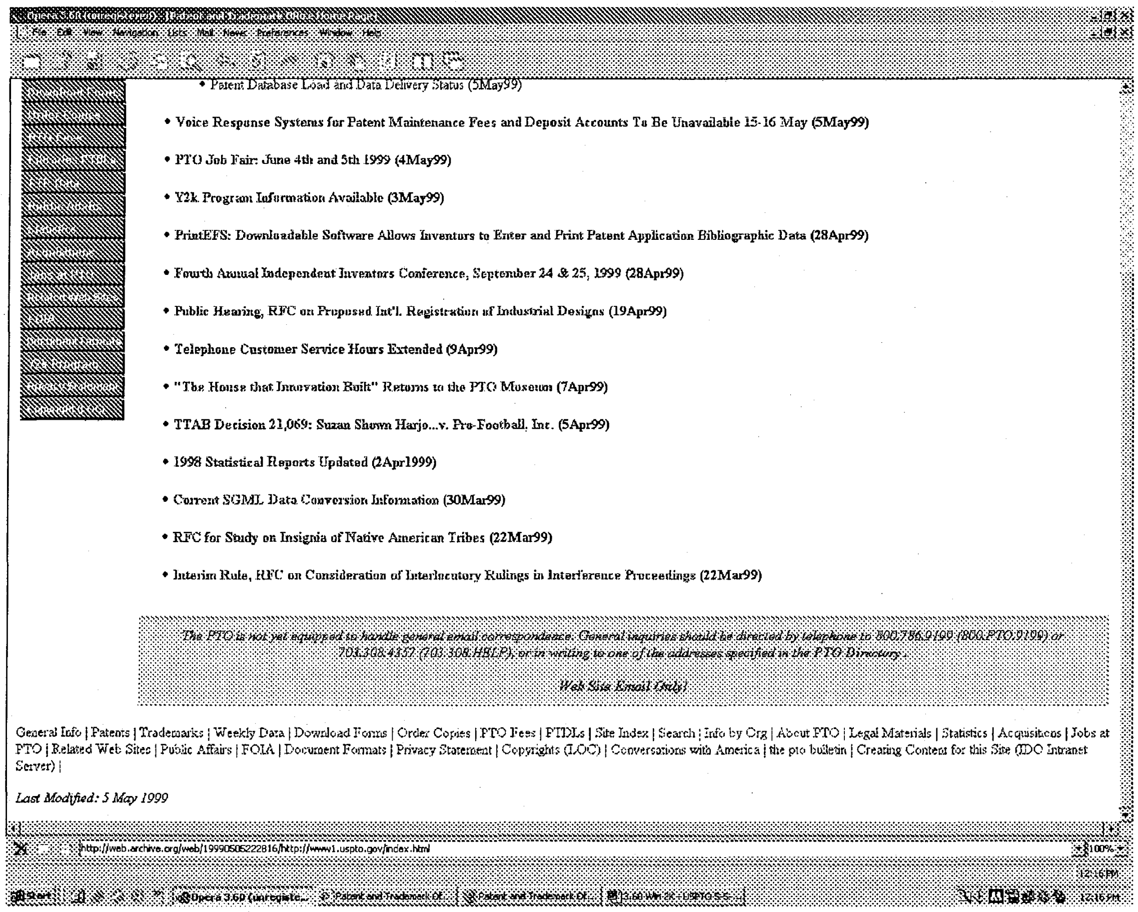


[1] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

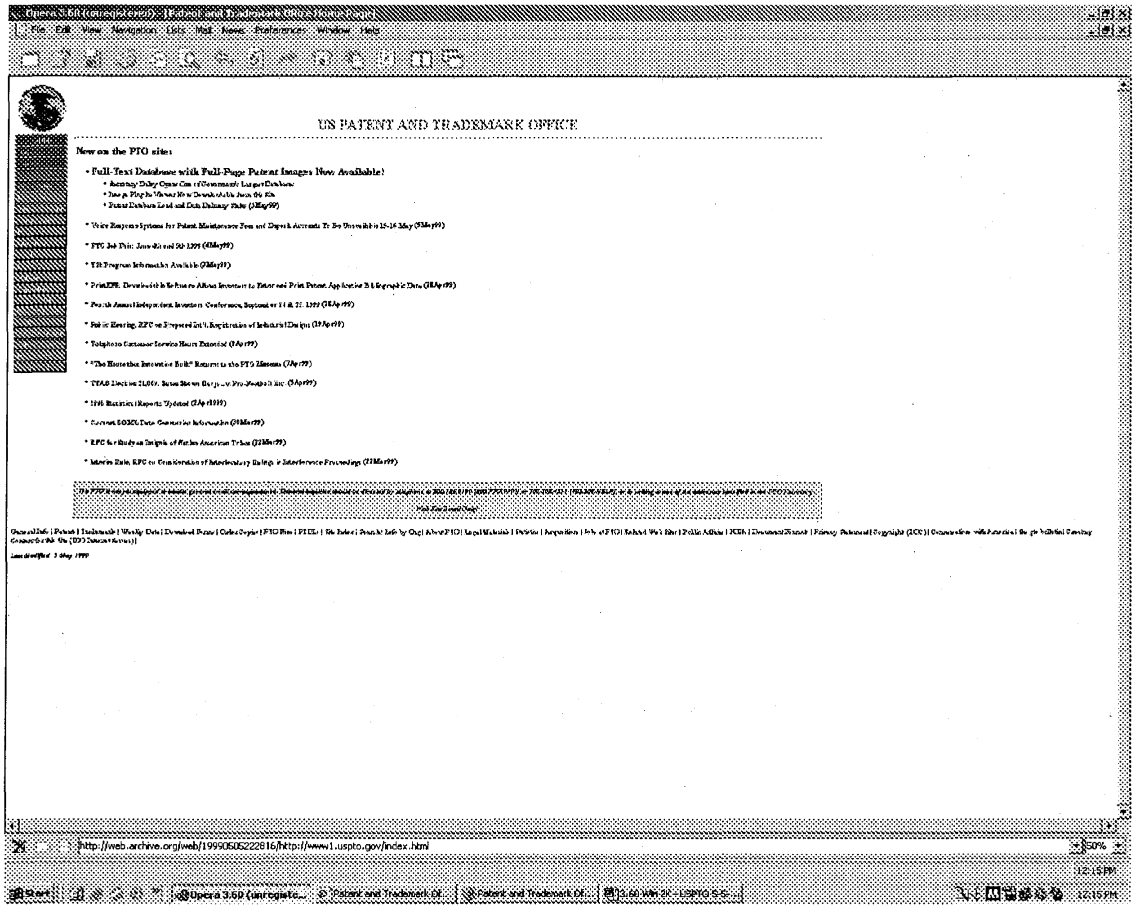
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



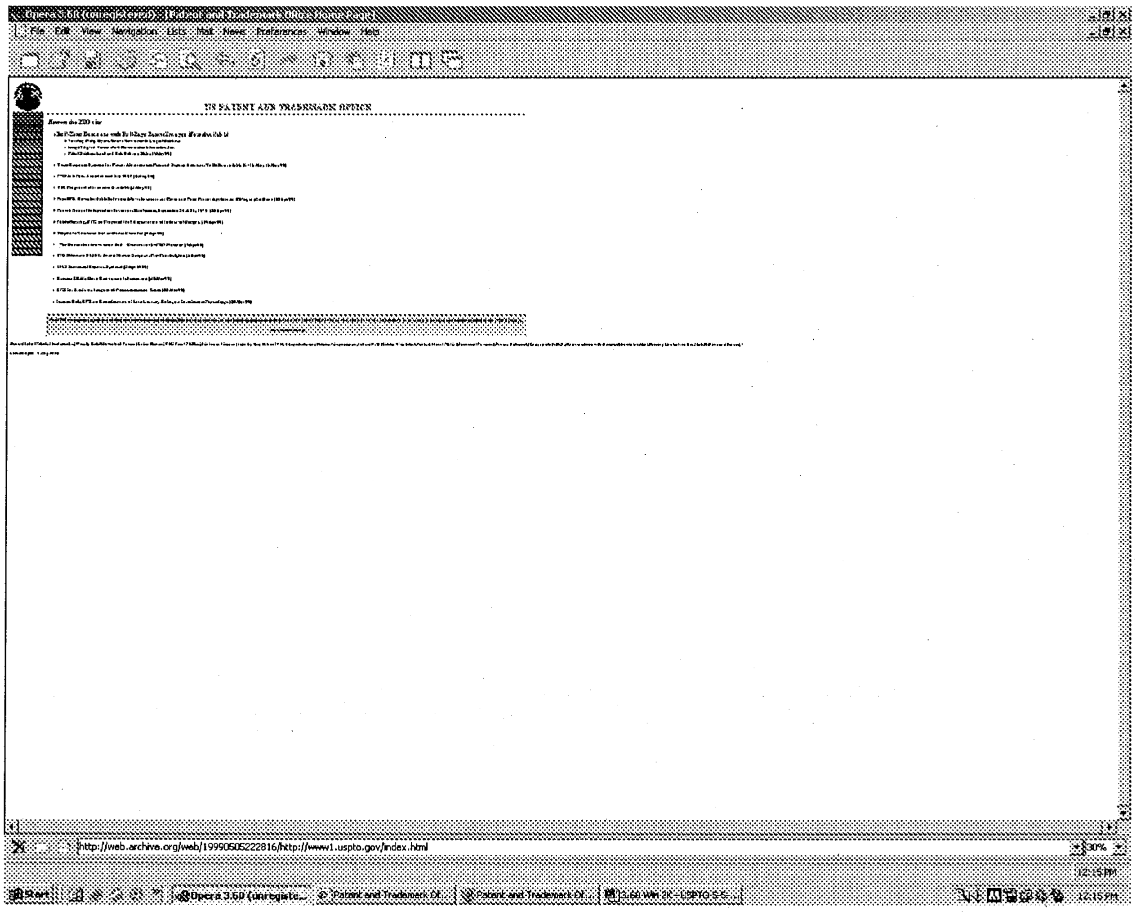
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



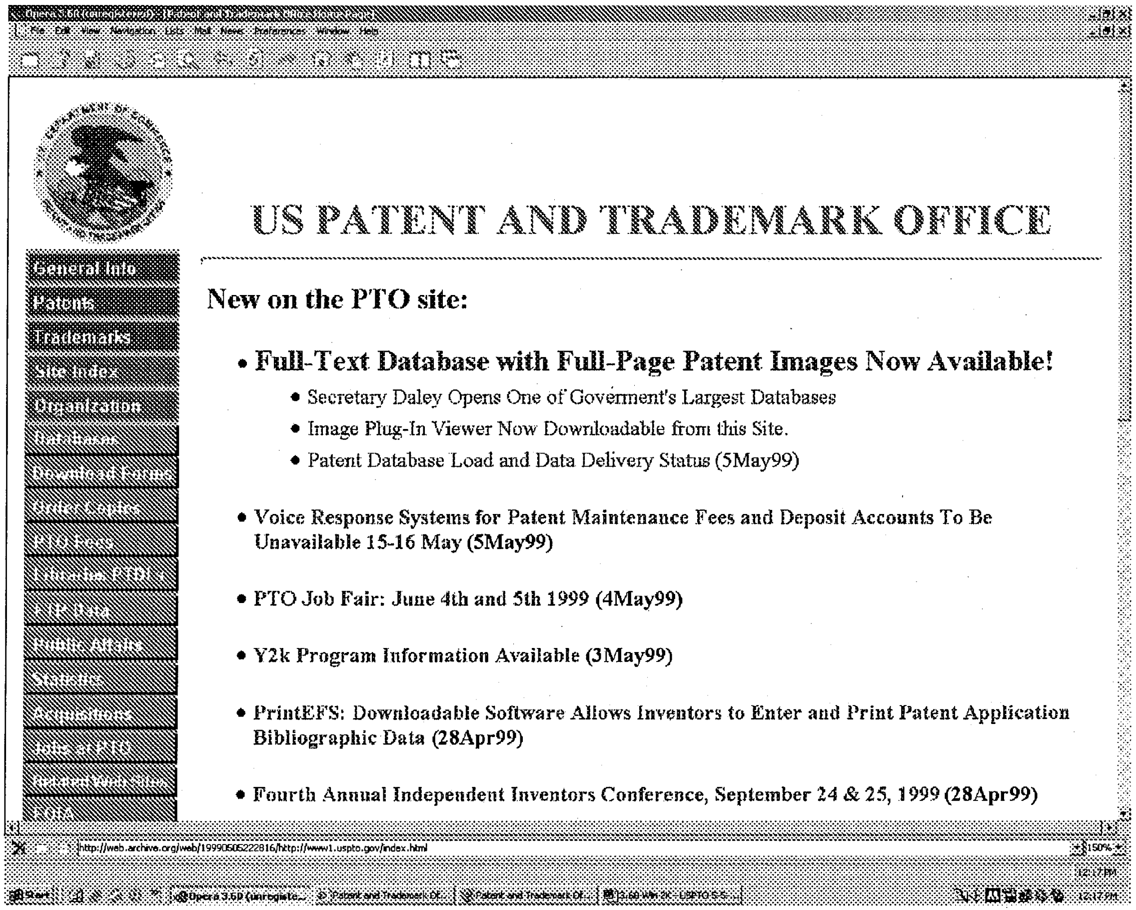
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



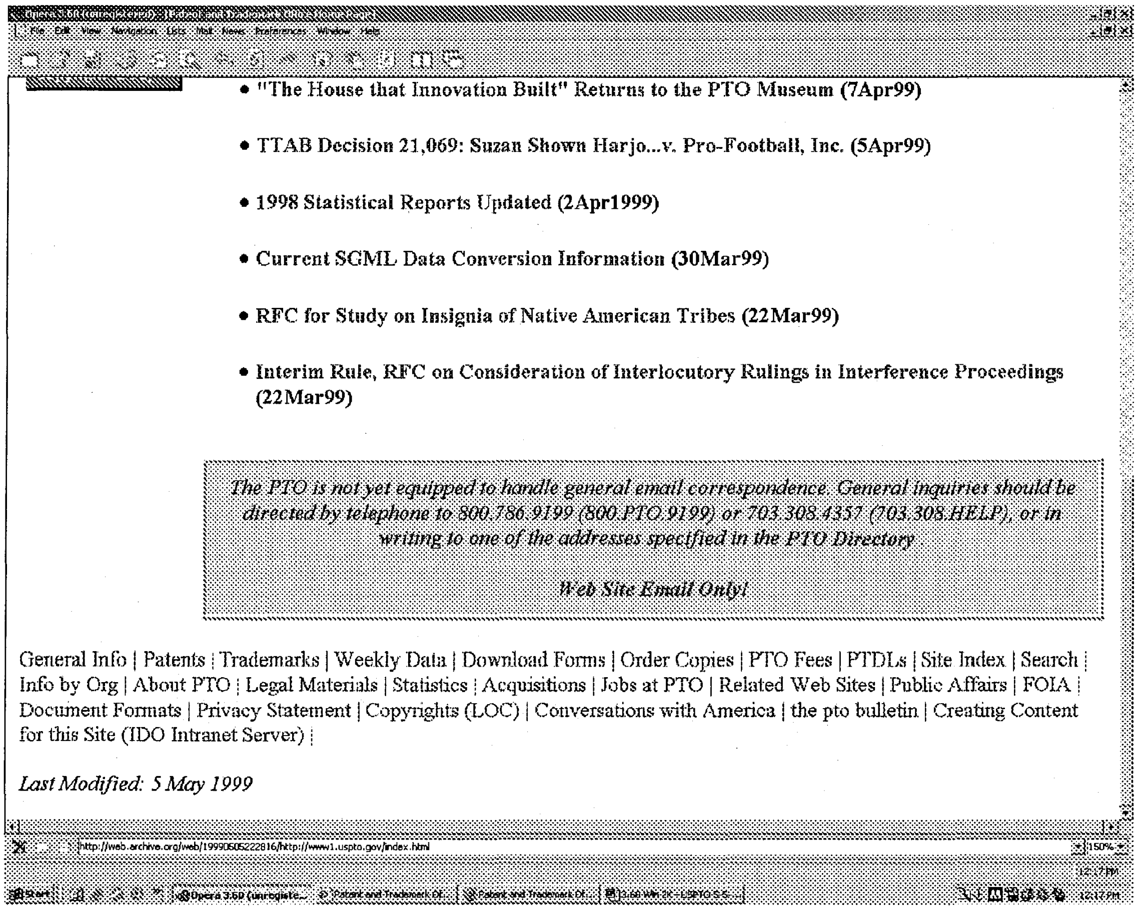
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



- **"The House that Innovation Built" Returns to the PTO Museum (7Apr99)**
- **TTAB Decision 21,069: Suzan Shown Harjo...v. Pro-Football, Inc. (5Apr99)**
- **1998 Statistical Reports Updated (2Apr1999)**
- **Current SGML Data Conversion Information (30Mar99)**
- **RFC for Study on Insignia of Native American Tribes (22Mar99)**
- **Interim Rule, RFC on Consideration of Interlocutory Rulings in Interference Proceedings (22Mar99)**

The PTO is not yet equipped to handle general email correspondence. General inquiries should be directed by telephone to 800.786.9199 (800.PTO.9199) or 703.308.4357 (703.308.HELP), or in writing to one of the addresses specified in the PTO Directory

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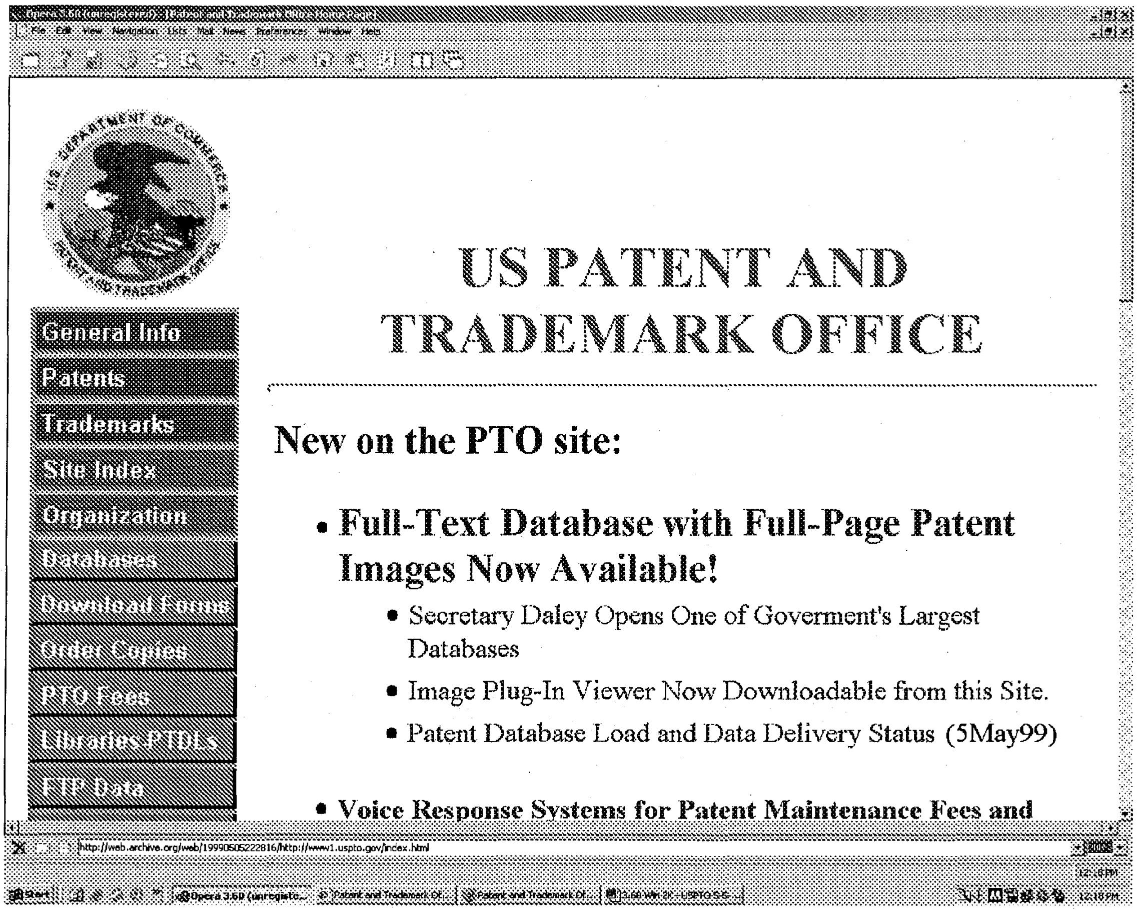
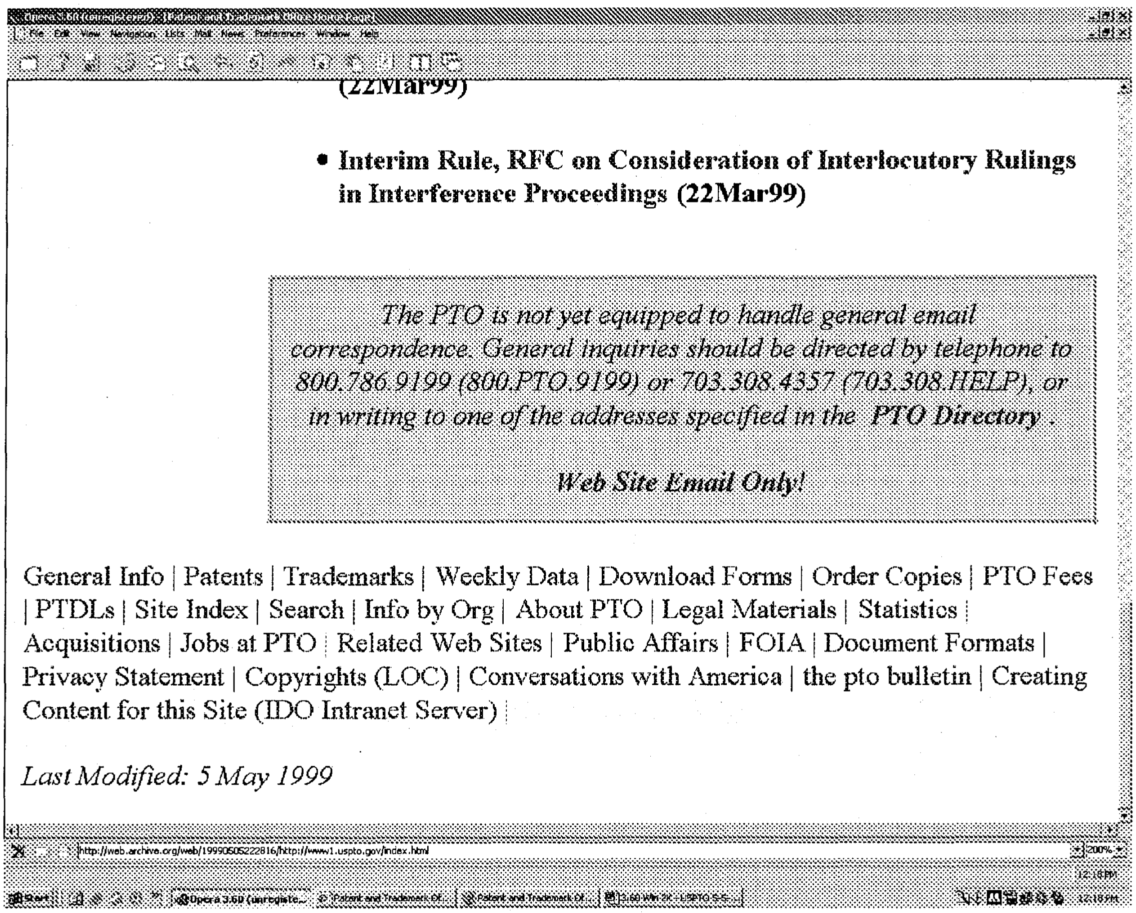
Last Modified: 5 May 1999

http://web.archive.org/web/19990505222816/http://www1.uspto.gov/index.html

Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%



(22Mar99)

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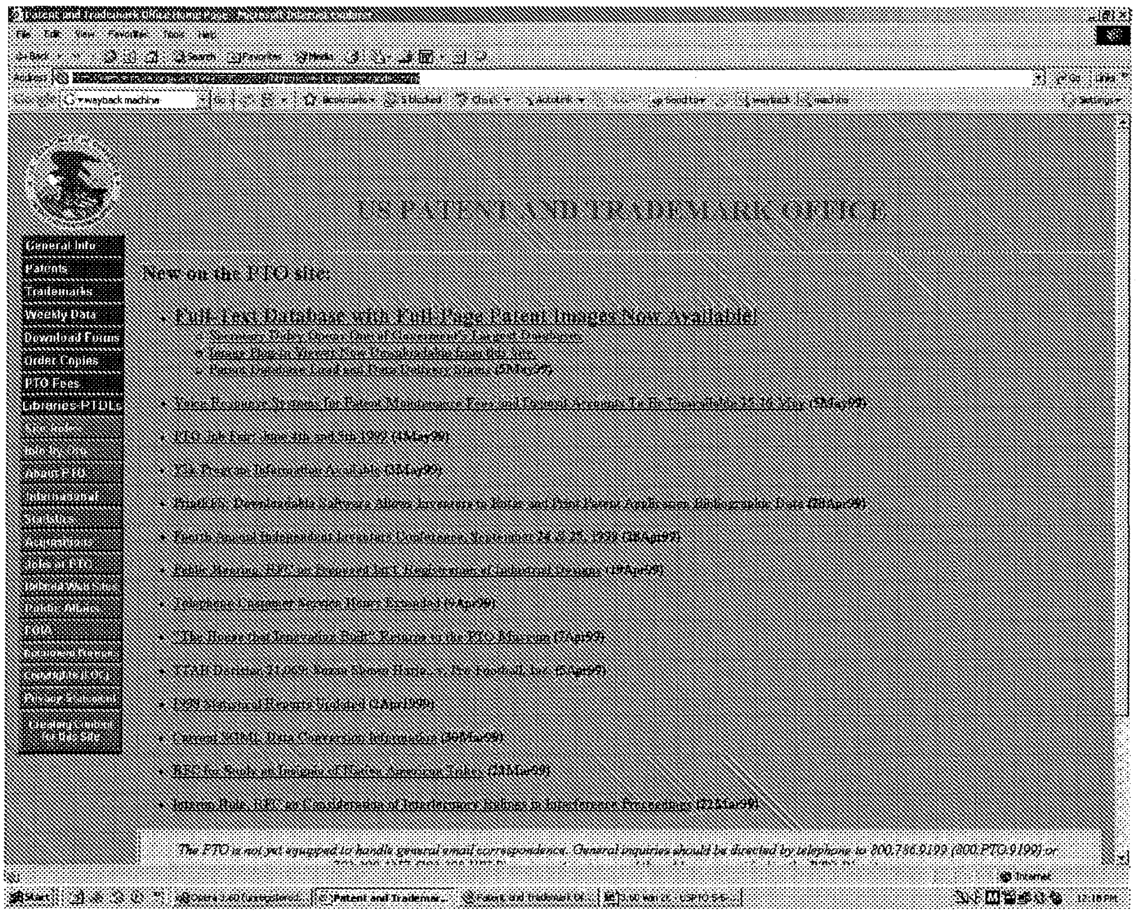
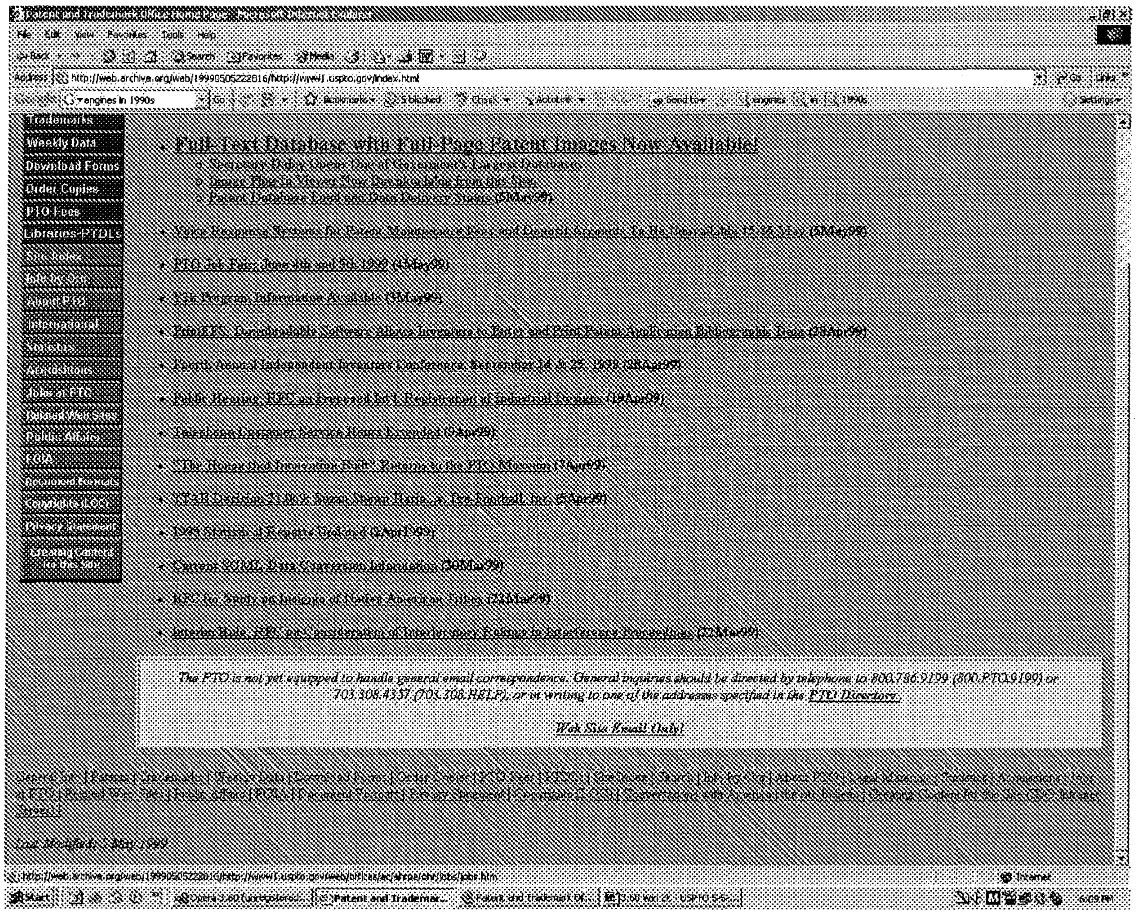
Last Modified: 5 May 1999

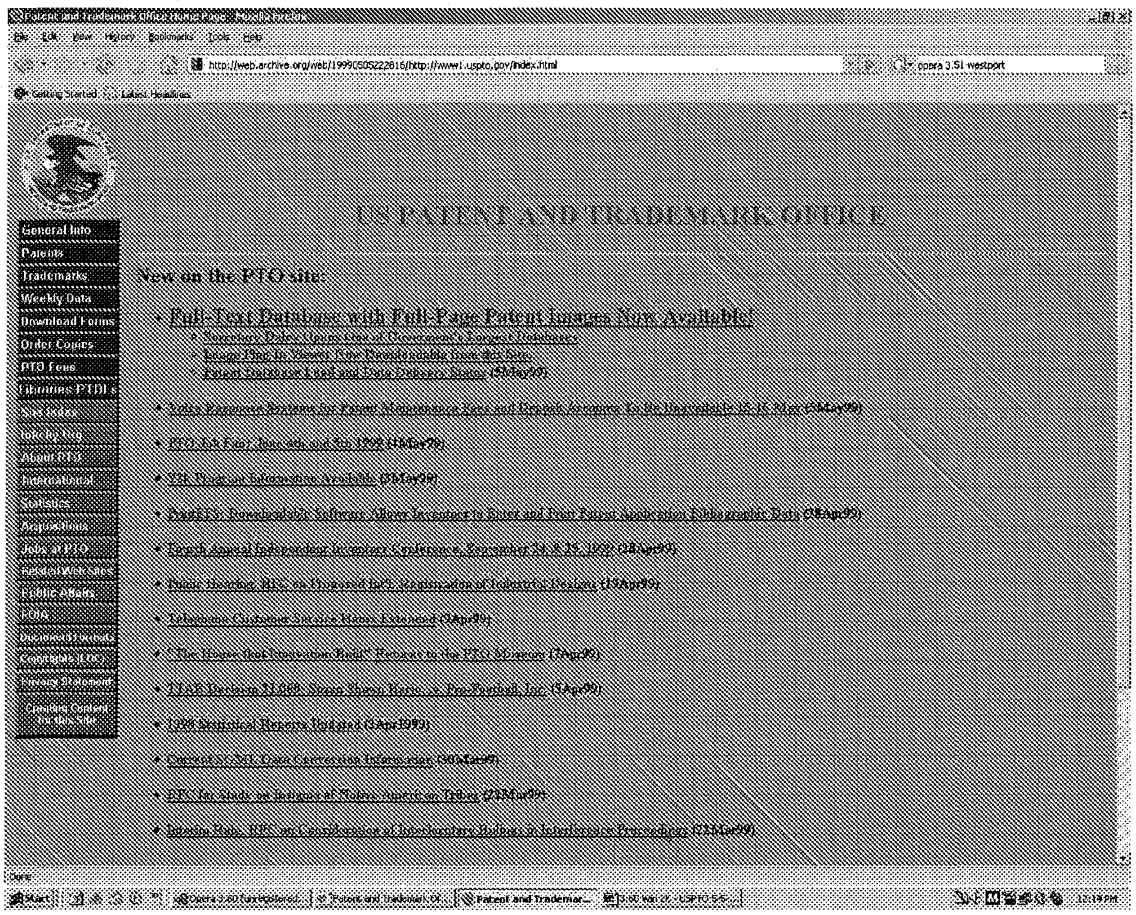
Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



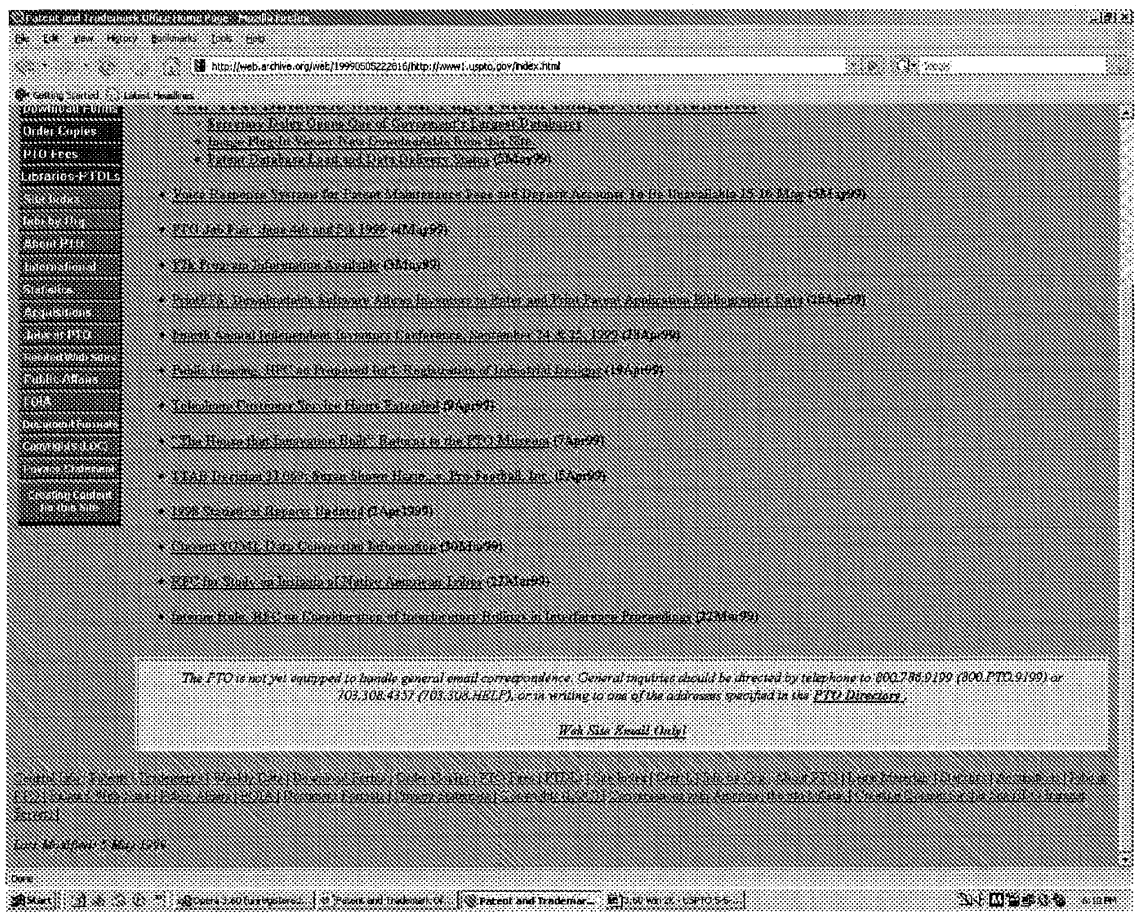
Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



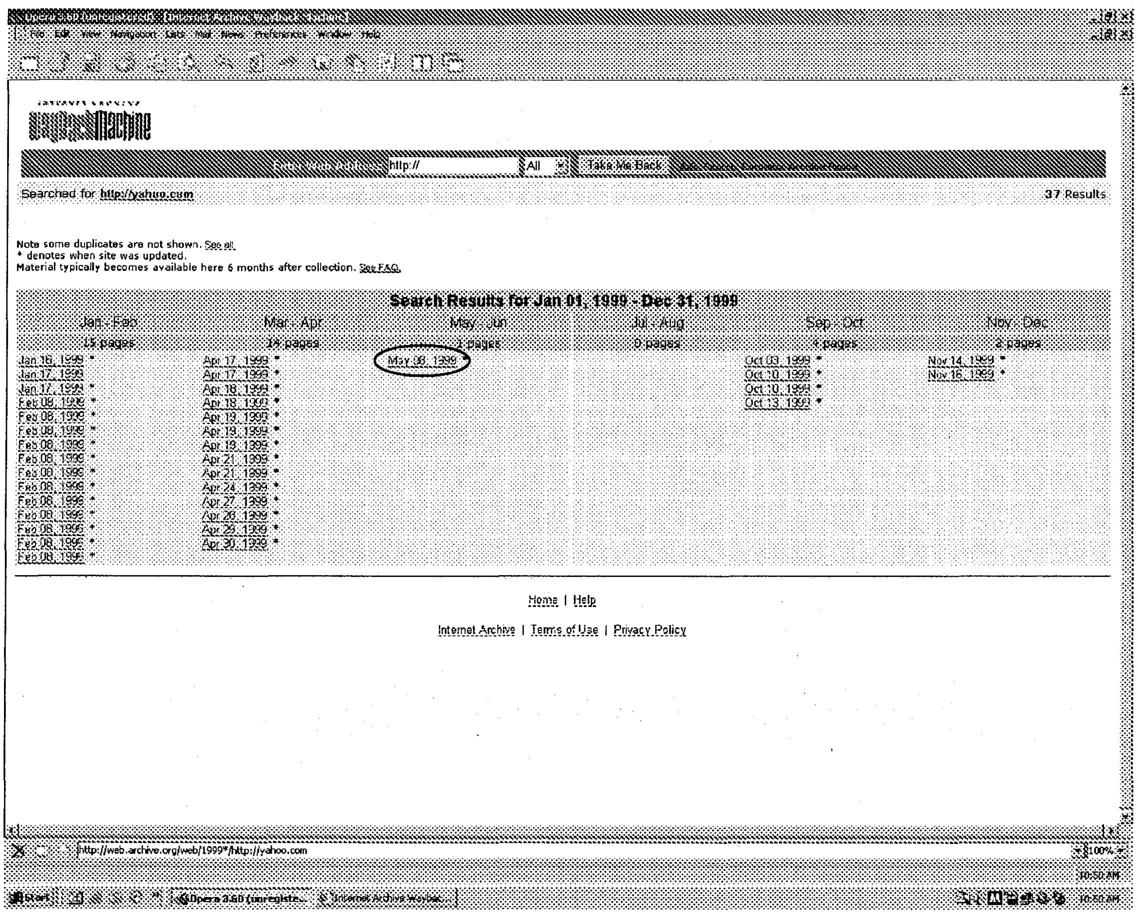
Yahoo.com.com – May 8, 1999

The following screenshots are of the page:

http://web.archive.org/web/19990508070818/http://www3.yahoo.com/

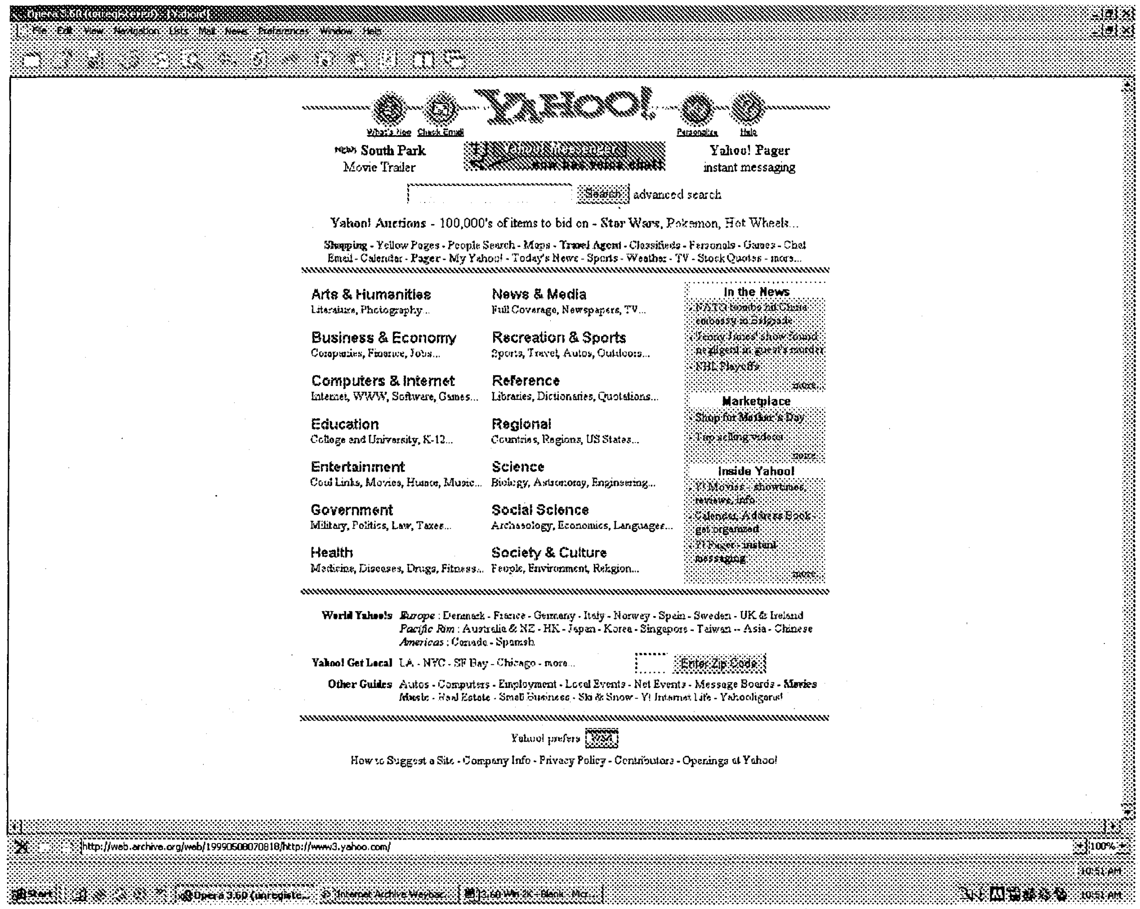
This corresponds to the www.yahoo.com home page on May 8, 1999, as served by the Wayback Machine Internet Archive site.[1]

Machine: Hewlett Packard Brio; Intel Pentium II, 160MB RAM
OS: Windows 2000 Professional

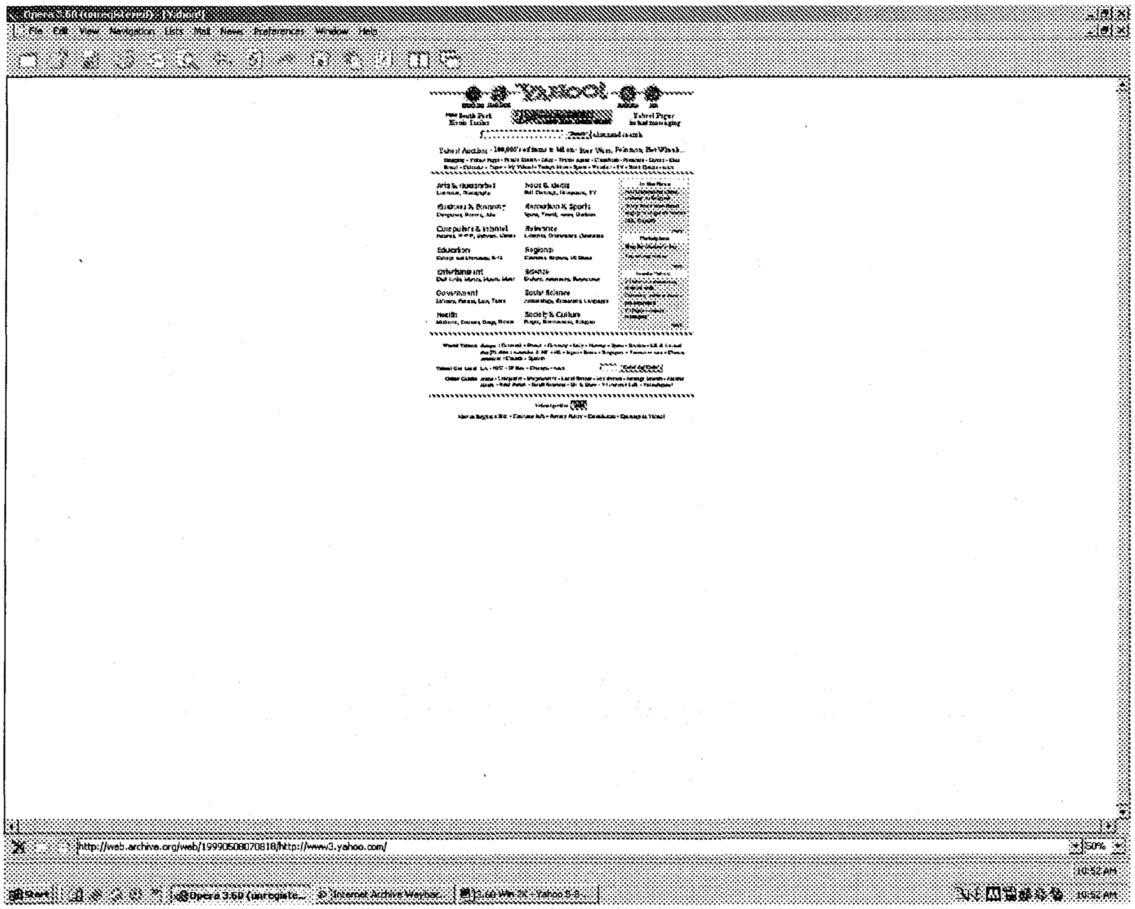


[1] It is noted the Wayback Machine augments the Web page source definition by adding some Javascript at the end of the source document – it does not appear the Javascript alters the appearance of the page.

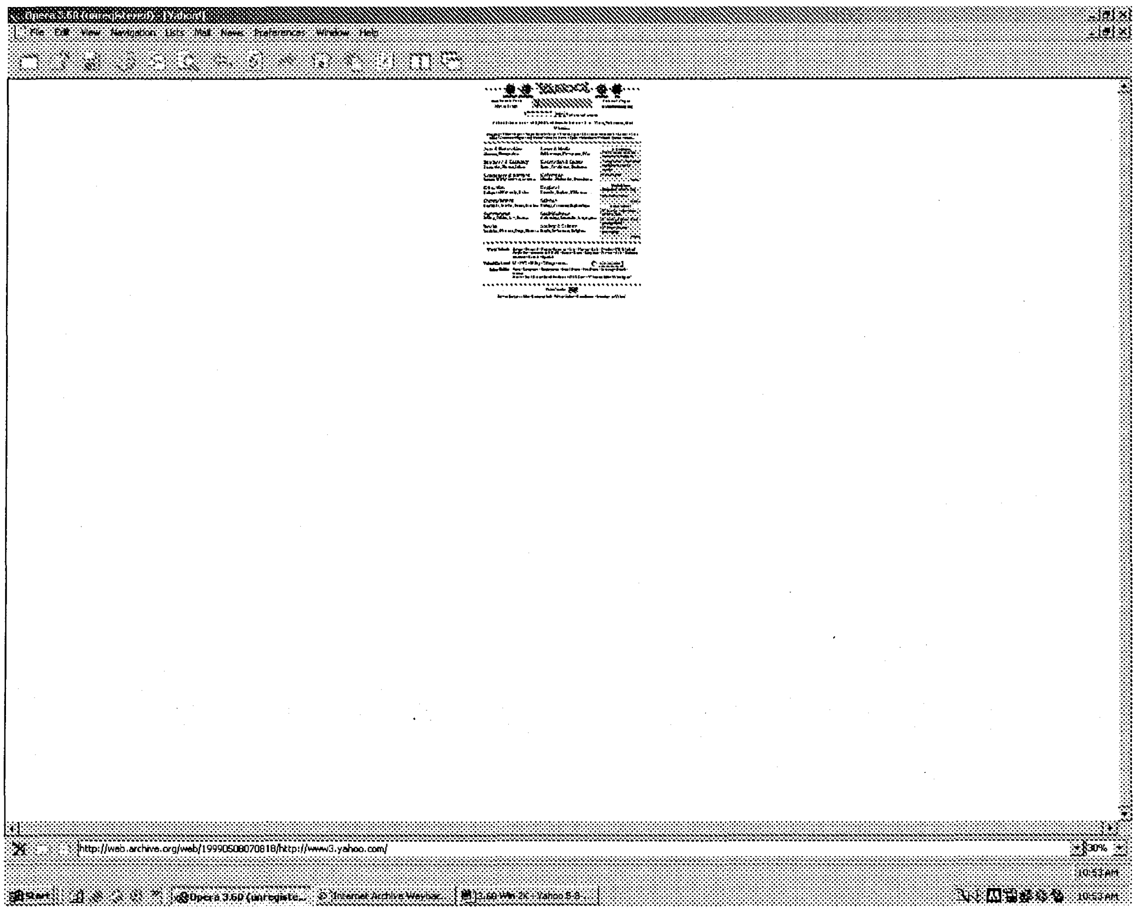
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 100%



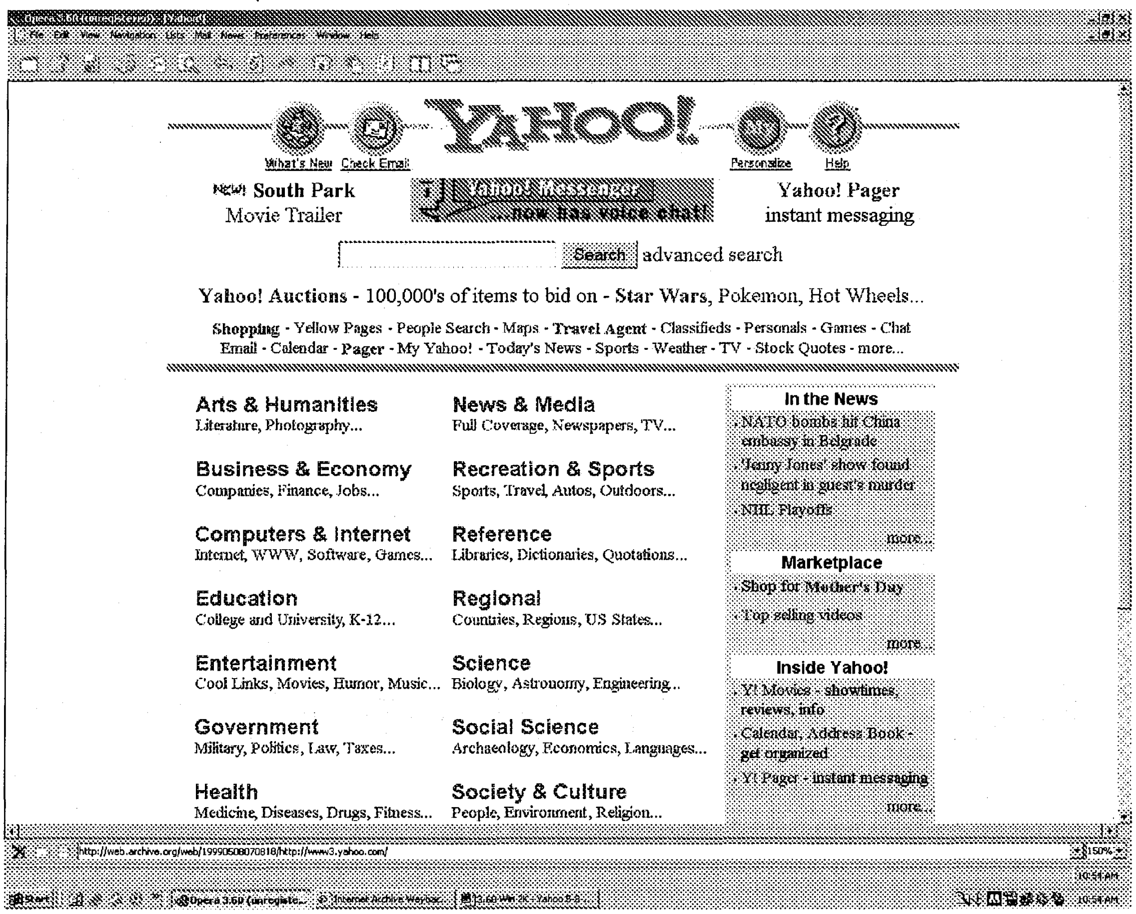
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 50%



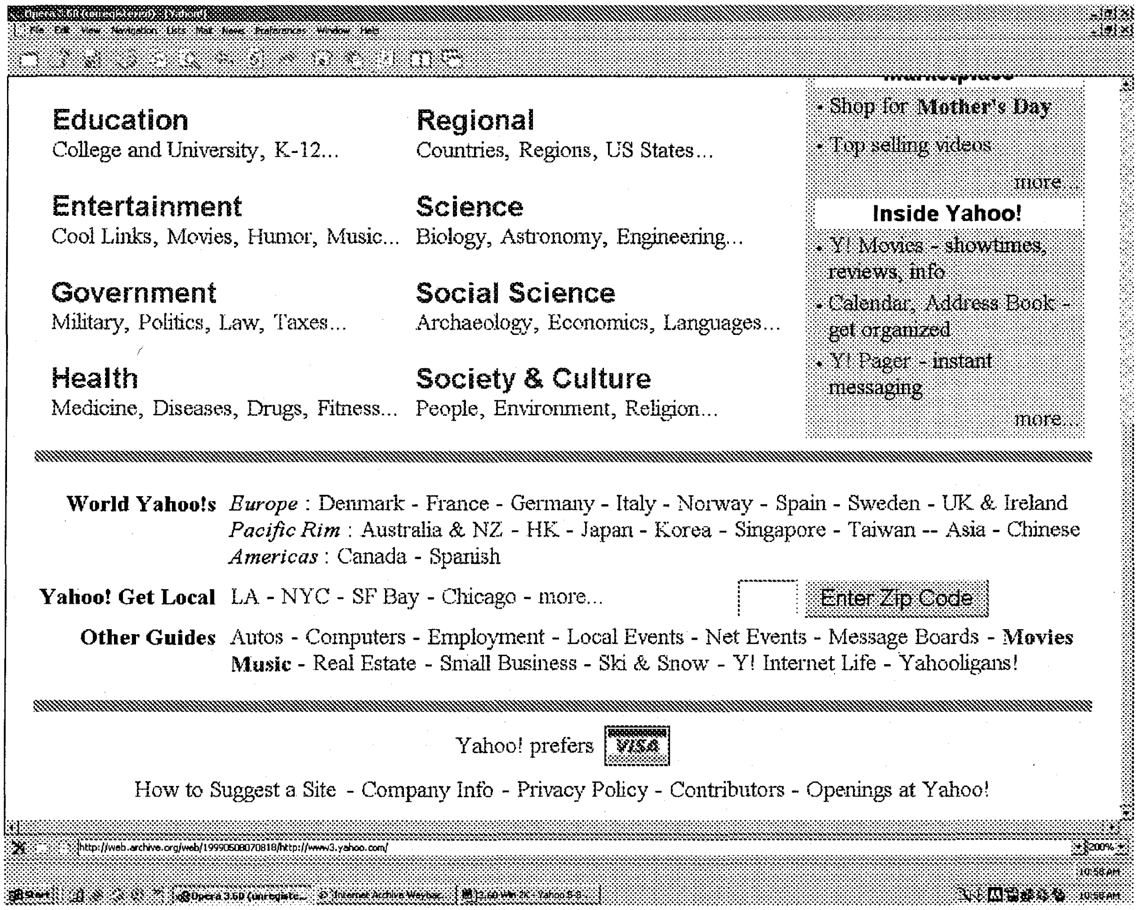
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 30%



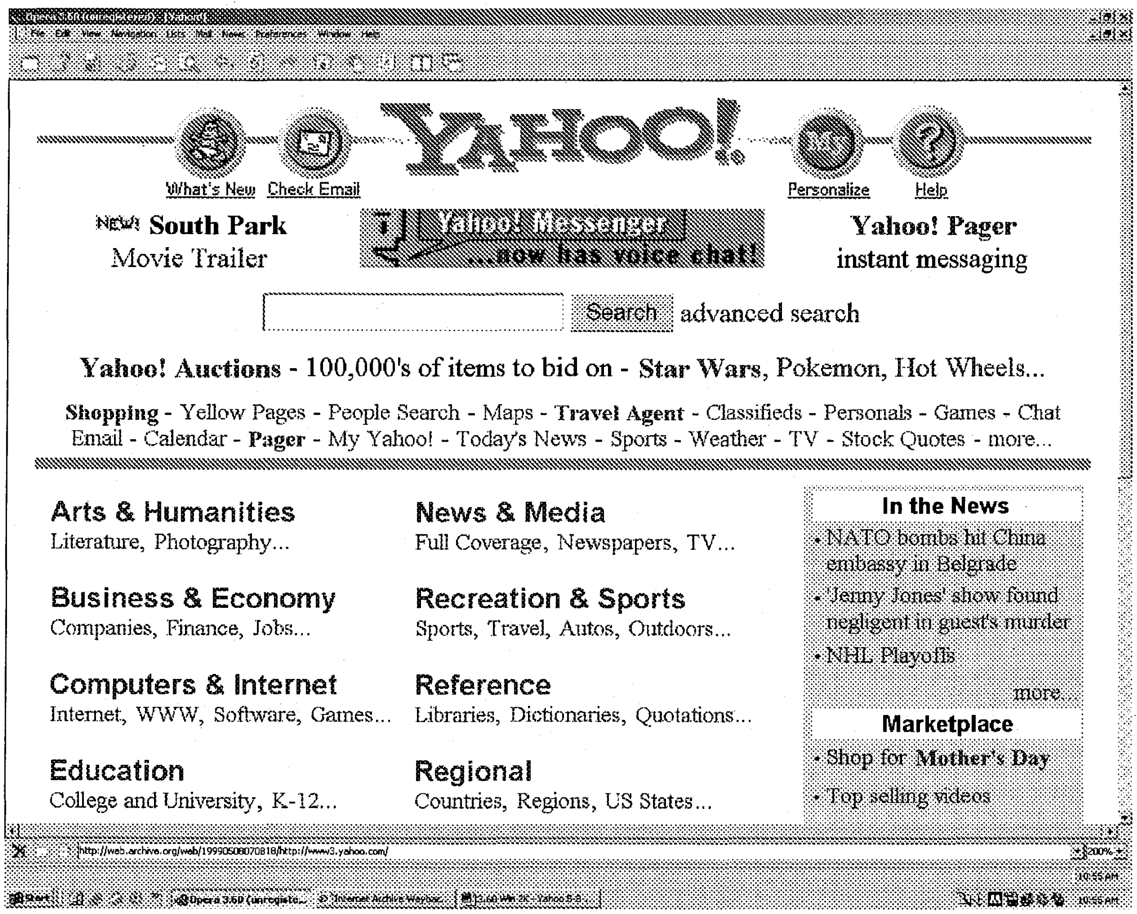
Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%



Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 150%

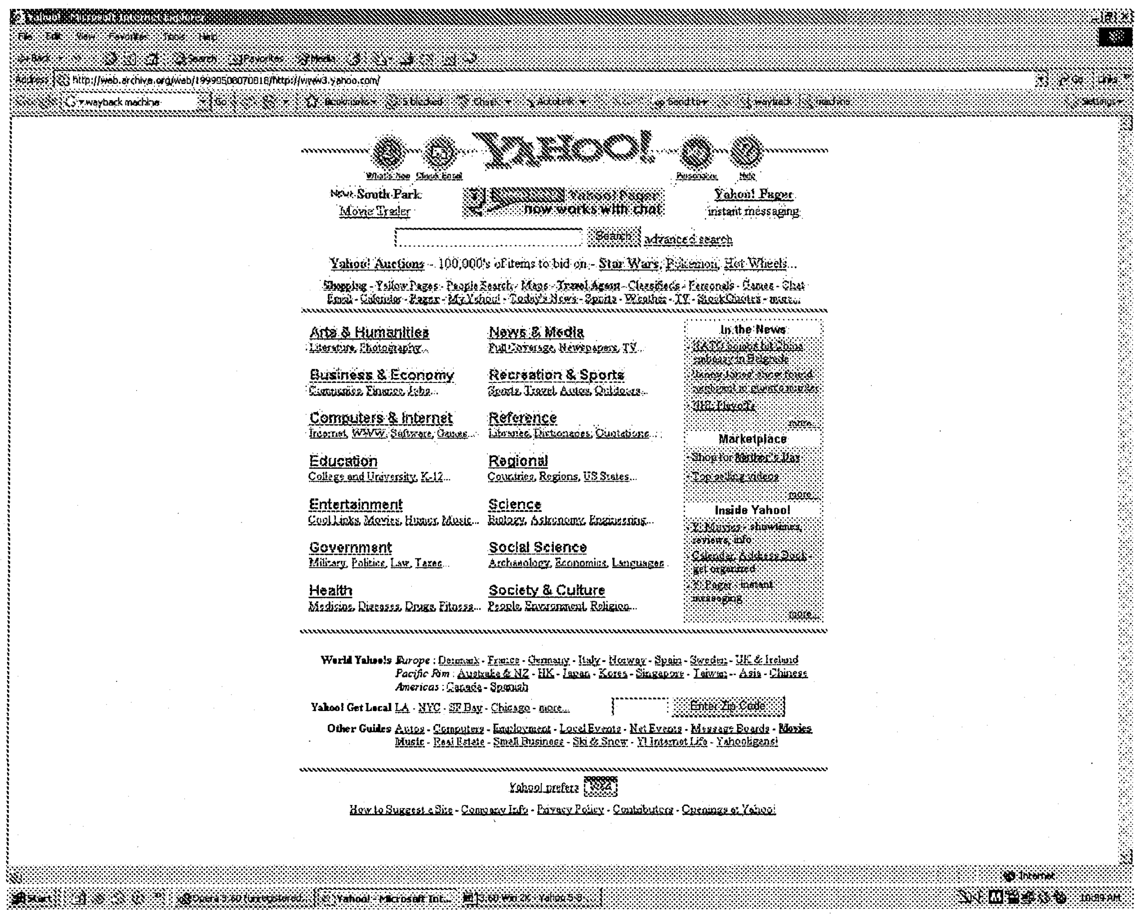


Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 200%

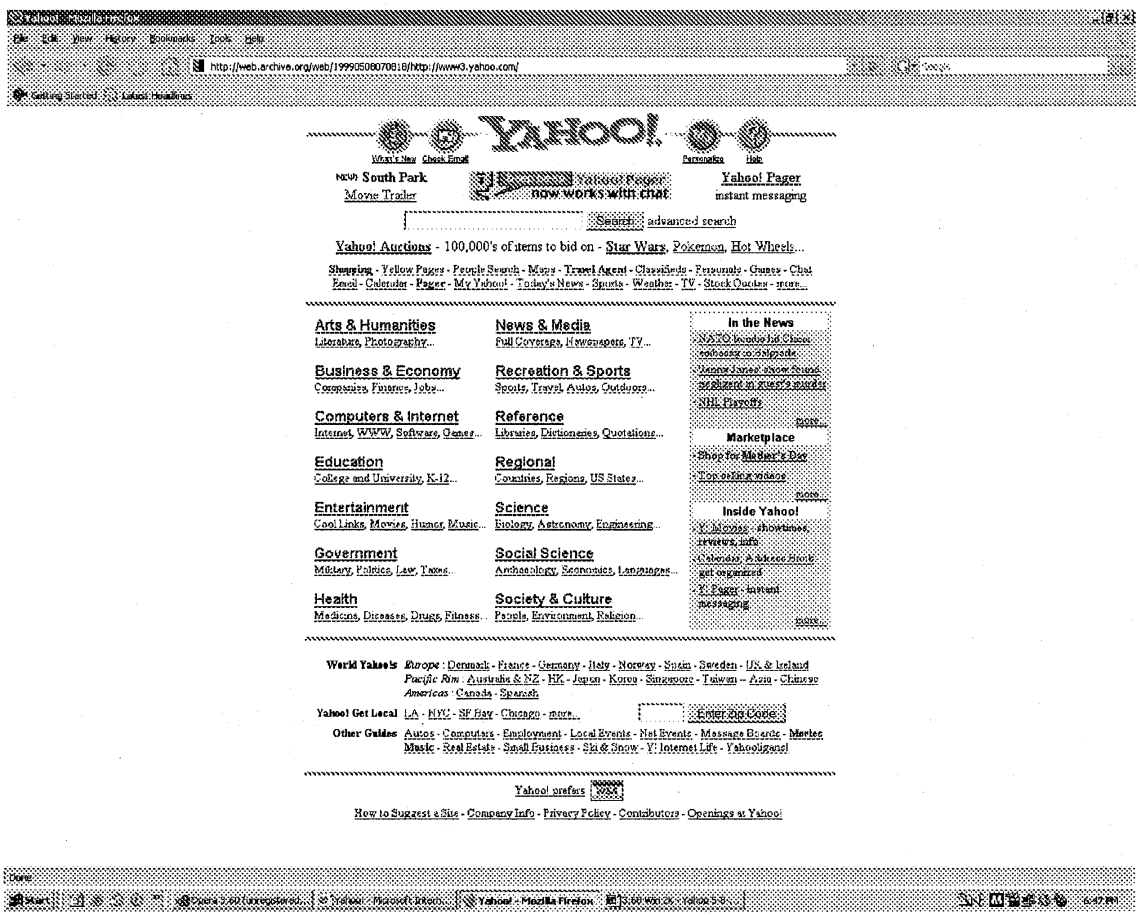


Browser: Opera 3.60
Resolution: 1280 x 1024
Zoom: 400%

Browser: Internet Explorer 6
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



Browser: Firefox 2.0
Resolution: 1280 x 1024
Zoom: 100% (as rendered)
This screenshot is provided for comparison purposes



OCTOBER 23, 2007
OFFICE ACTION

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/045,757	01/28/2005	Gary B. Rohrabaugh	7342.P001XD	4819

8791 7590 10/23/2007
BLAKELY SOKOLOFF TAYLOR & ZAFMAN
1279 OAKMEAD PARKWAY
SUNNYVALE, CA 94085-4040

EXAMINER	
TRAN, QUOC A	

ART UNIT	PAPER NUMBER
2176	

MAIL DATE	DELIVERY MODE
10/23/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 11/045,757	Applicant(s) ROHRABAUGH ET AL.
	Examiner Tran A. Quoc	Art Unit 2176

94

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *71-92 and 94-179* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *71-87,92,94-117,122-124,127-157 and 160-179* is/are rejected.

7)☒ Claim(s) *88-91, 118-121, 125-126, and 158-159,* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *31 August 2007* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *entry No. 13, 35-38, 47 and 48*.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application

6) ☐ Other: _____.

Applicant's Response

In Applicant's Response dated 09/31/2007, Applicant elected Group II without traverse (claims 71-150).

Applicant amends Claims 71,74, 76-79, 81-85, 91,96, 99, 101, 102, 105, 107, 108, 111-114, 121, 123, 128, 131, 134, 136, 140, and 143-147, and has cancelled claims 40-70, and 93, and claims 1-39 are previously cancelled and has added new claims 151-179.

Presently, claims 40-92, and 94-179 are pending in the present application. Claims 71, 99, 128, 140, and 174 are independent claims.

Preliminary amendments filed 08/31/2007, 07/1/2007, and 03/31/2007 are accepted in conjunction with the paper filed 09/31/2007.

It is noted the current application is a division of 09/878,097 now is US Patent 7,210,099 filed 06/08/2001 issued 04/24/2007, which is a continuation in part of 09/828,511, which Claims Priority from Provisional Application 60/211,019 filed ***06/12/2000***, which claims Priority from Provisional Application 60/217,345 filed 07/11/2000

It is noted the claimed limitations "*Java Virtual Machine*" of claims 94, and 124 are not benefit from No. 09/878,097 now is US Patent 7,210,099 filed 06/08/2001 issued 04/24/2007, which is a continuation in part of 09/828,511, which Claims Priority from Provisional Application 60/211,019 filed ***06/12/2000***, which claims Priority from Provisional No. 60/217,345 filed 07/11/2000, evidence is based upon the current application disclosure Vs all the CIP No. 60/217,345, disclosures, (see the current application specification at Para 38, 54, and 94, discloses, " *the client-side viewer may be deployed as a standard browser plug-in, or Java applet for extending browser functionality, and scripting language code, such as JavaScript*" which was not previously disclose anywhere in all of the parent's application disclosure.

Information Disclosure Statement

The signed and dated copies of applicant's IDS, which were filed on 01/28/2005, 09/17/2007, 09/18/2007, 09/20/2007, 09/20/2007, and 10/05/2007 (2), are attached to this Office Action.

It is noted, a portion of the references cited in the Information Disclosure Statement filed 09/18/2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because many of the references (items 1-11 of the NPL documents) do not list the publication date for the reference. The examiner has not considered, and has lined through, that portion of the Information Disclosure Statement as to the merits.

Applicant is advised that the date of any re-submission of any item of information contained in this Information Disclosure Statement or the submission of any missing elements will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Claims Rejections – 35 U.S.C. 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

Claims 71-73, 75, 79, 81-82, 87, 99, 105, 109-114, 118, 123, 125, 158, 133, 135-136, 143-147, 151, 156, 174-175, and 179 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because of the following:

Claim 71, recites the limitation "substantially" in Pages 2 and 3, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Also claim 71, recites the limitation "may be" in Page 2, renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 71, recites the limitation "web content" and "web page" in Pages 2-3. There are insufficient antecedent basis for this limitation in the claim.

Claim 73, recites the limitation "substantially" in Page 3, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 75, recites the limitation "and/or" in Page 3, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 79, recites the limitation "substantially" in Page 3 renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 81, recites the limitation "higher" in Pages 4-5, renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 82 recites the limitation "substantially" in Page 5 renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 87, recites the limitation "rapid" in Page 6, renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 99 recites the limitation "and/or" in Page 9, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Also claim 99, recites the limitation "may be" in Page 8, renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 105 recites the limitation "and/or" in Page 10, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claims 109-114 recites the limitation "and/or", "higher", and "substantially" in Pages 10-12, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 118 recites the limitation "its" in Page 13, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 123 recites the limitation "substantially" in Page 14 renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claims 125 and 158 recite the limitation "*HTML-based content comprises XML-based content*" in Pages 15 and 20 renders the claim indefinite. Sine the current Application merely discloses, discloses "*a scalable vector representation of the web page is generated in a block 114 by an HTML translator 58. In brief, HTML translator 58 translates HTML, XML, and cascaded style sheet (CSS) layout content into a scalable vector representation, such as SVF*" See current discloses Para 4, 54, and 58, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 128 recites the limitation "and/or" in Page 15, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Also claim 128, recites the limitation "may be" in Page 15, renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claims 133 and 135 recite the limitation "substantially" in Page 16 renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 136 recites the limitation "higher" and "substantially" in Pages 16-17, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 143 recites the limitation "it", and "may be" in Page 18, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claim 144 recites the limitation "higher" and "substantially" in Page 18, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claims 145-147, 151, 156, recite the limitation "and/or", "higher", and "substantially" in Pages 18-20, renders the claim indefinite. Sine the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Claims 174, 175, and 179 recite the limitation "its", "may be" and "substantially" in Page 18, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. See also, MPEP 706.03(d).

Also, claims 71-92, and 94-179 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because of the following:

Claims 71-92, and 94-179 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. A single claim which claims both an apparatus and the method steps of using the apparatus is indefinite under 25 U.S.C. 112, second paragraph. See, Ex Parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter. 1990). See also, MPEP 2173.05(p).

Appropriate correction is required.

Claims Rejections – 35 U.S.C. 101

35 U.S.C. 101 reads as follows:

> ***Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.***

35 U.S.C. 101 reads as follows:

claims 71-92, and 94-179 are rejected under 35 U.S.C. 101 because the claimed inventions are directed to non-statutory subject matter, because of the following:

Claims 71-92, and 94-179 are directed to neither a "apparatus" nor a "process," based on the theory that the claims are directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551. See also, MPEP 2173.05(p).

In the interest of compact prosecution, the application is further examined against the prior art, as stated below, upon the assumption that the applicants may overcome the above stated rejections under 35 U.S.C. 101.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees.

A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

Independent claims 71, 99, 128, 143, and 174 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of co-pending U.S. Patent Application No. 09//878,097 US Patent No. 7,210,099 issued 04/242007, which is parent application of the current application. Although the conflicting claims are not identical, they are not patentably distinct from each other because they are both exhibiting similar method of Resolution independent vector displaying on Internet content of wireless hand-help devices.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

The independent claims 71, 99, 128, 143, and 174, of current application and co-pending U.S. Patent Application No. 09//878,097 US Patent No. 7,210,099 issued 04/242007, are compared as follows, showing the obviousness of the teachings of the patent to the claimed invention:

Current application	**Co-pending application 09/878,097**
Claims 71, 99, 128, 143, and 174:	**Claims 15, 25, and 43:**
a) processing means, wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed; a display; memory; and storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,	A device comprising: a processor, a communications device coupled to the processor, to enable the device to be linked to a network via which Web content may be accessed; a display; and a memory, coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the device to perform operations including, (see claim 25), and The device of claim 25, wherein the device comprises a wireless hand-held device (see claim 43)
b) rendering a browser interface via which a user is enabled to request access to a Web page, the Web page including associated HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;	enabling a user to select a hyperlink on the displayed Web content via an associated user interface input; and in response thereto, requesting Web content corresponding to the selected hyperlink; receiving vector-formatted Web content corresponding to the requested Web content; and rendering at least a portion of the vector-formatted Web content on the client device (see claim 15), and

	responsive to a request for Web content by a client device, said Web content associated with a Web page having an original page layout and attributes including at least one hyperlink (se claim 15)
c) retrieving, via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the content Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and	The device of claim 25, wherein the device comprises a wireless hand-held device (see claim 43), and enabling a user to select a hyperlink on the displayed Web content via an associated user interface input; and in response thereto, requesting Web content corresponding to the selected hyperlink; receiving vector-formatted Web content corresponding to the requested Web content; and rendering at least a portion of the vector-formatted Web content on the client device (see claim 15), and responsive to a request for Web content by a client device, said Web content associated with a Web page having an original page layout and attributes including at least one hyperlink (se claim 15)
d) the scalable content to render at least a portion of the Web page on the display using a first scale factor such that the original width and height of the Web page is rendered to fit substantially across the display.	scalable vector representation of at least a portion of the Web page that supports a scalable resolution-independent display of the Web content that substantially retains the original page layout and attributes of the Web page when it is rendered on the client device; rendering the vector-formatted Web content on the client device using a first scaling factor to generate a first display of the Web content on the client device (see claim 15).
e) non-volatile memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,	A device comprising: a processor, a communications device coupled to the processor, to enable the device to be linked to a network via which Web content may be accessed; a display; and a memory, coupled to the processor, in which a plurality of

	instructions are stored that when executed by the processor enable the device to perform operations including, (see claim 25), and The device of claim 25, wherein the device comprises a wireless hand-held device (see claim 43)
f) scalinq the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.	scalable vector representation of at least a portion of the Web page that supports a scalable resolution-independent display of the Web content that substantially retains the original page layout and attributes of the Web page when it is rendered on the client device (see claim 15), and rendering the vector-formatted Web content on the client device using a first scaling factor to generate a first display of the Web content on the client device (see claim 15).

In addition, it is obvious that the claimed limitation cites above, (b), (d), and (f) the original width and height of the Web page is rendered to fit substantially across the display is equivalent to and equated to receiving, at the client device, vector-formatted Web content comprising a scalable vector representation of at least a portion of the Web page that supports a scalable resolution-independent display of the Web content that substantially retains *the original page layout and attributes of the Web page* when it is rendered on the client device (see claim 15), and rendering the vector-formatted Web content on the client device using a first scaling factor to generate a first display of the Web content on the client device (see claim 15), to produce a method of Resolution independent vector displaying on Internet content of wireless hand-help devices of copending Application No. 11/045,757.

Allowable Subject Matter

Claims 88-91, 118-121, 125-126,158-159, objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome 35 USC 101, and 35 USC 112, and Terminal Disclaimer.

Claims Rejection – 35 U.S.C. 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 71-87, 92, 95-117, 122-123, 127-157, and 160-179 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chithambaram et al. US006674445B1 -Provisional No.60/159,069 filed 10/12/1999 [hereinafter "Chithambaram"], in view of Roy et al. US006642925B2 -Continuation of No.08/757,706 filed 10/30/1996 [hereinafter "Roy"].

Independent claim 71, Chithambaram teaches:

A wireless device, a display, a memory, and storage means,

(See Chithambaram Column 3, Lines 65-67, discloses a personal digital assistance (PDA).)

Comprising: wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed; a display; memory; and storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including, rendering a browser interface via which a user is enabled to request access to a Web page,

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106.)

retrieving, via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the content Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and, scalinq the scalable

content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106.

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

<u>In addition, Chithambaram does not expressly teach, but Roy teaches:</u>

the Web page including associated HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

(See Roy Column 10, Lines 1-15, discloses an HTML document using specify the width and height of the map in pixels with the WIDTH=NNN and HEIGHT=NNN parameters. For example: <EMBED SRC="http://www.mapguide.com/map pictures/usa.mwf" WIDTH=300HEIGHT=200>. This entry displays a map of the US in the current document. The map picture is 300x200 pixels in size.)

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching Chithambaram, to include the Web page including associated HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page as taught by Roy to produce a predictable result, as evidence, using Roy's specify the width and height of the map in pixels with the WIDTH=NNN and HEIGHT=NNN parameters with Chithambaram's SVG (Scalable Vector Graphics) and the offset for location of the object is obtained and the offset is encoded using bounding box of to zoom in and filtering out the unwanted object for display on the PDA (see Chithambaram Column 6 Lines 55-65, and also see Chithambaram Column 8 Lines 30-65).

Independent claim 99,

the rejection of claim 71 is fully incorporated, which cites above, and is similarly rejected under the same rationale. In addition, Chithambaram teaches:

employing the scalable content and/or data derived therefrom to, render the Web page on the touch-sensitive display;

(See Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA (i.e. It is noted PDA is inherently includes the tough sensitive display as claimed)

and re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page;

(See Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

Independent claim 128,

the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected under the same rationale.

Independent claim 143,

the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected under the same rationale.

Independent claim 174,

the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected under the same rationale. In addition, Chithambaram teaches:

translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered;

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106.

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

and employing the scalable content to render the Web page on the display using a first scale factor; and enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display;

(See Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

***Claim** 72,* Chithambaram teaches:

enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

(See Chithambaram Column 7 Lines 4-6 and Column 8 Lines 30-65, teaching using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

***Claim** 73,* Chithambaram teaches:

wherein the display of the Web page is re-rendered to effect zooming operations.

(See Chithambaram Column 7 Lines 4-6 and Column 8 Lines 30-65, teaching using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

In addition, Chithambaram does not expressly teach, but Roy teaches:

substantially in real-time,

(See Roy Column 3, Lines 40-45, discloses real-time access to dynamic map pictures and associated map data through a Web browser interface suitable for a wide range of users.

See also Roy at Column 2, Lines 20-31, teaching the vector-based data includes Zoom in feature.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching Chithambaram, to include the Web page is re-rendered to effect zooming operations in real time as taught by Roy to produce a predictable result, as evidence, using Roy's re-rendered to effect zooming operations in real time and the offset for location of the object is obtained and the offset is encoded using bounding box of to zoom in and filtering out the unwanted object for display on the PDA (see Chithambaram Column 6 Lines 55-65, and also see Chithambaram Column 8 Lines 30-65).

Claim 74, Chithambaram teaches:

wherein the Web content page includes at least one hyperlink,

(See Chithambaram Column 10 Lines 20-25, teaching attributes stored in records 532-540 may include a URL, an id, and other relevant information.)

and wherein execution of the instructions performs further operations comprising: enabling the user to select the hyperlink; and, in response thereto, retrieving and translating Web content associated with the hyperlink.

(See Chithambaram Column 10 Lines 20-25, teaching attributes stored in records 532-540 may include a URL, an id, and other relevant information.)

to produce additional scalable content; and employing the additional scalable content to render the Web content associated with the hyperlink on the display.

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106.)

Claim 75, Chithambaram teaches:

> **parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including text objects, graphic layout objects, and/or graphic image objects included in the Web page; defining a primary datum corresponding to the original page layout; and, for each object, defining an object datum corresponding to the layout location for the object; generating a vector from the primary datum to the object datum for the object; and creating a reference that links the object to its corresponding vector**

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106.

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

Claim 76, Chithambaram teaches:

> **enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs.**

(See Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

Claim 77, Chithambaram teaches:

returning the display of the Web page to a previous view in response to a corresponding user input.

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers).

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects. It is noted the claimed returning the display of the Web page to a previous view, is reasonable equated to Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles as taught by Chithambaram.)

Claim 78, Chithambaram teaches:

enabling a user to pan a display of the Web content page in response to a corresponding user input.

(See Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA (i.e. to pan a display))

Claim 79, Chithambaram teaches:

enabling the display of the Web page to be panned.

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers).

Also see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA (i.e. to pan a display))

<u>In addition, Chithambaram does not expressly teach, but Roy teaches:</u>

substantially in real-time,

(See Roy Column 3, Lines 40-45, discloses real-time access to dynamic map pictures and associated map data through a Web browser interface suitable for a wide range of users.

See also Roy at Column 2, Lines 20-31, teaching the vector-based data includes Zoom in feature.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching Chithambaram, to include the Web page is re-rendered to effect zooming operations in real time as taught by Roy to produce a predictable result, as evidence, using Roy's re-rendered to effect zooming operations in real time and the offset for location of the object is obtained and the offset is encoded using bounding box of to zoom in and filtering out the unwanted object for display on the PDA (see Chithambaram Column 6 Lines 55-65, and also see Chithambaram Column 8 Lines 30-65).

Claim 80, Chithambaram teaches:

> **the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.**

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers).

Also, see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. It is noted the claimed **an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio** as equivalent to the SVG and the offset for location of the object is obtained and the offset is encoded as taught by Chithambaram.

Claim 81, Chithambaram teaches:

> **wherein execution of the instructions performs further operations comprising enabling a user to view a column of the Web at a higher resolution than a current resolution via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the**

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers).

Also, see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. Using the broadest reasonable interpretation, Examiner equates the claimed **view a column of the Web at a higher resolution than a current resolution via a corresponding user input** as equivalent to multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects as taught by Chithambaram.

Claim 82, Chithambaram teaches:

wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

Claim 83, Chithambaram teaches:

wherein the Web content includes at least one image,

(See Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA).

and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across display.

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. Using the broadest reasonable interpretation, Examiner equates the claimed **view an image at a higher resolution than a current resolution** as equivalent to the Zoom feature as taught by Chithambaram.)

Claim 84, Chithambaram teaches:

wherein the Web content includes at least one image,

(See Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA).

and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution via a corresponding user input wherein in response thereto, the display is re-rendered such that the content corresponding to the selected paragraph is displayed substantially across display.

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. Using the broadest reasonable interpretation, Examiner equates the claimed **view an image at a higher resolution than a current resolution** as equivalent to the Zoom feature as taught by Chithambaram.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.)

Claim 85, Chithambaram teaches:

wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re- rendered,

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.)

Claim 86, Chithambaram teaches:

wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising: receiving content corresponding to the text and layout attributes via a first connection; and receiving content corresponding to at least one image via a second connection,

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

See also Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers).)

Claim 87, Chithambaram teaches:

> **generating a vector-based display list associated with the scalable content; and employing the display list to re-render the display at different scale factors to enable rapid zooming of the Web page.**

(See Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA (i.e. It is noted PDA is inherently includes the tough sensitive display as claimed).

See also Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (e.g. a PDA, WINCE, or PALM device) or a thick client 104 (e.g., a computer system running a browser) to server computers 106 (i.e. it is inherently includes web page as the result of executing the web browser to server computers.)

Claim 92, Chithambaram teaches:

> **wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content,**

(See Chithambaram Column 6 Lines 55-65, teaching the Scalable Vector Graphics (SVG) representation vector graphic shapes (e.g., paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composited into previously rendered objects.)

Claims 95, 96, 100, 101, 163-166, and 177, Chithambaram teaches:

> **the device comprises a mobile phone, a Personal Digital Assistant (PDA) or handheld computer, notebook computer, or laptop computer.**

(See Chithambaram Column 5 Lines 30-50, teaching the thin client devices (i.e. PDA, Smart Phone, personal computers or workstations, and servers 106 that are personal computers, workstations, minicomputers, or mainframes) .)

Claim 97, Chithambaram teaches:

wherein the network comprises a mobile service provider network.

(See Chithambaram Column 5 Lines 30- 50, teaching a thin client includes three classes of devices: handheld personal computers (HPC), palm-held personal computers (PPC), personal digital assistants (PDA), and smart phones, also includes server 106, a network/Internet 118 comprising the Internet, LANs, WANs, SNA networks, or the like.)

Claim 98, Chithambaram teaches:

wherein a portion of the scalable content comprises vector-based content.

(See Chithambaram at the Abstract, teaching personal digital assistant (PDA). Embodiments provide differential encoding and indexing of raster and vector based data.)

Claims 102-116,

the rejection of claims 72, 72, 73, 74, 98, 78, 73, 80-86 respectively are fully incorporated, which cites above, and are similarly rejected under the same rationale.

Claim 117, Chithambaram teaches:

dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising: building a display list via use of the scalable

content and rendering display list content on a virtual display in the dynamic memory; and scaling the display list content to re-render the display of the Web page.

(See Chithambaram Column 7 Lines 1-10, teaching the PDA allows panning (virtual roaming paradigm), and zooming across discrete multiple levels. A smart-cache on thin client 102 allows the swapping of compact tiles from the database to memory. Using the broadest reasonable interpretation, Examiner reads the claimed **dynamic memory** as equivalent to memory as taught by Chithambaram, because Applicant current Specification discloses," dynamic storage device 504 (referred to as main memory)" see Applicant current disclosure Para 105.

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.

Claims 122-123, and 127

the rejection of claims 92, 71, and 98 respectively are fully incorporated, which cites above, and are similarly rejected under the same rationale.

Claims 129-130, Chithambaram teaches:

wherein the processing means includes a general-purpose processor, and wherein the processing means includes a special-purpose processor.

(See Chithambaram at Column 5, Lines 30-55, teaching the thick and thin client with different processor speed, provide differential encoding and indexing of raster and vector based data.)

Claims 131-132, Chithambaram teaches:

enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

(See Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

Claim 133:

the rejection of claim 73 is fully incorporated, which cites above, and is similarly rejected under the same rationale.

Claims 134-141:

the rejection of claims 78, 73, 81, 117, 97, 95, 96, and 98 respectively are fully incorporated, which cites above, and are similarly rejected under the same rationale.

Claim 142, Chithambaram teaches:

wherein the processing means includes logic circuitry programmed with a portion of the instructions.

(See Chithambaram at Column 5, Lines 30-55, teaching the thick and thin Client with different processor speed, provide differential encoding and indexing of raster and vector based data.

Also see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. Using the broadest reasonable interpretation, Examiner reads the claimed **logic circuitry programmed** as equivalent to the thick and thin Client with different processor speed, provide differential encoding as taught by Chithambaram, because Applicant current Specification discloses," special-purpose processor or logic circuits programmed with the instructions to perform the operations)" see Applicant current disclosure Para 35.

Claims 144-151, 155-157, 160-162, 175-176, and 178-179:

the rejection of claims 81—85, 78, 77, 73, 78, 73, 86, 97, 95-96, 73, 96, 78 and 73 respectively are fully incorporated, which cites above, and are similarly rejected under the same rationale.

Claims 152-154, and 167-173, Chithambaram teaches:

wherein the corresponding user input comprises tapping on the column, paragraph, image via the display,

(See Chithambaram Column 3, Lines 65-67, discloses a personal digital assistance (PDA).

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 4 Line 60 → Column 5, Line 10, teaching the indexing raster (i.e. Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA. Using the broadest reasonable interpretation, the Examiner equates the claimed **tapping on the column, image and**

paragraph via the display, as equivalent to the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA, since the PDA is inherently includes the input devices the allows user to create bounding box on the PDA display to Zoom in and out as design.

Claims 94, and 124 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chithambaram et al. US006674445B1 -Provisional No.60/159,069 filed 10/12/1999 [hereinafter "Chithambaram"], in view of Roy et al. US006642925B2 -Continuation of No.08/757,706 filed 10/30/1996 [hereinafter "Roy"], further in view of Blumberg US006886034B2 -Continuation of No.09/267,951 filed 03/11/1999 [hereinafter "Blumberg"],

Claim 94, Chithambaram and Roy do not teach, but Blumberg teaches:

> **wherein at least a portion of the instructions comprise Java-based instructions configured to be executed on a Java virtual machine,**

(See Blumberg Column 6 Lines 1-5, teaching the Java Applet Machine and Active –X control,

Also see Blumberg Column 2 Lines 15-45, teaching Zoomable web page using resolution independent for Scalable web content.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching Chithambaram and Roy, to include Java-based instructions configured to be executed on a Java virtual machine of

Blumberg to the Web page is re-rendered to effect zooming operations in real time as taught by Roy to produce a predictable result, as evidence, using Roy's re-rendered to effect zooming operations in real time and the offset for location of the object is obtained and the offset is encoded using bounding box of to zoom in and filtering out the unwanted object for display on the PDA (see Chithambaram Column 6 Lines 55-65, and also see Chithambaram Column 8 Lines 30-65).

Claim 124

the rejection of claim 94 is fully incorporated, which cites above, and are similarly rejected under the same rationale.

It is noted that citations to specific, pages, columns, lines, or figures in the prior art references should not be considered to be limiting in any way. A reference is relevant for all it contains and may be relied upon for all that it would have reasonably suggested to one having ordinary skill in the art. See, MPEP 2123.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

http://www.w3.org/TR/1999/WD-SVG-19990211/Vector Graphics (SVG). htm

Published 02/11/1999

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tran A. Quoc whose telephone number is 571-272-8664. The examiner can normally be reached on 9AM - 5PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on 571-272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Quoc A. Tran/
Patent Examiner
Art Unit 2176
10/10/2007

/Doug Hutton/
Doug Hutton
Supervisory Primary Examiner
Technology Center 2100

DECEMBER 9, 2007
AMENDMENT AND RESPONSE
TO OFFICE ACTION

Certificate of Electronic Filing

I hereby certify that this correspondence is being Electronically Filed via EFS

on December 9, 2007

Date of Deposit

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett December 9, 2007

Signature Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)	
	)	
Rohrabaugh et al.	)	Examiner: Tran, Quoc A.
	)	
Serial No. 11/045,757	)	Art Unit: 2176
	)	
Filed: June 8, 2001	)	
	)	
For: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES	)	

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND RESPONSE TO OFFICE ACTION

Sir:

Responsive to the Office Action mailed October 23, 2007, the Applicant requests the Examiner to enter the following amendments and to reconsider all pending claims in view of the amendment and the following remarks.

Amendments begin on page 2. Remarks begin on page 24.

AMENDMENT

In the Drawings

A replacement set of drawing sheets is filed electronically herewith to replace all previously filed drawings sheets. In the replacement sheets, FIGs 2A, 2B, and 2C a typographical error has been corrected (XLM corrected to XML). The other substitute drawings sheets are being filed to provide a better resolution version of the Figures – the drawing sheets are written in their original form to a PDF file as compared with scanning in the drawings to a PDF file (as done by the USPTO with the original drawings). No new matter has been added.

In the Specification

Please add the following new paragraph after paragraph [0008] in the BRIEF SUMMARY OF THE INVENTION section.

According to additional aspects of the invention, methods and software for enabling support for resolution-independent scalable display of Web content is provided. The methods and software enable users of various devices, from handheld devices with small screens, to desktop PC's and laptops, to very large screen devices, to view Web pages in a manner independent of the screen resolution of such device's built-in or associated display, while maintaining the look and feel of browsing such pages with a conventional desktop browser. Thus, users are enabled to access millions of Web pages on various devices having different screen resolutions while providing a full Web browsing experience.

In the Claims

This listing of claims replaces all prior versions and listing of claims in the application. Amendments or cancellations of any claims are done without prejudice, waiver and/or disclaimer. Applicants reserve the right to claim the subject matter of any amendment and/or cancellation in a continuing application.

1-70. (Cancelled)

71. (Currently Amended) A wireless device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network ~~via which Web content may be accessed~~ that supports access to the Internet;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page ~~including associated~~ comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page [[,]] via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.

72. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

73. (Previously Presented) The wireless device of claim 72, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

74. (Currently Amended) The wireless device of claim 71, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

75. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, ~~and/or~~ and graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to ~~its corresponding~~ the vector that is generated.

76. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs.

77. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

78. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

79. (Previously Presented) The wireless device of claim 78, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

80. (Previously Presented) The wireless device of claim 71, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.

81. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~

a column of the Web page ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

82. (Previously Presented) The wireless device of claim 81, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

83. (Currently Amended) The wireless device of claim 71, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ an image ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

84. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ a paragraph of the Web content ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

85. (Previously Presented) The wireless device of claim 84, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

86. (Previously Presented) The wireless device of claim 71, wherein the Web page includes text, layout attributes, and images, and wherein execution of the

instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

87. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to ~~enable rapid zooming of~~ zoom the Web page.

88. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to ~~its corresponding~~ the vector that is generated.

89. (Previously Presented) The wireless device of claim 88, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

90. (Previously Presented) The wireless device of claim 89, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

91. (Previously Presented) The wireless device of claim 90, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

92. (Previously Presented) The wireless device of claim 71, wherein the scalable content includes scalable text content, and wherein execution of the instructions

performs further operations comprising scaling a scalable font to render the scalable text content.

93. (Cancelled)

94. (Currently Amended) The wireless device of claim 71, wherein at least a portion of the instructions comprise Java-based instructions ~~configured to be executed on a Java virtual machine~~.

95. (Previously Presented) The wireless device of claim 71, wherein the device comprises a mobile phone.

96. (Previously Presented) The wireless device of claim 71, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

97. (Previously Presented) The wireless device of claim 71, wherein the network comprises a mobile service provider network.

98. (Previously Presented) The wireless device of claim 71, wherein a portion of the scalable content comprises vector-based content.

99. (Currently Amended) A mobile device, comprising:

a processor,

a wireless communications device, to facilitate wireless communication with a network ~~via which Web content may be accessed~~ <u>that supports access to the Internet</u>;

a display; and

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving <u>the Web page</u> [[,]] via the wireless communications device, and processing [[the]] HTML-based Web content to produce scalable content; and

employing <u>at least one of</u> the scalable content ~~and/or~~ <u>and</u> data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

100. (Previously Presented) The mobile device of claim 99, wherein the device comprises a mobile phone.

101. (Previously Presented) The mobile device of claim 99, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

102. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

103. (Previously Presented) The mobile device of claim 102, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

104. (Previously Presented) The mobile device of claim 99, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

105. (Currently Amended) The mobile device of claim 99, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs

further operations comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content ~~and/or~~ and data derived therefrom to render the Web content associated with the hyperlink on the display.

106. (Previously Presented) The mobile device of claim 99, wherein at least a portion of the scalable content comprises scalable vector-based content.

107. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

108. (Currently Amended) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web ~~content~~ page in response to a corresponding user input.

109. (Currently Amended) The mobile device of claim 108, wherein execution of the instructions performs further operations comprising enabling the display of the Web ~~content~~ page to be panned substantially in real-time.

110. (Currently Amended) The mobile device of claim 99, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein ~~the~~ said at least one of scalable content ~~and/or~~ and data derived therefrom is scaled to render a display having a different aspect ratio.

111. (Currently Amended) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~

a column of the Web content ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

112. (Previously Presented) The mobile device of claim 111, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

113. (Currently Amended) The mobile device of claim 99, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to <u>zoom on</u> ~~view~~ an image ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

114. (Currently Amended) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to <u>zoom on</u> ~~view~~ a paragraph of the Web ~~content~~ <u>page</u> ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across a display area of the display.

115. (Previously Presented) The mobile device of claim 114, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

116. (Previously Presented) The mobile device of claim 99, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions

performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

117. (Previously Presented) The mobile device of claim 99, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

118. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to ~~its corresponding~~ the vector that is generated.

119. (Previously Presented) The mobile device of claim 118, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

120. (Previously Presented) The mobile device of claim 119, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

121. (Previously Presented) The mobile device of claim 120, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

122. (Previously Presented) The mobile device of claim 99, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

123. (Previously Presented) The mobile device of claim 99, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

124. (Currently Amended) The mobile device of claim 99, wherein at least a portion of the instructions comprise Java-based instructions ~~configured to be executed on a Java virtual machine~~.

125. (Currently Amended) The mobile device of claim 99, wherein a portion of the HTML-based Web content comprises ~~XML-based content~~ XML code.

126. (Previously Presented) The mobile device of claim 99, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

127. (Previously Presented) The mobile device of claim 99, wherein a portion of the scalable content comprises vector-based content.

128. (Currently Amended) A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network ~~via which Web content may be accessed~~ that supports access to the Internet;

a display, to facilitate user input and display rendered content; and storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by the processing means, the mobile device is enabled to perform operations, including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving the Web page [[,]] via the wireless communications means, and processing at least a portion of the HTML-based Web content to produce scalable content; and

employing at least one of the scalable content ~~and/or~~ and data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs made via the display ~~means~~ to enable the user to zoom in and out a display of the Web page.

129. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a general-purpose processor.

130. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a special-purpose processor.

131. (Previously Presented) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

132. (Previously Presented) The mobile device of claim 131, wherein the user interface input enables the user to define a window of a current view of the Web page

on which to zoom in on.

133. (Previously Presented) The mobile device of claim 128, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

134. (Previously Presented) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user interface input.

135. (Previously Presented) The mobile device of claim 134, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned substantially in real-time.

136. (Currently Amended) The mobile device of claim 128, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ an image ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

137. (Previously Presented) The mobile device of claim 128, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list objects on a virtual display in the dynamic memory; and

scaling display list objects to re-render the display of the Web page.

138. (Previously Presented) The mobile device of claim 128, wherein the network comprises a mobile service provider network.

139. (Previously Presented) The wireless device of claim 128, wherein the device comprises a mobile phone.

140. (Previously Presented) The wireless device of claim 128, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

141. (Previously Presented) The wireless device of claim 128, wherein a portion of the scalable content comprises vector-based content.

142. (Previously Presented) The mobile device of claim 128, wherein the processing means includes logic circuitry programmed with a portion of the instructions.

143. (Currently Amended) A mobile device, comprising:

a processor,

a wireless communications interface, to facilitate wireless communication with a network ~~via which Web content may be accessed~~ that supports access to the Internet;

a display;

non-volatile memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface on the display via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the [[web]] Web page;

retrieving ~~at least a portion of the HTML-based~~ Web ~~content~~ page via the wireless communications ~~device~~ interface;

rendering the Web page ~~so it is displayed~~ such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

144. (Currently Amended) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ a column of the Web page ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

145. (Previously Presented) The mobile device of claim 144, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

146. (Currently Amended) The mobile device of claim 143, wherein the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ an image ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

147. (Currently Amended) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ a paragraph of the Web page ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

148. (Previously Presented) The mobile device of claim 147, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

149. (Previously Presented) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

150. (Previously Presented) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

151. (Previously Presented) The mobile device of claim 143, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

152. (Previously Presented) The mobile device of claim 144, wherein the corresponding user input comprises tapping on the column via the display.

153. (Previously Presented) The mobile device of claim 146, wherein the corresponding user input comprises tapping on the image via the display.

154. (Previously Presented) The mobile device of claim 147, wherein the corresponding user input comprises tapping on the paragraph via the display.

155. (Currently Amended) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web ~~content~~ page in response to a corresponding user input made via the display.

156. (Currently Amended) The mobile device of claim 155, wherein execution of the instructions performs further operations comprising enabling the display of the Web ~~content~~ page to be panned substantially in real-time.

157. (Previously Presented) The mobile device of claim 143, wherein the Web

page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

158. (Currently Amended) The mobile device of claim 143, wherein a portion of the HTML-based Web content comprises ~~XML-based content~~ XML code.

159. (Previously Presented) The mobile device of claim 143, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

160. (Previously Presented) The mobile device of claim 143, wherein the network comprises a mobile service provider network.

161. (Previously Presented) The mobile device of claim 143, wherein the device comprises a mobile phone.

162. (Previously Presented) The mobile device of claim 143, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

163. (Previously Presented) The mobile device of claim 143, wherein the device comprises one of a notebook computer or laptop computer.

164. (Currently Amended) The ~~mobile~~ wireless device of claim 71, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

165. (Previously Presented) The mobile device of claim 99, wherein the device comprises one of a notebook computer or laptop computer.

166. (Previously Presented) The mobile device of claim 128, wherein the device

comprises one of a notebook computer or laptop computer.

167. (Previously Presented) The wireless device of claim 81, wherein the corresponding user input comprises tapping on the column via the display.

168. (Previously Presented) The wireless device of claim 83, wherein the corresponding user input comprises tapping on the image via the display.

169. (Previously Presented) The wireless device of claim 84, wherein the corresponding user input comprises tapping on the paragraph via the display.

170. (Previously Presented) The mobile device of claim 111, wherein the corresponding user input comprises tapping on the column via the display.

171. (Previously Presented) The mobile device of claim 113, wherein the corresponding user input comprises tapping on the image via the display.

172. (Previously Presented) The mobile device of claim 114, wherein the corresponding user input comprises tapping on the paragraph via the display.

173. (Previously Presented) The mobile device of claim 136, wherein the corresponding user input comprises tapping on the image via the display.

174. (Currently Amended) A wireless device, comprising:

a processor;

a wireless communications interface, to facilitate wireless communication with a network ~~via which Web content may be accessed~~ that supports access to the Internet;

a display;

memory; and

a storage device, on which a plurality of instructions are stored that when executed by the processor enable the wireless device to perform operations including, rendering a browser interface via which a user is enabled to request access to a Web page, the Web page ~~including associated~~ comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving, via the wireless communications interface, and translating at least a portion of the HTML-based Web content ~~from its original format~~ into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; [[and]]

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display.

175. (Previously Presented) The wireless device of claim 174, wherein the display is re-rendered substantially in real-time.

176. (Previously Presented) The wireless device of claim 174, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

177. (Previously Presented) The wireless device of claim 174, wherein the device comprises one of a notebook computer or laptop computer.

178. (Previously Presented) The wireless device of claim 174, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

179. (Previously Presented) The wireless device of claim 178, wherein execution of the instructions performs further operations comprising enabling the display of the

Web page to be panned substantially in real-time.

180. (New) A method, comprising:

rendering a browser interface on a device via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page via the device, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

scaling the scalable content to render the Web page on a display of the device such that the original width of the Web page is rendered to fit substantially across the display.

181. (New) The method of claim 180, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

182. (New) The method of claim 181, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

183. (New) The method of claim 180, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

184. (New) The method of claim 180, performs comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, and graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

185. (New) The method of claim 180, further comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs.

186. (New) The method of claim 180, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

187. (New) The method of claim 180, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

188. (New) The method of claim 187, further comprising enabling the display of the Web page to be panned substantially in real-time.

189. (New) The method of claim 180, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled

when rendered so as to produce a display having a different aspect ratio.

190. (New) The method of claim 180, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

191. (New) The method of claim 190, wherein the corresponding user input comprises tapping on the column via the display.

192. (New) The method of claim 190, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

193. (New) The method of claim 180, wherein the Web content includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

194. (New) The method of claim 193, wherein the corresponding user input comprises tapping on the image via the display.

195. (New) The method of claim 180, further comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

196. (New) The method of claim 132, wherein the corresponding user input comprises tapping on the paragraph via the display.

197. (New) The method of claim 132, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

198. (New) The method of claim 180, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

199. (New) The method of claim 180, further comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

200. (New) The method of claim 180, further comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

201. (New) The method of claim 200, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

202. (New) The method of claim 201, further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

203 (New) The method of claim 202, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

204. (New) The method of claim 180, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable font to render the scalable text content.

205. (New) The method of claim 180, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

206. (New) The method of claim 180, wherein the device comprises a mobile phone.

207. (New) The method of claim 180, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

208. (New) The method of claim 180, further comprising accessing the Internet via a wireless connection to retrieve the Web page.

209. (New) The method of claim 180, wherein a portion of the scalable content comprises vector-based content.

210. (New) The method of claim 180, wherein the device comprises one of a notebook computer or laptop computer.

211. (New) A method, comprising:

rendering a browser interface on a device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving the Web page via the device, and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content and data derived therefrom to,

render the Web page on a display of the device; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

212. (New) The method of claim 211, wherein the device comprises a mobile phone.

213. (New) The method of claim 211, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

214. (New) The method of claim 211, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user

interface input.

215. (New) The method of claim 214, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

216. (New) The method of claim 211, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

217. (New) The method of claim 211, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content and data derived therefrom to render the Web content associated with the hyperlink on the display.

218. (New) The method of claim 211, wherein at least a portion of the scalable content comprises scalable vector-based content.

219. (New) The method of claim 211, further comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

220. (New) The method of claim 211, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

221. (New) The method of claim 220, further comprising enabling the display of the Web page to be panned substantially in real-time.

222. (New) The method of claim 211, wherein the page layout of the Web page is

defined to have an original aspect ratio, and wherein said at least one of scalable content and data derived therefrom is scaled to render a display having a different aspect ratio.

223. (New) The method of claim 211, further comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

224. (New) The method of claim 223, wherein the corresponding user input comprises tapping on the column via the display.

225. (New) The method of claim 223, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

226. (New) The method of claim 211, wherein the Web content includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

227. (New) The method of claim 226, wherein the corresponding user input comprises tapping on the image via the display.

228. (New) The method of claim 211, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across a display area of the display.

229. (New) The method of claim 228, wherein the corresponding user input comprises tapping on the paragraph via the display.

230. (New) The method of claim 228, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

231. (New) The method of claim 211, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

232. (New) The method of claim 211, further comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in dynamic memory; and

scaling the display list content to re-render the display of the Web page.

233. (New) The method of claim 211, further comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

234. (New) The method of claim 233, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of

content.

235. (New) The method of claim 234, wherein the device includes dynamic memory having at least a portion employed for rendering purposes, the method further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

236. (New) The method of claim 235, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

237. (New) The method of claim 211, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable font to render the scalable text content.

238. (New) The method of claim 211, wherein the original format of the Web page defines a height and width for the Web page, the method further comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

239. (New) The method of claim 211, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

240. (New) The method of claim 211, wherein a portion of the HTML-based Web content comprises XML code.

241. (New) The method of claim 211, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

242. (New) The method of claim 211, wherein a portion of the scalable content comprises vector-based content.

243. (New) The method of claim 211, wherein the device comprises one of a notebook computer or laptop computer.

244. (New) A method, comprising:

rendering a browser interface on a display of a device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the Web page;

retrieving the Web page via the device;

rendering the Web page via the device such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to the device to enable the user to zoom in and out a display of the Web page.

245. (New) The method of claim 244, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

246. (New) The method of claim 245, wherein the corresponding user input comprises tapping on the column via the display.

247. (New) The method of claim 245, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

248. (New) The method of claim 244, wherein the Web page includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

249. (New) The method of claim 248, wherein the corresponding user input comprises tapping on the image via the display.

250. (New) The method of claim 244, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

251. (New) The method of claim 250, wherein the corresponding user input comprises tapping on the paragraph via the display.

252. (New) The method of claim 250, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

253. (New) The method of claim 244, further comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

254. (New) The method of claim 244, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

255. (New) The method of claim 244, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

256. (New) The method of claim 244, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input made via the display.

257. (New) The method of claim 256, further comprising enabling the display of the Web page to be panned substantially in real-time.

258. (New) The method of claim 244, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

259. (New) The method of claim 244, wherein a portion of the HTML-based Web content comprises XML code.

260. (New) The method of claim 244, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

261. (New) The method of claim 244, wherein the wireless connection comprises a wireless connection to a mobile service provider network.

262. (New) The method of claim 244, wherein the device comprises a mobile phone.

263. (New) The method of claim 244, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

264. (New) The method of claim 244, wherein the device comprises one of a notebook computer or laptop computer.

265. (New) A method, comprising:

rendering a browser interface on a display via which a user of a device is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving the Web page, via the device, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display.

266. (New) The method of claim 265, wherein the display is re-rendered substantially in real-time.

267. (New) The method of claim 265, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

268. (New) The method of claim 265, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

269. (New) The method of claim 265, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

270. (New) The method of claim 269, further comprising enabling the display of the Web page to be panned substantially in real-time.

271. (New) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface via which a user is enabled to request access to a Web page hosted by an Internet Web site, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.

272. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

273. (New) The machine-readable medium of claim 272, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

274. (New) The machine-readable medium of claim 271, wherein the Web page

includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

275. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, and graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

276. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs.

277. (New) The machine-readable medium of claim 271, wherein execution of the

instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

278. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

279. (New) The machine-readable medium of claim 278, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

280. (New) The machine-readable medium of claim 271, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.

281. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

282. (New) The machine-readable medium of claim 281, wherein the corresponding user input comprises tapping on the column via the display.

283. (New) The machine-readable medium of claim 281, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

284. (New) The machine-readable medium of claim 271, wherein the Web content

includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

285. (New) The machine-readable medium of claim 284, wherein the corresponding user input comprises tapping on the image via the display.

286. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

287. (New) The machine-readable medium of claim 286, wherein the corresponding user input comprises tapping on the paragraph via the display.

288. (New) The machine-readable medium of claim 286, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

289. (New) The machine-readable medium of claim 271, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

290. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

291. (New) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

292. (New) The machine-readable medium of claim 291, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

293. (New) The machine-readable medium of claim 292, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

294. (New) The machine-readable medium of claim 293, wherein execution of the

instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

295. (New) The machine-readable medium of claim 271, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

296. (New) The machine-readable medium of claim 271, wherein at least a portion of the instructions comprise Java-based instructions.

297. (New) The machine-readable medium of claim 271, wherein the device comprises a mobile phone.

298. (New) The machine-readable medium of claim 271, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

299. (New) The machine-readable medium of claim 271, wherein the Web page is accessed via a mobile service provider network.

300. (New) The machine-readable medium of claim 271, wherein a portion of the scalable content comprises vector-based content.

301. (New) The machine-readable medium of claim 271, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

302. (New) The machine-readable medium of claim 271, wherein the instructions are embodied as a Web browser.

303. (New) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving the Web page and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content and data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

304. (New) The machine-readable medium of claim 303, wherein the device comprises a mobile phone.

305. (New) The machine-readable medium of claim 303, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

306. (New) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

307. (New) The machine-readable medium of claim 306, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

308. (New) The machine-readable medium of claim 303, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

309. (New) The machine-readable medium of claim 303, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content and data derived therefrom to render the Web content associated with the hyperlink on the display.

310. (New) The machine-readable medium of claim 303, wherein at least a portion of the scalable content comprises scalable vector-based content.

311. (New) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

312. (New) The machine-readable medium of claim 303, wherein execution of the

instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

313. (New) The machine-readable medium of claim 312, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

314. (New) The machine-readable medium of claim 303, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content and data derived therefrom is scaled to render a display having a different aspect ratio.

315. (New) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

316. The machine-readable medium of claim 315, wherein the corresponding user input comprises tapping on the column via the display.

317. The machine-readable medium of claim 315, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

318. (New) The machine-readable medium of claim 303, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

319. (New) The machine-readable medium of claim 318, wherein the corresponding user input comprises tapping on the image via the display.

320. (New) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across a display area of the display.

321. (New) The machine-readable medium of claim 320, wherein the corresponding user input comprises tapping on the paragraph via the display.

322. (New) The machine-readable medium of claim 320, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

323. (New) The machine-readable medium of claim 303, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

324. (New) The machine-readable medium of claim 303, wherein the device includes dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

325. (New) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

326. (New) The machine-readable medium of claim 325, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

327. (New) The machine-readable medium of claim 326, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

328. (New) The machine-readable medium of claim 327, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

329. (New) The machine-readable medium of claim 303, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

330. (New) The machine-readable medium of claim 303, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

331. (New) The machine-readable medium of claim 303, wherein at least a portion of the instructions comprise Java-based instructions.

332. (New) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises XML code.

333. (New) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

334. (New) The machine-readable medium of claim 303, wherein a portion of the scalable content comprises vector-based content.

335. (New) The machine-readable medium of claim 303, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

336. (New) The machine-readable medium of claim 303, wherein the instructions are embodied as a Web browser.

337. (New) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a wireless device to perform operations comprising:

rendering a browser interface on a display of the wireless device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the Web page;

retrieving the Web page via the wireless device;

rendering the Web page such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

338. (New) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a

column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

339. (New) The machine-readable medium of claim 338, wherein the corresponding user input comprises tapping on the column via the display.

340. (New) The machine-readable medium of claim 338, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

341. (New) The machine-readable medium of claim 337, wherein the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

342. (New) The machine-readable medium of claim 341, wherein the corresponding user input comprises tapping on the image via the display.

343. (New) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

344. (New) The machine-readable medium of claim 343, wherein the corresponding user input comprises tapping on the paragraph via the display.

345. (New) The machine-readable medium of claim 343, wherein the content of the

paragraph is reformatted to fit characteristics of the display when re-rendered.

346. The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

347. (New) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

348. (New) The machine-readable medium of claim 337, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

349. (New) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input made via the display.

350. (New) The machine-readable medium of claim 349, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

351. (New) The machine-readable medium of claim 337, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

352. (New) The machine-readable medium of claim 337, wherein a portion of the

HTML-based Web content comprises XML code.

353. (New) The machine-readable medium of claim 337, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

354. (New) The machine-readable medium of claim 337, wherein the wireless device is configured to connect to a mobile service provider network.

355. (New) The machine-readable medium of claim 337, wherein the device comprises a mobile phone.

356. (New) The machine-readable medium of claim 337, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

357. (New) The machine-readable medium of claim 337, wherein the device comprises one of a notebook computer or laptop computer.

358. (New) The machine-readable medium of claim 337, wherein the instructions are embodied as a Web browser.

359. (New) A machine-readable medium having a plurality of instructions comprising a Web browser stored thereon, which when executed enable a device to perform operations comprising:

launching a Web browser including a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable content to render the Web page in the Web browser using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display of the Web page.

360. (New) The machine-readable medium of claim 359, wherein the display is re-rendered substantially in real-time.

361. (New) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on a device comprising one of a Personal Digital Assistant (PDA) or handheld computer.

362. (New) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on at least one of a desktop computer, notebook computer or laptop computer.

363. (New) The machine-readable medium of claim 359, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

364. (New) The machine-readable medium of claim 363, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

REMARKS

This Amendment is in response to the Office Action mailed October 23, 2007. In the Office Action,

- The IDS filed 9/18/2007 was deemed improper due to lack of publication dates for the references.
- Claims 71-73, 75, 79, 81-82, 87, 99, 105, 109-114, 118, 123, 125, 158, 133, 135-136,143-147, 151, 156, 174-175, and 179 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
- Claims 71-92, and 94-179 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention based on the assertion a single claim which claims both an apparatus and the method steps of *using* the apparatus is indefinite under 35 U.S.C. §112, second paragraph, citing Ex Parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter l990) and MPEP 21 73.05(p).
- Claims 71-92, and 94-179 were rejected under 35 U.S.C. §101 for allegedly being directed to neither a "apparatus" nor a "process," based on the theory that the claims are directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101.
- Independent claims 71, 99, 128, 143, and 174 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of co-pending U.S. Patent Application No. 09/878,097, now US Patent No. 7,210,099 issued April 24, 2007, which is parent application of the current application.

- Claims 88-91, 118-121, 125-126, and 158-159 stand objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome 35 USC 101, and 35 USC 112, and Terminal Disclaimer.
- Claims 71-87, 92, 95-1 17, 122-123, 127-157, and 160-179 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chithambaram *et al.* US 6,674,445 Bl -Provisional No.60/159,069 filed October 12, 1999 (hereinafter *Chithambaram*), in view of Roy *et al.*, US 6,642,925 B2 -Continuation of No. 08/757,706 filed October 30, 1996 (hereinafter *Roy*).
- Claims 94 and 124 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Chithambaram* in view of *Roy*, further in view of Blumberg, US 6,886,034 B2.

In the Amendment, claims 71, 74, 75, 81, 83, 84, 88, 94, 99, 105, 108-110, 111, 113, 114, 118, 124, 125, 128, 136, 143, 144, 146, 147, 155, 156, 158, 164, 166, and 174 have been amended to clarify the claimed invention. New claims 180-364 have been added. Thus, claims 71-92 and 94-364 are now pending. No new matter has been added, and all claims are supported by the original disclosure of 09/878,097 and other priority applications incorporated therein by reference (Application Serial Nos. 60/217,345, 60/211,019, and 09/828,511). Entry of this amendment is respectfully solicited.

Information Disclosure Statement

Applicants thank the Examiner for pointing out a deficiency in the Information Disclosure Statement filed on 09/18/2007 (lack of publication dates). Applicants note that there is no publication date for the provisional applications, as none of them were ever published; however, they each have a filing date that was not identified in the IDS. To address the deficiency, Applicants resubmitted a corrected IDS on October 28, 2007 that includes the filing date for each provisional application.

Examiner Interview

An in-person examiner interview was conducted at the USPTO on December 3, 2007. The attendees included Examiner Quoc A. Tran, SPE Doug Hutton, Inventor Gary Rohrabaugh, and attorney representative R. Alan Burnett.

Demonstration of Device

During the interview, a demonstration of a device and software based on the underlying teachings of the claimed invention was presented. The demonstration device was a Toshiba Pocket PC running a version of the SoftView™ browser, as discussed in further detail below. Originally, a demonstration of various emulators running on a laptop computer were attempted – however, since there was no network connectivity, the emulators could not retrieve Web pages from the Internet, and thus the demonstration could not be completed. Under the Toshiba Pocket PC demonstration, the demonstration Web pages were preloaded on the device (in preparation for not having network connectivity). Inventor Gary Rohrabaugh demonstrated the SoftView™ browser's ability to scale and render Web pages to fit the Toshiba's display, selectively zoom on user-defined windows, images, columns, and paragraphs, and generally zoom and pan Web pages and perform browser functions such as activating hyperlinks. Claims corresponding to each of these features are included in the present application.

Discussion of 35 U.S.C. § 112, Second Paragraph and 35 U.S.C. § 101 rejections.

Prior to the meeting and as discussed below, Examiner Tran believed the claims were directed to an apparatus (device) and method of using the apparatus. It was made clear that the claims were directed simply to an apparatus that was configured to perform various operations via execution of corresponding instructions. As discussed below and indicated by SPE Hutton, as well as agreed to during the interview, each of the pending claims meets the requirement of 35 U.S.C. § 112, Second Paragraph and 35 U.S.C. § 101 with respect to the foregoing issue.

There was also some discussion generally about the use of "substantially" in the claims. Examiner Tran indicated he would consider whether such use was definite in view of the arguments presented in response to the current action (*i.e.*, this response).

Discussion of 35 U.S.C. § 103 Rejections

A discussion of the rejections under 35 U.S.C. §103(a) as being unpatentable over *Chithambaram*, in view of *Roy* was conducted. In connection with the discussion was a video demonstrating how the Autodesk MapGuide technology disclosed in *Chithambaram* and *Roy* works (in addition, see further discussion below). The video shows a desktop browser display of various MapGuide sites, and clearly demonstrates that the MapGuide implementation is as an embedded application (plug-in) that operates separately from the browser. The video shows the tracking of packets (using a packet-sniffer utility) received from the MapGuide host site, and demonstrates that the data delivered to the MapGuide plug-in does not comprise HTML-based content, but rather comprises proprietary MapGuide data and associated data associated with HTTP Requests and Responses.

During the interview, it was acknowledged by Examiner Tran that he did not appreciate that under the pending claims, the claimed operations were being performed by the device itself, and that none of the claim operations were being performed by a proxy server. In the parent application, the device received scalable content that was translated from its original HTML-based form (i.e., from the original HTML-based Web page content). It is now understood that this is not the case. In view of this consideration, Examiner Tran indicated that a new search would be conducted, and the present §103 rejections were not applicable.

Obviousness-type Double Patenting

A discussion of the obviousness-type double patenting rejection was also discussed. Applicants asserted that the present claims are not obvious over the issued claims of the parent 7,210,099 patent claims. Examiner Tran said he would need to reconsider this rejection in view of his new understanding of the claims and arguments presented in response to the current Office Action. These arguments are presented below.

Discussion of adding Method and Beauregard Claims

During discussions concerning interpretation of the pending claims, Examiner Tran identified that the typical application included method and Beauregard claims in addition to apparatus claims concerning an apparatus configured to perform analogous method operations (as claimed in the method claims) via execution of instructions, *e.g.*, as claimed in the Beauregard claims. Examiner Tran also indicated inclusion of such claims would be helpful in interpreting the apparatus claims. Applicants agreed this would be helpful, and offered to include such claims in present response. Accordingly, Method and Beauregard claims that claim elements substantially analogous to those presented in the pending apparatus (device) claims have been included in the present amendment.

Claim Rejections – 35 U.S.C. § 112, Second Paragraph

Claims 71-73, 75, 79, 81-82, 87, 99, 105, 109-114, 118, 123, 125, 158, 133, 135-136,143-147, 151, 156, 174-175, and 179 were rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The §112 rejection of individual claims are addressed below. However, a discussion of the appropriate use of some of the claim terms is first presented.

Use of the terminology "Substantially" in the Claims

The following is quoted from the MPEP[1]

2173.05(b) Relative Terminology [R-5] - 2100 Patentability

2173.05(b) Relative Terminology [R-5]

The fact that claim language, including terms of degree, may not be precise, does not automatically render the claim indefinite under 35 U.S.C. 112, second paragraph. *Seattle Box Co., v. Industrial Crating & Packing, Inc.*, 731 F.2d 818, 221 USPQ 568 (Fed. Cir. 1984). Acceptability of the claim language depends on whether one of ordinary skill in the art would understand what is claimed, in light of the specification.

WHEN A TERM OF DEGREE IS PRESENT, DETERMINE WHETHER A STANDARD IS DISCLOSED OR WHETHER ONE OF ORDINARY SKILL IN THE ART WOULD BE APPRISED OF THE SCOPE OF THE CLAIM

When a term of degree is presented in a claim, first a determination is to be made as to whether the specification provides some standard for measuring that degree. If it does not, a determination is made as to whether one of ordinary skill in the art, in view of the prior art and the status of the art, would be nevertheless reasonably apprised of the scope of the invention. Even if the specification uses the same term of degree as in the claim, a rejection may be proper if the scope of the term is not understood when read in light of the specification. While, as a general proposition, broadening modifiers are standard tools in claim drafting in order to avoid reliance on the doctrine of equivalents in infringement actions, when the scope of the claim is unclear a rejection under 35 U.S.C. 112, second paragraph, is proper. See *In re Wiggins*, 488 F. 2d 538, 541, 179 USPQ 421, 423 (CCPA 1973).

When relative terms are used in claims wherein the improvement over the prior art rests entirely upon size or weight of an element in a combination of elements, the adequacy of the disclosure of a standard is of greater criticality.

REFERENCE TO AN OBJECT THAT IS VARIABLE MAY RENDER A CLAIM INDEFINITE

A claim may be rendered indefinite by reference to an object that is variable. For example, the Board has held that a limitation in a claim to a bicycle that recited "said front and rear wheels so spaced as to give a wheelbase that is between 58 percent and 75 percent of the height of the rider that the bicycle was designed for" was indefinite because the relationship of parts was not based on any known standard for sizing a bicycle to a rider, but on a rider of unspecified build. *Ex parte Brummer*, 12 USPQ2d 1653 (Bd. Pat. App. & Inter. 1989). On the other hand, a claim limitation specifying that a certain part of a pediatric wheelchair be "so dimensioned as to be insertable through the space between the doorframe of an automobile and one of the seats" was held to

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[1] as published at http://www.uspto.gov/web/offices/pac/mpep/documents/2100_2173_05_b.htm.

be definite. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1 USPQ2d 1081 (Fed. Cir. 1986). The court stated that the phrase "so dimensioned" is as accurate as the subject matter permits, noting that the patent law does not require that all possible lengths corresponding to the spaces in hundreds of different automobiles be listed in the patent, let alone that they be listed in the claims.

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D. "Substantially"

The term "substantially" is often used in conjunction with another term to describe a particular characteristic of the claimed invention. It is a broad term. *In re Nehrenberg*, 280 F.2d 161, 126 USPQ 383 (CCPA 1960). The court held that the limitation "to substantially increase the efficiency of the compound as a copper extractant" was definite in view of the general guidelines contained in the specification. *In re Mattison*, 509 F.2d 563, 184 USPQ 484 (CCPA 1975). The court held that the limitation "which produces substantially equal E and H plane illumination patterns" was definite because one of ordinary skill in the art would know what was meant by "substantially equal." *Andrew Corp. v. Gabriel Electronics*, 847 F.2d 819, 6 USPQ2d 2010 (Fed. Cir. 1988).

The use of “substantially” in claims is widely used in modern patent practice. Notably, according to USPTO electronic records, there are 884,854 United States Patents issued since 1976 that include at least one claim including the word “substantially”.[2] It is further noted that the number of patents that have issued since 1976 is 2,801,584.[3] Thus, approximately 32% of patents issued since 1976 include at least one claim that recites the word “substantially.”

With respect to claim 71, the Examiner states,

> Claim 71, recites the limitation "substantially" in Pages 2 and 3, renders the claim indefinite. Sine [sic] the current Application merely discloses, "Web content and displays a vector representation of the requested Web content that substantially retains page layout and/or graphics associated with the requested Web content." See current discloses Para 9, which is rendering indefinite, since one of ordinary skill in the art would not be reasonably appraised of the scope of the invention. Also claim 71, recites the limitation "may be" in Page 2,

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[2] Search query of “substantially” in the claims (Field 1: Claims) using the USPTO patent search page at http://patft.uspto.gov/netahtml/PTO/search-bool.html.

[3] Search query of “A” in the claims (Field 1: Claims) using the USPTO patent search page at http://patft.uspto.gov/netahtml/PTO/search-bool.html.

renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised [sic] of the scope of the invention.

Applicants have amended claim 71 to remove the use of "may be" to further prosecution of the instant claims; however, the Applicants respectfully assert that the prior terminology was definite. The amendment to this subparagraph is to clarify the claim element and was not made in consideration of any cited art; thus no prosecution history under *Festo* should apply.

Applicants respectfully assert the following terminology in claim 71 would be clearly understood by one of ordinary skill in the art to be definite:

"… translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page ***that substantially retains the original page layout and attributes of the content defined by its original format when rendered***." (Emphasis added)

Applicants note that this or similar terminology was in the original claims and in the original Summary of the Invention section of the present application and its parent (09/878,097 now US 7,210,099). Additionally, each of the issued claims 1, 7, and 12 of US 7,210,099 contains identical language.

First, as explained below in further detail, one of skill in the art would appreciate the fact that the same Web page (in its original HTML-based format) may not be rendered identically by conventional desktop browsers due to various factors. Moreover, one of skill in the art would understand that due to the combination of both incrementally scalable and mathematically scalable content that could be derived by translating the original HTML-based Web page content, the corresponding scaled page may not result in an exact scaling of the Web page content. For example, under embodiments of the present application the overall layout of a web page may be scaled by a non-integer mathematical factor, such as 40%. However, since Web page text definitions and most browser (more accurately

Operating System) text definitions are defined by incremental font sizes (*e.g.*, a font size defined by an integer, such as 6, 8, 9,10, 11, 12, 14, *etc.*), a mathematical (i.e., vector) scaling of a Web page layout may produce a slightly different scaling of the Web page text content. For example, suppose text with a font size of 14 is to be scaled. 40% of 14 is 5.6, which is not a standard font size supported by a typical browser or OS. The nearest fixed font size is 6; however, to ensure the text fits the scaled down object area, the font size is rounded down to the nearest font size supported by the browser/OS. In order to accommodate for this, portions of the rendered Web page may need to be adjusted (that is the layout and/or size of those portions may need to be modified) to meet the rendered font capabilities of the browser/OS. This does not imply that it is not possible to have truly (*i.e.*, mathematically) scalable fonts, as the use of such fonts are disclosed in the present application. However, use of fixed size fonts are also disclosed, which may result in scaled Web pages having a slightly different layout (yet substantially similar) than a non-scaled Web page (*i.e.*, the layout of a Web page as defined by its original HTML code).

A similar type of situation exists when using today's Web browsers, such as Microsoft Internet Explorer, Apple Safari, Mozilla Firefox or an Opera browser. There are instances under which the same Web page is rendered to have a (non-scaled) page layout that is slightly different depending on which of these browsers is used. Moreover, the underlying operating system (which is used to generate various fonts) may also have an impact. For instance, Apple Safari on an Apple computer running an Apple OS may not render the same Web page exactly the same when using a PC running a Windows OS.[4] Various examples of differences in rendering the same Web page are presented below.

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[4] The Apple Safari browser has recently been ported to run on Windows.

A general purpose of the novel resolution-independent Web Page scaling, zooming, and panning techniques disclosed in the present application is to provide user's with a similar browsing experience on substantially any device as they experience using a desktop browser. The location of content in the rendered page is substantially the same as the page appears when rendered by a desktop browser; the difference is the rendered page is scaled to accommodate the different display capabilities of various devices, from handheld devices with small screens (and corresponding smaller resolution capabilities), to desktop PC's and laptops, to very large screen devices, such as large digital advertising billboards and stadium scoreboards. Notably, the techniques may also be employed on desktop PC's and laptops to enabling scaling of Web pages to better fit the screen and enhance readability. Moreover, the full Web page scaling capability works to provide the same browsing experience regardless of the resolution of the screen or display. Thus, a full Web browsing experience is supported on a wide range of devices having different display capabilities and screen sizes. This greatly enhances the usability of Web browsers on these devices.

In summary, applicants respectfully assert the use of the terminology, "… translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered" is definite and meets the requirements of 35 U.S.C. §112.

The Examiner further discusses the use of "substantially" in claim 71 on page 3 of the previous (August 31, 2007) response. The corresponding claim subparagraph recites,

> scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered *to fit* ***substantially across***

the display.

Applicants respectfully assert that the use of substantially is definite in this context, since one of ordinary skill in the art would be reasonably apprised of the scope of this claim element.

For example, Figs. 7A, 8A, and 9A show examples of Web pages rendered to fit substantially across the display of the illustrated Palm IIIc touchscreen display. One of skill in the art would recognize that it may be desirable to provide a border of a few pixels or more around the edges of the rendered Web page for readability purposes and/or aesthetics. Additionally, depending on the scrolling scheme employed, a portion of the browser may be used for scroll bars or the like, such as shown in Figs. 7A, 8A, and 9A. Generally, depending on the underlying operating system (and possibly browser features), the width of the scroll bars may vary, no scroll bars may be displayed, or scroll bars may be overlaid over a portion of the browser's page rendering area, enabling the entire width of the display to be used for browser page rendering. Examples of operating systems and/or browser implementations with different scroll bar widths are shown below:

NYT Web page as rendered on a Mozilla Firefox desktop browser running under the Microsoft Windows XP operating system

Sony Clié running Palm OS	Pocket PC running Windows CE OS
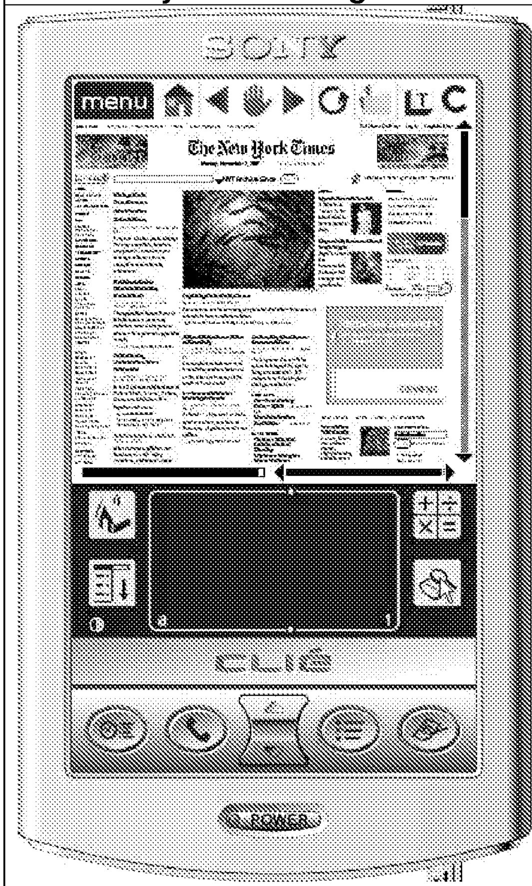	
Image 1A	**Image 1B**

Image 1A shows a Web page rendered by a Softview™ browser on a Sony Clié running a version of Palm OS, while Image A2 shows a Web page rendered by a Softview™ browser on a Pocket PC running a version of Windows CE OS. (It is noted that the principle developers of the Softview™ browsers were Gary Rohrabaugh and Scott Sherman, the inventors of the claimed inventions in the present application, and the Softview™ browsers employ the resolution-independent Web page scaling, zooming, and scrolling techniques disclosed in the application.)

As illustrated in Image 1A, and similarly illustrated in Figs. 7A, 8A, and 9A of the present application (the Palm IIIc also ran on a version of Palm OS), the

Softview™ browser implementation running on a Palm OS employs a vertical and horizontal scroll bar with arrows at the ends that are wider than the bars themselves. Also, the completely filled horizontal scroll bars in each of Image 1A, Figs. 7A, 8A, and 9A, indicates that horizontal scrolling is not applicable, as the Web page view has been rendered to fit across the width of the browser display area.[5] The scroll bars used by Windows CE are somewhat different – they include separate arrow controls that are the same width as the scroll bars. In a manner similar to the Palm OS examples, the Web page in Image 1B is rendered to fit across the width of the browser display area. Of course, for operating systems/browsers that use overlaid scroll bars, the actual browser display area would be slightly larger. Thus, depending on the type of scroll bar implementation, the portion of the display available to render the Web page (*i.e.*, the browser display area) will vary a small amount. As noted above, border areas may also be desired for readability and/or aesthetics. The net result is that under any of the discussed scroll bar schemes and/or border areas schemes, the rendered Web page will substantially fit the width of the display. Accordingly, Applicants respectfully assert the use of the terminology, " …to fit substantially across the display" is definite within the meaning of 35. U.S.C. §112.

With further respect to claim 71, the examiner states,

> "Claim 71, recites the limitation "web content" and "web page" in Pages 2-3. There are insufficient antecedent basis for this limitation in the claim.

Applicants respectfully assert claim 71, prior to the present amendment, did not have an antecedent basis problem for these terms. Moreover, it is clear from the following subparagraph in amended claim 71, which contains the first mention of the

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[5] It is noted that one of ordinary skill in the art would recognize the browser display area is the portion of the rendered display reserved for rendering the Web page content. This typically includes the display area that is not occupied by browser menu items, tool bars (as applicable) and scroll bars (as applicable).

terms “Web content” and “Web page,” that each first mention is proper.

> rendering a browser interface via which a user is enabled to request access to ***a*** ***Web page*** hosted by an Internet Web site, ***the*** ***Web page*** comprising HTML-based ***Web content*** having an original format defining an original width and height of ***the*** ***Web page*** and an original page layout and attributes of content on ***the*** ***Web page***;

With respect to claim 73, the Examiner asserts the use of “substantially” renders the claim indefinite. Claim 73 recites,

73. The wireless device of claim 72, wherein the display of the Web page is ***re-rendered substantially in real-time*** to effect zooming operations. (Emphasis added)

Thus, the use context of “substantially” in claim 73 is re-rending the display of a Web page substantially in real time. One of skill in the art would recognize the meaning of the terminology “real time” varies depending on the particular use context. For example, for an embedded real-time operating system or implementation, real-time might mean a timeframe in the millisecond or even microsecond range. In this context, the time context is machine time and real-time means instantaneous. In another use context, such as replying to e-mail, real-time is significantly longer. For example, many people refer to responding to e-mail in “real time” – this means the people respond to new e-mails as they come in, as compared with waiting until the end of the day or some other time to respond to e-mails in more of a batch manner. In a real time flight tracking context, the data that is provided may actually reflect a tracking position that is several seconds, or even minutes, old.

One of skill in the art would recognize that in a software user-interface context, which is applicable to the present claims, the use of real-time typically means the user is enabled to continue an operation in a non-disrupted manner, meaning the user doesn't have to wait a period of time of significance for the operation to be performed. In this context, real-time is perceived by the user's sense of time.

As defined by SearchSMB.com Definitions[6]

real time

DEFINITION- Also see real-time clock and real-time operating system.

Real time is a level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present visualizations of the weather as it constantly changes). *Real-time* is an adjective pertaining to computers or processes that operate in real time. Real time describes a human rather than a machine sense of time.

In the days when mainframe batch computers were predominant, an expression for a mainframe that interacted immediately with users working from connected terminals was *online in real time*.

The inclusion of "substantially' in the use of a "substantially in real-time" context is to differentiate the claim from meaning it occurs instantaneously, which would be an erroneous interpretation under the proper use context. Rather, the operation is performed in a non-disrupted manner, as experienced by the user. For the purpose of a defined time period, "substantially in real time" as used herein means the operation is performed in a few seconds or less.

With respect to claim 75, the Examiner asserts the use of "and/or" in the claim renders the claim indefinite. The applicable part of Claim 75 (prior to the present amendment) recited,

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, ***including text objects, graphic layout objects, and/or graphic image objects*** included in the Web page; (Emphasis added)

Applicants respectfully assert that the use of "and/or" in the foregoing claim is

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[6] http://searchsmb.techtarget.com/sDefinition/0,,sid44_gci214344,00.html

proper, and one of ordinary skill in the art would be reasonably apprised of the scope of the foregoing claim element. However, to advance prosecution, applicants have amended claim 75 to now recite,

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including ***at least one of*** ***text objects, graphic layout objects, and graphic image objects*** included in the Web page;

It will be understood that this recitation means the plurality of objects may include any of the following singular or combinations:

1. text objects
2. graphic layout objects
3. graphic image objects
4. a combination of text objects and graphic layout objects
5. a combination of text objects and graphic image objects
6. a combination of graphic layout objects and graphic image objects
7. a combination of text objects, graphic layout objects, and graphic image objects.

Applicants respectfully assert that amended claim 75 is definite.

With respect to claim 79, the Examiner asserts the use of "substantially" renders the claim indefinite. Claim 79 recites,

79. The wireless device of claim 78, wherein execution of the instructions performs further operations comprising enabling the display of the Web page ***to be panned substantially in real-time***. (Emphasis added)

Applicants respectfully assert that one or ordinary skill in the art would be reasonably apprised of the scope of this claim element. In particular, the discussion above concerning the use of similar terminology in claim 73 is likewise applicable to claim 79.

With respect to claim 81, the Examiner asserts the use of "higher" in the claim renders the claim indefinite. Applicants respectfully disagree. However, to advance prosecution, Applicants have amended claim 81 to now recite:

81. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on ~~view~~ a column of the Web page ~~at a higher resolution than a current resolution~~ via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

Similar amendments have been made to each of claims 83, 84, 111, 113, 114, 136, 144, 146, and 147. Applicants respectfully assert that each of these amended claims is definite.

With respect to claim 82, the Examiner asserts the use of "substantially" renders the claim indefinite. Applicants believe the Examiner intended to apply this to both claims 81 and 82 (by dependency), as the word "substantially" is present in claim 81 but not 82. The use of "substantially" in claim 81 concerns displaying the column substantially across the display. For the same reasons as discussed above with respect to displaying the web page substantially across the display, Applicants respectfully assert that this element of claims 81 and 82 (by dependency) is definite.

With respect to claim 87, the Examiner asserts the use of "rapid" renders the claim indefinite. Claim 87 has been amended to remove the use of "rapid." Applicants respectfully assert that amended Claim 87 is now definite.

With respect to independent claim 99, the Examiner asserts the user of "and/or" and "may be" render the claim indefinite. Claim 99 has been amended to remove this terminology. In particular, the applicable portion of the claim for which "and/or" was previously used now recites, employing at least one of the scalable content ~~and/or~~ and data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

It will be understood that employing at least one of the scalable content and data derived therefrom means,

1. Employing the scalable content to perform the render and re-render operations.
2. Employing data derived from the scalable content to perform the render and re-render operations.
3. Employing a combination of the scalable content and data derived from the scalable content to perform the render and re-render operations.

With respect to claim 105, the examiner asserts the use of “and/or” renders the claim indefinite. Claim 105 has been amended to remove the “and/or” terminology and uses similar language as discussed above with respect to Claim 99. Applicants respectfully assert that claim 105 is definite.

With respect to claims 109-114, the examiner asserts the use of “and/or”, “higher”, and “substantially” renders the claims indefinite.

Applicants respectfully assert that the use of “enabling the Web page to be panned substantially in real-time” in claim 109 is definite for reasons similar to those argued above with respect to claim 73.

Applicants have amended claim 110 to remove the “and/or” terminology in a manner similar to claim 99 discussed above.

Applicants have amended claims 110-114 (claim 112 indirectly by dependency) to remove the terminology “higher” in a manner similar to that discussed above with respect to claim 81.

With respect to claim 118, the Examiner asserts the use of "its" renders the claims indefinite. Claim 118 has been amended to remove the term "its"; the applicable part of claim 118 now recites,

creating a reference that links the object to ~~its corresponding~~ the vector that is generated.

Applicants respectfully assert claim 118 is now definite.

With respect to claim 123, the Examiner asserts the use of "substantially" renders the claim indefinite. Applicants respectfully assert the use of "to display at least one of the width and height of the Web page substantially across a display area of the display" is definite for reasons similar to those argued above with respect to the use of similar language in claim 71.

With respect to claims 125 and 158, the Examiner asserts the use of "HTML-based content comprises XML-based content" renders the claims indefinite. Applicants respectfully traverse this rejection.

It is well-known to those of ordinary skill in the art that Web pages are defined, at least in part, by corresponding HTML code contained in one or more HTML documents. In general, such HTML code may be stored in one or more files (*i.e.*, static content), or all or a portion of the HTML code may be dynamically generated in response to user access requests (*e.g.*, through scripts and other techniques). While the Web page content includes HTML code, it is not limited to HTML code. Thus, the use of the terminology "HTML-based content" in the present claims. As discussed throughout the specification and shown in the drawings of the present application, the Web page content may include XML code, cascaded style sheet (CSS) data, and scripting language code, such as JavaScript. Those of ordinary skill in the art would recognize that Web page content may also contain other types of content. Moreover, one of ordinary skill in the art would recognize that XML code comprises XML-based content.

Notably, extensive discussion of HTML documents and their use is disclosed in the present application. In particular, paragraph [0052] states,

> **[0052]** HTML is a standardized language that describes the layout of content on a web page, and attributes of that content. This layout and attribute information is defined by sets of tags contained in HTML code corresponding to the page. The tags define various HTML layout and display information, including tables, paragraph boundaries, graphic image positions and bounding box sizes, typeface styles, sizes, and colors, borders, and other presentation attributes. A portion or all of a web page's text content may be contained in the parent HTML document corresponding to the URL. *In addition to basic HTML, web page documents may contain* ***XML (eXtensable markup language)*** *code, as well as scripting language code, such as javascript.* ***However, for simplicity, any documents containing web page content other than only graphic content that are discussed herein will be referred to as <u>HTML documents</u>***. (Emphasis added)

Applicants respectfully assert the use of the terminology "XML-based content" is definite, and one of ordinary skill in the art would be apprised of the scope of prior versions of claims 125 and 158. However, to advance prosecution, Applicants have amended these claims to refer to "XML code."

With respect to the indefinite rejection of independent claim 128, applicants have removed the "and/or" and "may be" terminology in a manner similar to that discussed above. Applicants respectfully assert that amended claim 128 is definite.

With respect to rejections of claims 135 and 135 as indefinite in view of the use of "substantially," applicants respectfully traverse these rejections based on similar reasons to those presented above concerning the use of the terminology "substantially in real-time."

With respect to the rejection of claim 136 as indefinite for using "higher" and "substantially," Applicants have amended claim 136 to remove use of the term "higher." Applicants respectfully assert the use of the terminology,

"the display is re-rendered such that the image is displayed substantially across the display"

is definite, for reasons similar to those discussed above concerning displaying Web pages or selected content (*i.e.*, images, columns, paragraphs) "substantially across the display."

With respect to claim 143, the Examiner asserts that the use of "it" and "may be" render the claim indefinite. Applicants have amended claim 143 to remove use of "it" and "may be." Applicants respectfully assert that amended claim 143 is definite.

With respect to the rejection of claim 144 for indefiniteness, Applicants have amended claim 144 to remove the use of "higher." Applicants respectfully assert the use of "the selected column is displayed substantially across the display" is not indefinite, for reasons similar to those discussed above. Applicants respectfully assert that amended claim 144 is definite.

With respect to claims 145-147, 151, and 156, the Examiner asserts that the use of "and/or", "higher", and "substantially" render these claims indefinite.

Applicants respectfully assert that claim 145, which depends from claim 144, is definite for the same reasons as claim 144.

Each of claims 146 and 147 has been amended to remove the term "higher". Applicants respectfully assert the use of the terminology "displayed substantially across the display" is definite for similar reasons to those presented above with respect to the use of the same terminology.

With respect to each of claims 151 and 156, Applicants respectfully assert the use of "substantially in real time" renders the claim definite, as argued above.

With respect to claims 174, 175, and 179, the Examiner asserts that the use of "its", "may be" and "substantially" render these claims indefinite. Applicants have amended claim 174 to remove reference to "its" and "may be." Applicants respectfully assert that the terminology "substantially retains the original page layout and attributes of the content defined by its original format when rendered" is definite based on similar reasons argued above with respect to the definiteness of claim 71.

With respect to claims 175 and 176, applicants respectfully assert the terminology “substantially in real-time” is definite for reasons similar to those discussed above.

Traversal of the Rejection of Claims 71-92 and 94-179 under 35 U.S.C. §112, second paragraph

Claims 71-92, and 94-179 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. These rejections were based on the assertion a single claim which claims both an apparatus and the method steps of *using* the apparatus is indefinite under 35 U.S.C. §112, second paragraph, citing Ex Parte Lyell, 17 USPQ2d 1548 (Bd. Pat. App. & Inter l990) and MPEP 21 73.05(p). Applicants respectfully traverse these rejections.

It is clear that each of claims 71-92 and 94-179 are directed to an apparatus (specifically, a wireless device or a mobile device, as applicable). In particular, each wireless or mobile device includes instructions (stored in some type of storage device or means) that enable the apparatus to perform certain operations upon execution of the instructions. Generally, the instructions comprise software and/or firmware[7] that is executed by a processor and/or other processing means/circuitry to facilitate various device operations. The claim form used for these claims is a conventional form for claiming such devices. The claim does not refer to method steps of *using* the apparatus, but rather recite operations *performed by* the apparatus via execution of software and/or firmware instructions.

Applicants respectfully assert that none of claims 71-92 and 94-179 claim both an apparatus and a method of ***using*** the apparatus. In addition, see the traversal of

[7] It is noted that a portion of the instructions may comprise programmed logic in some embodiments

the 35 U.S.C. §101 argument below, which states in part,

> ***an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is simply an apparatus claim including functional limitations***. See, e.g., R.A.C.C. Indus. v. Stun-Tech, Inc., 178 F.3d 1309 (Fed. Cir. 1998) (unpublished) (Emphasis added)

Moreover, it was agreed during the Examiner interview of December 3, 2007 that the pending claims meet the requirements for both 35 U.S.C. §112, second paragraph and 35 U.S.C. §101. Accordingly, the rejection of claims 71-92 and 94-179 under 35 U.S.C. §112, second paragraph is traversed.

Traversal of the Rejection of Claims 71-92 and 94-179 under 35 U.S.C. §101

The Examiner rejected Claims 71-92, and 94-179 for allegedly being directed to neither a "apparatus" nor a "process," based on the theory that the claims are directed to neither a "process" nor a "machine," but rather embraces or overlaps two different statutory classes of invention set forth in 35 U.S.C. 101 which is drafted so as to set forth the statutory classes of invention in the alternative only. Id. at 1551. See also, MPEP 2173.05(p). Applicants respectfully traverse these rejections.

As discussed in detail above, each of claims 71-92 and 94-179 is directed to an apparatus (wireless device or mobile device). Claims directed to an apparatus clearly meet the statutory subject matter requirements of 35 U.S.C. §101.

Each of the rejected claims is clearly patentable under the *Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility* published by the USPTO on October 26, 2005. In particular, section IV B. states[8]:

B. Determine Whether the Claimed Invention Falls Within An Enumerated Statutory Category

To properly determine whether a claimed invention complies with the statutory invention requirements of 35 U.S.C. § 101, USPTO personnel must first identify

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[8] Emphasis added to text in bold italics. Underlines are in the original text.

whether the claim falls within at least one of the four enumerated categories of patentable subject matter recited in section 101 (process, machine, manufacture or composition of matter).

In many instances it is clear within which of the enumerated categories a claimed invention falls. Even if the characterization of the claimed invention is not clear, this is usually not an issue that will preclude making an accurate and correct assessment with respect to the section 101 analysis. The scope of 35 U.S.C. § 101 is the same regardless of the form or category of invention in which a particular claim is drafted. <u>AT&T</u>, 172 F.3d at 1357, 50 USPQ2d at 1451 . <u>See also</u> <u>State Street</u>, 149 F.3d at 1375, 47 USPQ2d at 1602 wherein the Federal Circuit explained

> The question of whether a claim encompasses statutory subject matter should not focus on <u>which</u> of the four categories of subject matter a claim is directed to -- process, machine, manufacture, or composition of matter -- [provided the subject matter falls into at least one category of statutory subject matter] but rather on the essential characteristics of the subject matter, in particular, its practical utility.

For example, a claimed invention may be a combination of devices that appear to be directed to a machine and one or more steps of the functions performed by the machine. Such instances of mixed attributes, although potentially confusing as to which category of patentable subject matter it belongs in, does not affect the analysis to be performed by the examiner. ***Note that an apparatus claim with process steps is not classified as a "hybrid" claim; instead, it is <u>simply an</u>***

apparatus claim including functional limitations. See, e.g., R.A.C.C. Indus. v. Stun-Tech, Inc., 178 F.3d 1309 (Fed. Cir. 1998) (unpublished).

It is clear from the foregoing that each of claims 71-92 and 94-179 claims an invention that meets the statutory requirements of 35 U.S.C. §101. As discussed above, it was agreed during the Examiner interview of December 3, 2007 that the pending claims meet the statutory requirements of 35 U.S.C. §101. Accordingly, the rejection of claims 71-92 and 94-179 under 35 U.S.C. §101 is traversed.

Obviousness-type Double Patenting

Independent claims 71, 99, 128, 143, and 174 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-50 of co-pending U.S. Patent Application No. 09/878,097, now US Patent No. 7,210,099 issued April 24, 2007, which is parent application of the current application. Applicants respectfully traverse this rejection.

A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, *e.g.*, *In re* Berg, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re* Goodman, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re* Longi, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re* Van Ornum, 686 F.2d 937,214 USPQ 761 (CCPA 1982); *In re* Vogel, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re* Thorington, 418 F.2d 528, l63 USPQ 644 (CCPA 1969).

The originally filed claims of the 09/878,097 (Parent) application were subject to a three-way restriction, including the following groups.

I. Claims 1-8, 21-24 and 30-33, are drawn to a display-processing document including format transformation feature, classified in class 715, subclass

523.

II. Claims 9-14, are drawn to a networking including Client/Server feature, classified in class 709, subclass 203.

III. Claims 15-20, and 25-29, are drawn to a computer graphic processing included resolution conversion, classified in class 345, subclass 3.3.

Group III claims were elected for prosecution in the ‘097 application. Meanwhile, divisional applications including claims respectively directed to Groups I and II were filed on January 28, 2005 (11/045,757 (present application) to Group I; 11/045,649 to Group II).

When considered at a general level, the original claim groups were directed to:

I. (Claims 1-8, 21-24 and 30-33) Retrieval and translation of Web page content from original HTML form to scalable content that may be rendered by a client-side device (*e.g.*, thin client). Generally server-side operations but are performed by the client under original dependent claim 3.

II. (Claims 9-14) Routing client request through a proxy to return translated Web content to client; dependent claims further include generation of translated content.

III. (Claims 15-20, and 25-29) Client-side rendering operations, where the client receives the translated scalable content and renders such content. Client-side rendering operations support scaling, zooming, and panning of the Web page.

By way of preliminary amendments and other amendments, the original claims of the present application were replaced by the present claims, which generally comprise a combination of the original claim subject matter in Groups I and III.

First, Applicants respectfully assert that if the original claims restricted to Group I and Group III are patentably distinct, then claims including subject matter that is a combination of the subject matter of the original claims of Groups I and Group III (considered generally) should be patentably distinct from each of Groups I and III, since each of these claims will include, by definition, claim elements that are not included in either of the claims restricted to Groups I and III alone.

The pending claims in the present application are patentably distinct from the issued claims in the '099 patent. Each of the pending claims includes the element of retrieving HTML-based Web page content corresponding to the requested Web page – that is, ***they begin with Web page content in its original form as stored on (a) Web server(s) and made available for download to conventional desktop browsers***. None of the claims in the US 7,210,099 include similar elements. In each of the claims in the '099 patent[9], the client receives scalable content that has already been translated from its original HTML-based form by some external entity, such as a proxy server. Clearly, none of claims in the 7,210,099 patent would anticipate any of the pending claims, nor render any of the pending claims obvious. Accordingly, the provisional double-patenting rejection is improper and should be withdrawn.

Allowable Subject Matter

Claims 88-91, 118-121, 125-126, and 158-159 stand objected to as being dependent upon a rejected base claims, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims and rewritten to overcome 35 U.S.C. §101, and 35 U.S.C. §112, and Terminal Disclaimer. Applicants thank the Examiner for acknowledging each of these claims contains allowable subject matter, but choose to not rewrite any of the claims in independent form or file a Terminal Disclaimer at this time. However, Applicants reserve the right to do so during future prosecution, as applicable.

Traversal of the Rejection of Claims under 35 U.S.C. §103.

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[9] It is noted that US 7,210,099 includes method claims, apparatus claims pertaining to an apparatus configured to perform the method, and Beauregard claims pertaining to software/firmware instructions for performing the method.

Claims 71-87, 92, 95-1 17, 122-123, 127-157, and 160-179 were rejected under 35 U.S.C. §103(a) as being unpatentable over *Chithambaram*, in view of *Roy*. Applicants respectfully traverse these rejections, as argued below.

The Examiner is reminded that to successfully make a prima facie rejection under 35 USC § 103, the Examiner must show that Applicant's claimed subject matter would have been obvious to one of ordinary skill in the art pertinent to Applicant's claimed subject matter at the time it was made. See KSR International, Co. v. Teleflex, Inc., 550 U.S. _____(decided April 30, 2007). Some of the factors to consider in this analysis include the differences between the applied documents and Applicant's claimed subject matter, along with the level of skill associated with one of ordinary skill in the art pertinent to Applicant's claimed subject matter at the time it was made. See USPTO Memo entitled "Supreme Court decision on KSR Int'l. Co., v. Teleflex, Inc.," (May 3, 2007). One way in which an Examiner may establish a prima facie case of unpatentability under 35 USC § 103 would be to show that three basic criteria have been met. First, the Examiner should show that the applied documents, alone or in combination, disclose or suggest every element of Applicant's claimed subject matter. Second, the Examiner should show that there is a reasonable expectation of success from the proposed combination. Finally, the Examiner should show that there was some suggestion or motivation, either in the applied documents themselves or in the knowledge generally available to one of ordinary skill in the art pertinent to the claimed subject matter at the relevant time, to modify the document(s) or to combine document teachings. The motivation or suggestion to make the proposed combination and the reasonable expectation of success should be found in the prior art, and should not be based on Applicant's disclosure. See *In re* Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); See MPEP § 2142; 2143 - § 2143.03 (regarding decisions pertinent to each of these criteria). It is respectfully asserted that the Examiner has not met these standards.

Overview of Claimed Subject Matter

In order to clearly differentiate the claimed subject matter from the cited references, we begin with an overview of the claimed subject matter.

By way of example and not limitation, claim 71 recites,

71. A wireless device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.

Aspects of the foregoing claim elements will now be discussed with reference to the schematic diagram on the following page (FIG. 1). The schematic drawing shows an exemplary infrastructure comprising well-known components for facilitating access to and delivery of Web pages. Web page content (*i.e.*, Web content) is served by servers that are accessed via the Internet, also commonly referred to as the World Wide Web (WWW). Accordingly, these servers are typically referred to as "Web" servers. More accurately, they are HTTP (Hypertext Transport Protocol) servers, as they serve content of various types using the HTTP protocol. FIG. 1 shows a pair of exemplary Web servers, including a New York Times (NYT) Web server and an Advertisement (ADV) Web server. It will be appreciated that literally millions of similar Web servers are connected to the Internet across the world, thus forming the World Wide Web.

To access WWW web servers, users use client devices that are communicatively coupled to the Internet through applicable network infrastructure. In the desktop environment, desktop clients, such as personal computers and workstations, are typically coupled to a Local Area Network (LAN) via an Ethernet link to a LAN host device. (It is noted that some desktop clients may wirelessly connect to a Wireless LAN (WLAN), in a manner similar to that discussed below for wireless clients.) The LAN, in turn is usually connected to the Internet via network infrastructure provided by an Internet Service Provider (ISP). Connection between the LAN and the ISP is typically provided by some type of Modem (*e.g.*, Cable or xDSL Modem) or dedicated hardware (for larger customers, such as businesses). (It is also noted that many individual users still connect to their ISP through a telephone modem.)

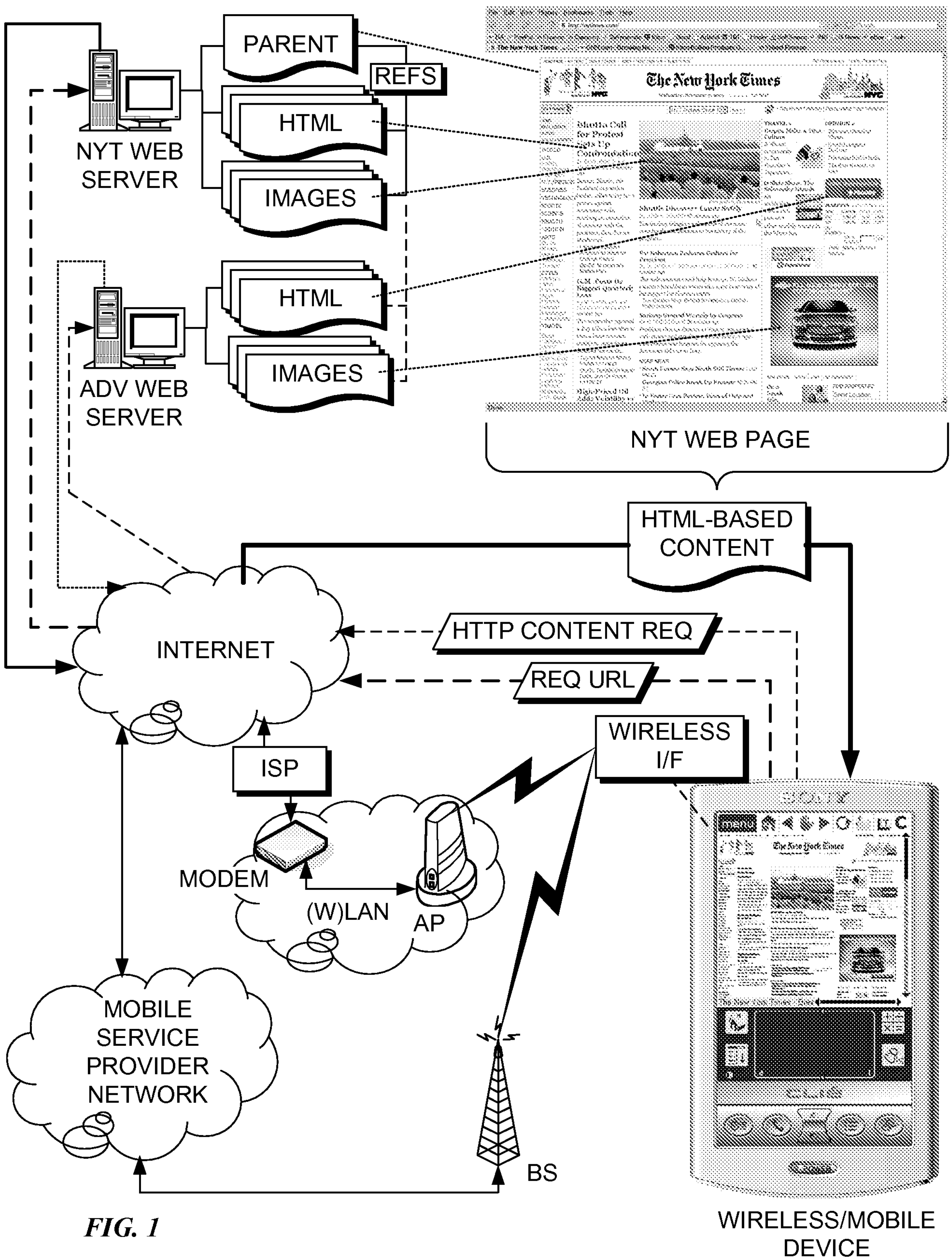
PARENT
REFS
HTML
IMAGES
NYT WEB SERVER
HTML
IMAGES
ADV WEB SERVER
NYT WEB PAGE
HTML-BASED CONTENT
INTERNET
HTTP CONTENT REQ
REQ URL
WIRELESS I/F
ISP
MODEM
(W)LAN
AP
MOBILE SERVICE PROVIDER NETWORK
BS
WIRELESS/MOBILE DEVICE

FIG. 1

Wireless and mobile devices, including those devices covered by the claims herein, typically connect to the Internet in one of the manners illustrated in FIG. 1. (It is noted that the schemes illustrated in FIG. 1 are exemplary, and by no means limiting to the wireless connection schemes covered by the associated claim elements.) Under one scheme, Internet access for a mobile phone may be facilitated via the service provider for the mobile phone. Typically, the service provider operates a data network to support Internet access and other data access facilities. Such a data network is illustrated by a base station (BS) and Mobile Service Provider Network cloud in FIG. 1.

The mobile server provider network will typically be accessed via either mobile service provider infrastructure used for general mobile telecommunications (*e.g.*, the same infrastructure used for the "voice" and data network), or a dedicated network used for data services. Generally, there are two mobile telecommunications technology groupings. They are,

1. CDMA[10] One/CDMA 2000
2. GSM[11] /GPRS[12] /EDGE[13] /WCDMA[14].

The second technology grouping also supports UMTS[15] networks. Mobile telecommunications networks use licensed spectrum.

The wireless and mobile devices may also access the Internet via some form of unlicensed (spectrum) wireless connection, such as via a Wireless LAN (WLAN). Under this scheme, the device wirelessly communicates via an access point (AP), which in turn is coupled to a LAN or directly coupled to a modem or other hardware that

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[10] Code Division Multiple Access

[11] Global System for Mobile Communications

[12] Global Packet Radio Service

[13] Enhanced Date Rates for GSM Evolution

[14] Wideband CDMA

[15] Universal Mobile Telecommunication System

supports a communication link with an ISP. Generally, WLAN technology includes IEEE 802.11a, b, g, or n (WiFi), IEEE 802.15.1 (Bluetooth) and IEEE 802.15.4 (ZigBee).

In addition to the schemes illustrated in FIG.1, the wireless and mobile devices may access the Internet via WiMAX (IEEE 802.16) infrastructure, which includes WiMAX base stations (not shown). Moreover, it is anticipated that other types of wireless communication technologies using licensed and unlicensed spectrum will be developed in the future.

As will be recognized by those skilled in the art, a given wireless or mobile device will provide components including antenna(s) and signal processing to facilitate wireless communication with one or more of the various types of base stations and access points described above. These components are collectively illustrated as a Wireless Interface (I/F) in FIG. 1. It is further noted that the particular wireless components and scheme employed is outside the scope of the present invention, as such will be known to those of skill in the wireless communication art, and is not to be limited by the exemplary wireless protocols discussed herein, as the scope of this claim element is intended to cover any means for communicating with a network via a wireless link or connection.

Now that the infrastructure of FIG. 1 has been described, we proceed with discussion of retrieving and processing the Web page content such that the Web page can be accessed via a wireless/mobile device. In the illustrated example, the process is initiated by a user desiring to access the New York Times (*i.e.*, and electronic version of the New York Times published to the Internet on a given day). This is facilitated by a browser running on the wireless/mobile device. The New York Times may be accessed via the Internet by downloading corresponding Web pages from the NYT Web server. More specifically, the New York Times home page may be accessed by entering the URL (Universal Resource Locator) www.nytimes.com.

As discussed above and in further detail in the present specification, Web pages comprise HTML-based content which may be stored in one or more documents commonly referred to as HTML documents. In addition, Web pages may include dynamically-generated content. Each Web page has a corresponding main or "parent" HMTL document that includes HTML code defining the Web page content layout, at least at some level. The parent HTML document may reference other HTML documents, as well as other content (such as image content) that further define the layout of content contained in the referenced documents. This may proceed in a hierarchical or nested fashion.

To access the Web page, the browser initiates an HTTP connection with the Web server hosting the Web page, and begins downloading the parent HTML document. Depending on how the Web server and/or Web page is configured, additional content (*i.e.*, beyond that included in the parent HTML document) referenced by the parent HTML document, may be retrieved by the Web page host server and then downloaded to the requesting client device, or a portion of this content may be downloaded by the client device via a separate connection. Generally, content that is hosted by a Web server or Web site is assembled by the Web server and downloaded to the client device. On the other hand, externally-referenced content (that is, content that is not stored on the Web server or Web site), is often left to the client device (*i.e.*, the browser) to retrieve.

An example New York Times home page (dated November 7, 2007, 2:22PM ET), as rendered by the Mozilla Firefox browser running on a desktop or laptop computer, is shown at the upper right-hand portion of FIG. 1. The same Web page is shown rendered on a Sony Clié using a Softview™ browser at the lower right-hand portion of FIG. 1. Notably, the same HTML-based content defining the page layout and attributes of the Web page content is downloaded by each of the Mozilla Firefox and Softview™ browsers. Moreover, the same HTML-based content would be retrieved by other desktop browsers, such as Microsoft Internet Explorer, Apple Safari, and Opera browsers, to render the New York Times home page.

As discussed above, the Parent HTML document typically includes HTML code to define the overall layout of the Web page and its content. For example, the HTML code will define whether the Web page includes frames, and, if so, where those frames are located on the rendered page. Various content displayed on the Web page may be stored in the Parent HTML document and/or one or more other HTML documents referenced by the Parent HTML document. If the content is to be rendered in a frame referenced by the Parent HTML document but whose content is not defined within the Parent HTML document, the actual reference to the HTML document storing the content may be in the document defined by the frame reference. For example, for illustrated purposes, the content in the column with the heading “Bhutto Call for Protest Sets Up Confrontation” is depicted to be stored in an HTML document that is hosted by the NYT Web server, but is separate from the Parent HTML document.

Likewise, image content may be stored separate from the Parent HTML document. This is typically done since images, which often contain a large amount of data due to the nature of image data, make require significant download time, especially over a slow connection. By putting image content in (a) separate document(s), the basic page layout and text content can be rendered much faster. Typically, HTML code defining the page layout location of an image on the page may be used to place an image “placeholder” or other indicia on the screen prior to rendering of the image.

As discussed above, various portions of the Web page content may be stored on Web servers that are external to the Web page host server. This is often the case with advertisement content. Rather than have the advertisement content stored locally on each Web server, the advertiser will use an advertisement host site to store and serve the advertisement content. For example, in FIG. 1, image data for rendering the “All

New Chevy Malibu" advertisement is depicted as being stored in an image document on the Advertisement Web server.

Typically, externally referenced advertisement content is downloaded by the browser directly from the advertisement content host site, rather than from the Web page host site. The network location of the advertisement content host server is identified by parsing the retrieved HTML-based content, and an HTTP GET request is used to download the associated advertisement content from its host server.

Some Web pages may include "embedded" content hosted by an external site. For example, the New York Times Web page includes embedded content provided by Fidelity. Oftentimes, such embedded content may be dynamic in nature (that is, may change over time or differ depending on identification of the target user). Generally, embedded content may be retrieved by the browser from an external host site (*e.g.*, advertisement Web server depicted in FIG. 1[16]), or such content may be first retrieved by the Web page host site and served to the browser.

It is common terminology to refer to a browser "retrieving" or "downloading" a Web page. For example, upon entry of a new URL in the browser Web address box, the browser will download the Web page referenced by the URL. It is well understood that this doesn't imply that all of the content associated with the Web page must be retrieved or downloaded. Some of the content is typically used for search engine purposes, such as Metatag header information, or is otherwise not used for rendering purposes. In other cases, content may be referenced that is not supported by the requesting browser. For example, "Flash" content typically requires a Flash plug-in viewer (or built-in Flash support provided by some browsers); if the plug-in viewer is not loaded by the browser (or such support isn't built in), the Flash content cannot be displayed. This is also true for TIFF images on the USPTO Web site. Unless the

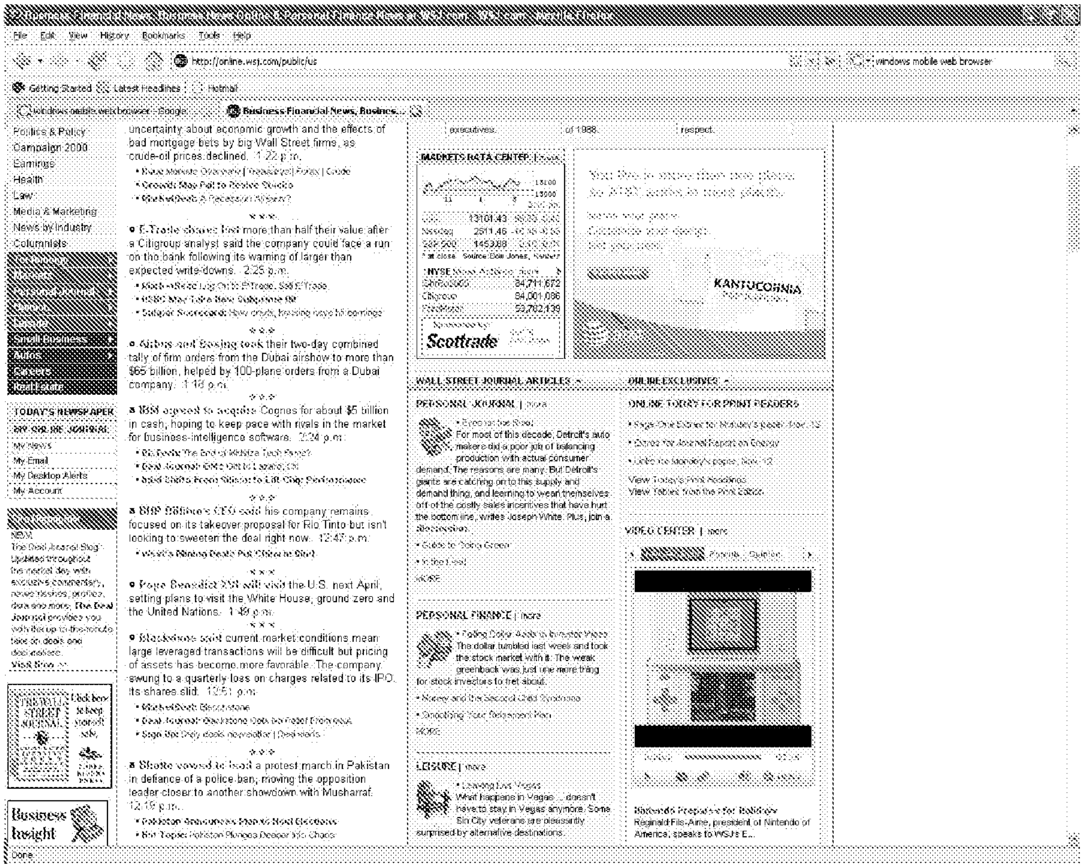
[16] It is noted that it would be likely the Fidelity content would be hosted by its own server that would be separate from the advertisement server; however, for simplicity, the advertisement is used for illustrative purposes.

proper TIFF plug-in viewer is loaded, the TIFF images will not be displayed.

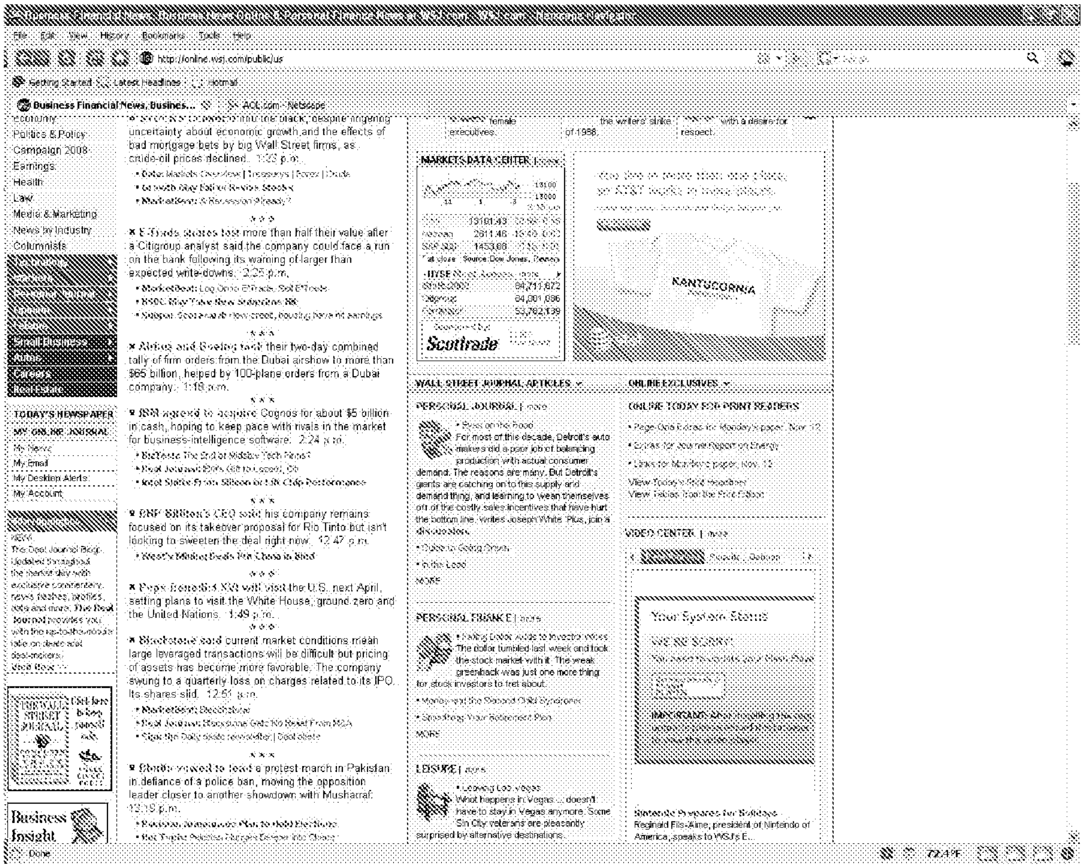
A similar situation exists with Active-X controls. In order to use the Active-X controls, the browser needs to provide support for Active-X controls. Since Active-X controls were developed by Microsoft, all recent versions of Microsoft Internet Explorer provided support for Active-X controls. Meanwhile, browsers from other vendors, such as Apple Safari, Mozilla Firefox, and Opera, do not support Active-X controls.

When a browser encounters content that is not supported “natively” by the browser, the browser will typically check to see if an appropriate plug-in is available. Depending on the browser and/or particular Web site, if an appropriate browser cannot be found, the browser or Web site may apprise the user of the situation and enable the user to download the plug-in. In other instances, the content is simply ignored. Thus, in some cases, the Web page may reference content that is never retrieved when the Web page is retrieved by the browser.

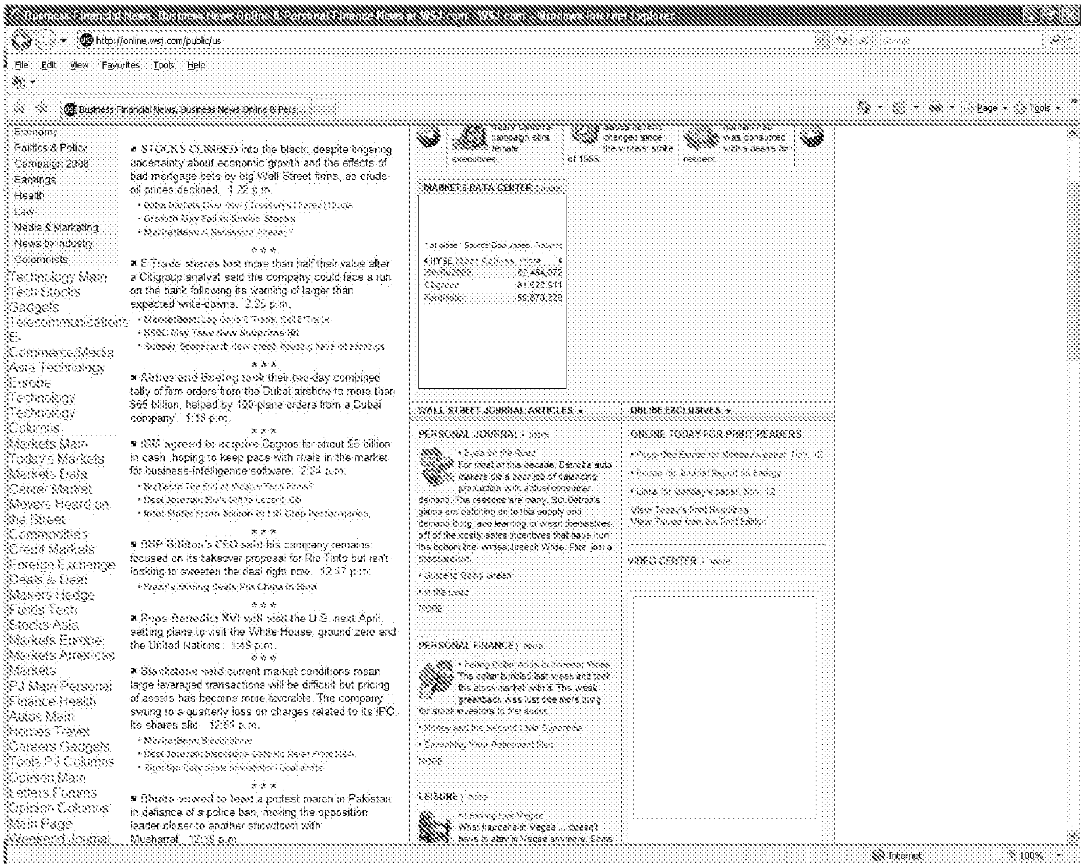
The three screen shots below respectively show the same Web page rendered on a Netscape Navigator 9 browser, a Mozilla Firefox 2.0 browser, and an Internet Explorer 7 (IE 7) browser. In this particular instance, certain features of the IE7 browser are disabled for security reasons. It is also missing some plug-ins. Each of these browsers is running on the Microsoft Windows XP operating system.



Mozilla Firefox 2.0 Browser



Netscape Navigator 9 Browser



Microsoft Internet Explorer 7 Browser

It will be observed that the Web page is rendered substantially the same by the Netscape Navigator 9 and FireFox 2 browsers, while portions of the Web page are rendered in a different manner by the IE 7 browser (notably the left-hand column). The similarity between Netscape and Firefox is expected since they both use the same Mozilla core rendering code, while IE 7 uses Microsoft's rendering code. It is further noted that some Web pages are coded to account for different browser features. For example, some Web pages will have provisions for Active-X controls for pages to be viewed by Internet Explorer browsers, while possibly including provisions for alternate mechanisms when using other browsers.

This example Wall Street Journal Web page includes various embedded ***non-***

HTML content requiring support of one or more plug-ins[17] or otherwise built in support for rendering ***non-HTML*** content of a particular content type. In particular, the VIDEO CENTER object in the lower right-hand corner requires an Adobe (formerly Macromedia[18]) Flash viewer for rendering Flash content, which uses vector and raster graphics, a native scripting language called ActionScript and bidirectional streaming of video and audio.[19]

It is noted that there is a message in the VIDEO CENTER box in the Web page rendered by the Netscape Navigator 9 browser indicating that the browser needs to update its Flash player. In the case of the Firefox 2 browser, either the appropriate Flash player was found or an appropriate level of support for Flash content is built into the browser. In this case, the Flash .SWF file including data to render a video image of a Nintendo DS console is retrieved from a corresponding host server and rendered by the browser (if it has built-in support) or Flash player, as applicable. In the case of the Netscape Navigator 9 browser, the appropriate Flash player plug-in is not available; accordingly, the video image of the Nintendo DS console is not retrieved.

In the case of the particular IE 7 browser configuration used to obtain the IE7 screen shot, the Flash player is either missing or blocked. As a result, the aforementioned VIDEO CENTER image is missing (just an empty box is rendered, as defined by corresponding HTML). Moreover, the IE 7 browser did not render a message indicating the Flash player needed to be upgraded. In addition, the source for

---

[17] As defined by Wikipedia, A **plugin** (**plug-in**, **addin**, **add-in**, **addon** or **add-on**) is a computer program that interacts with a host application (a web browser or an email client, for example) to provide a certain, usually very specific, function "on demand". Applications support plugins for many reasons. Some of the main reasons include: enabling third-party developers to create capabilities to extend an application, to support features yet unforeseen, reducing the size of an application, and separating source code from an application because of incompatible software licenses.

[18] Macromedia is now a division of Adobe Systems

[19] For more details on the Adobe Flash Player, see, e.g., http://en.wikipedia.org/wiki/Adobe_Flash_Player

the AT&T advertisement in the upper right-hand portion is blocked via a security setting, resulting in this portion of the page being rendered using the same background color as the frame it (would be) embedded in.

A point for discussing the foregoing is to make it clear that,

1. Even when rendering the same Web page source content (*i.e.*, the HTML code definition of the Web page), conventional Web browsers may not render the (non-scaled) Web page identically. Scaling Web pages may also result in alternation of the page layout. However, under aspects of embodiments of the invention (such as claimed in claim 71) the overall layout and appearance of the scaled Web pages will substantially retain the original page layout and attributes defined by the HTML code for the Web page.
2. Plug-ins may be required to render ***non-HTML content*** that is embedded within some web pages or used in a separate window launched from a web page. Notably, the plug-in content is not a Web page, but rather a specific type of content requiring a corresponding plug-in application to render the content.

Discussion of US 6,642,925 (*Roy*)

Roy discloses an architecture for supporting viewing of maps through a combination of server-side components and a client-side map viewer. As will be described in further detail below, the *Roy* subject matter is employed by Autodesk's MapGuide GIS[20] architecture.

As stated in the Abstract,

> [*Roy*] discloses a method, apparatus, and article of manufacture for a computer implemented geographic information system that enables viewing a map picture that is generated from vector-based data. Map pictures can be generated with vector-based data. Map pictures created with vector-based data can be viewed. Additionally, map pictures are comprised of map objects, such as states and cities. Map objects can be

[20] Geographical Information System

chosen to obtain additional information, for example, a different map picture. Additionally, areas of the map picture can be zoomed in on to view the areas with greater resolution or to obtain additional data about the areas. Furthermore, when a user requests to view a map picture, only the map data required to respond to the user's request is downloaded to generate a map picture. As a user makes additional requests for information, additional map data is downloaded and new map pictures generated.

As stated in the Overview section beginning at Col. 2, line 63 (Emphasis added),

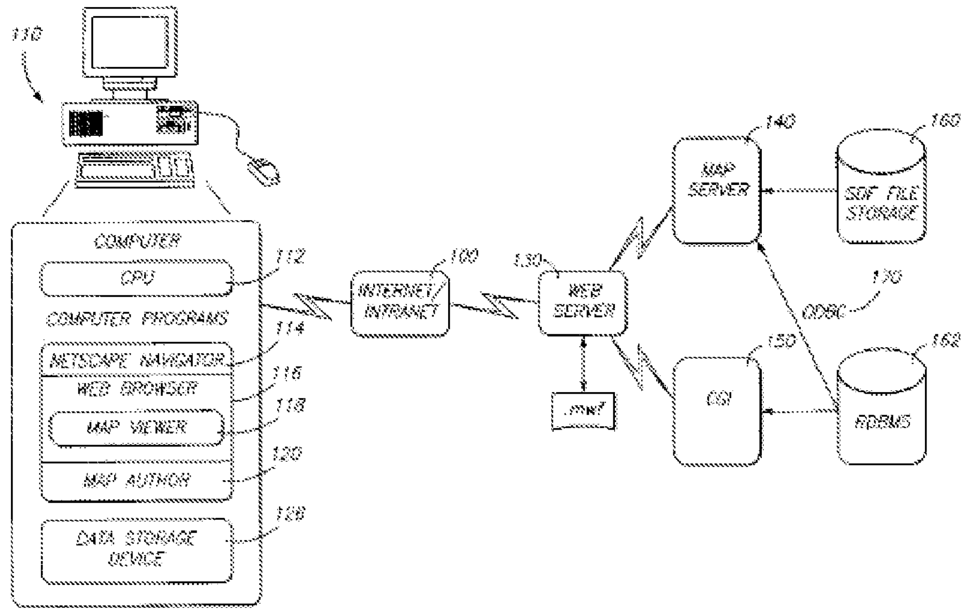
The present invention comprises a vector-based geographic information system that enables creating ***map window files*** *containing map definition information that defines a map picture*, storing and transmitting map data, and viewing map pictures generated using the map data. *In particular, the present invention includes one or more computer programs that include a* ***map viewer for viewing map pictures****, a map author for defining map pictures, and a* ***map server for storing and transmitting map data over the Internet or over Intranets***.

A user (i.e., author) uses the map author to create ***map window files*** *that contain map definition information.* The map definition information identifies map layers. Each map layer identifies a grouping of map objects, which are graphical entities. In particular, a map picture can have several map layers, each map layer providing additional information for the map picture. A map layer can either be static or dynamic. For a static map layer, ***map data is embedded in the map window file as a computer graphic metafile (CGM)***, and for a dynamic map layer, the location of the map data is identified in the map window file. *For dynamic map layers, the map data for a map layer is stored in a* ***spatial data format (SDF) file*** *at one or more map servers. The* ***map window file*** *either includes a static map layer or a dynamic map layer that is used to generate an initial map picture.* The initial map picture is displayed when a user requests to view the map picture.

The map window file is stored on a Web server, and the map data that is identified by the map definition information is stored on one or more map servers. ***The map viewer is used by a user to view map pictures. In particular, when a user inputs a request to view a map picture, the map viewer downloads a map window file from a Web server. Then, the map viewer reads the map definition information in the map window file to identify the map layer identifying the map data needed to generate an initial map picture. When the map definition information identifies the location of map data, the map viewer downloads this map data from the specified map server to generate the map picture. The map viewer then displays the initial map picture on a computer display device. As the user makes requests for additional information for the map picture, the map viewer***

downloads additional map data identified in the map window file from a map server.

The hardware environment is shown in FIG. 1 below:



In particular, map window files (as indicated by the .mwf component) are stored on a Hypertext Transport Protocol (HTTP)[21] Web server 130 and downloaded to a client computer 110 and viewed by a map viewer 118. In further detail (Col 5, lines 12-34, emphasis added),

> ***The map viewer*** *118 enables a user at a client computer to view map pictures and their associated data.* ***The map viewer 118 is currently embodied as <u>a Netscape Navigator browser 114 plug-in</u>. The Netscape Navigator browser 114 interfaces with the Internet and Intranets through the Web browser 116. When a user attempts to open a map window file, the <u>Netscape Navigator browser 114 automatically invokes the map viewer 118</u>. The map viewer downloads a map window file from the Web server 130 and stores the map window file in a data storage device 126. The map window file contains map definition information that identifies map data and the map servers from which the map viewer is to obtain the map data to render and display the map picture. The map viewer 118 makes requests for map data from map servers 140 via a Web server 130***

[21] See, Col. 11, lines 13-15.

and a Web browser 116 using the communications infrastructure of the Internet and/or one or more Intranets 100.

When the map viewer 118 requests map data from the map server 140, the map server retrieves the map data from either the SDF file storage 160 or from the relational database 162 through an open database connectivity (ODBC) connection 170. The map server returns the requested map data to the map viewer 118.

Additionally (Col. 5, lines 50-62, emphasis added),

Map definition information defining map pictures using vector-based data is saved in **map window files** *122 on the Web server 130.* ***The map viewer 118 uses the map window file 122 to identify the location of map data on map servers 140 for use in generating the map pictures***. ***This map data is communicated from the map server 140 to the map viewer 118 using the services of a Web server 130 and Web browser 116***. Following installation of the present invention, ***the Netscape Navigator browser 114 recognizes the map window file 122 as a file that requires the Netscape Navigator browser 114 to automatically load the map viewer plug-in 118 to read the file***. The map 118 viewer downloads the map window file 122 to the data storage device 126.

and (Col. 11, lines 48-62, emphasis added),

FIG. 5 is a flow diagram that illustrates the general logic of the map viewer 118. ***The map viewer 118 is currently embodied as a Netscape Navigator browser plug-in***. ***When a user, attempts to open a map window file, the Netscape Navigator browser automatically invokes the map viewer 118 to render and display the vector-based map data contained in the map window file***. ***The map viewer 118 makes requests for map data from map servers 140 using the communications infrastructure of the Internet and/or one or more Intranets 100 for display or printing. In particular, when the map viewer is invoked, the map viewer downloads the map window file 122. The map viewer then reads the map window file to identify the map data for the initial map picture. Next, the map viewer generates and displays the initial map picture***.

Details of the map window file structure are shown in FIG. 3. As described at Col. 5, line 63 – Col. 6, line 5 (emphasis added),

FIG. 3 illustrates the structure of the ***map window file***. In FIG. 3, the map window file 122 is stored on the data storage device 126. ***The map window file is a self-contained, portable map definition***. *The map window file describes the map picture and contains the information required to generate and display the map picture. In particular, the map*

> *window file contains map definition information including a map window information stream 310, a map layer storage 320, a reports storage 350, a zoom goto storage 360, and a pop-up menu stream 370.*

The architecture employs a map author to define, modify, and electronically publish map pictures[22]. "In particular, the map author 120 enables a user to create a map window file containing map definition information that identifies map data and the map servers from which this map data can be obtained by the map viewer."[23]

Moreover,

> Map window files created using the map author 120 are made available to Internet and/or Intranet 100 users by saving and publishing them using the File Save command in the map author 120. *When a map is published, it is saved to a map window file (with the file extension .mwf) within the Web server directory hierarchy.* ***The map window file has a URL so that it can be accessed by Internet and/or Intranet 100 users with the map viewer 118***.
>
> Individuals using a map viewer 118 can access published map pictures *by accessing the Web site where the map window file defining the map picture is stored.* ***The URLs for map pictures on a Web site can be made available from a HTML (Hypertext Markup Language) Home Page.*** A map picture can also be embedded within a Web page. When the URL for a map picture is placed into a Web browser 116, the map picture is displayed in the Web browser's 116 user interface. (Col. 8, line 57 – Col. 9, line 6, Emphasis added)

Discussion of US 6,674,445 (*Chithambaram*)

As stated in the title, *Chithambaram* discloses a "Generalized, differentially encoded, indexed raster vector data and schema for maps on a personal digital assistant." In particular, *Chithambaram* discloses an extension to Autodesk's MapGuide GIS (as disclosed in *Roy*) to support personal digital assistants (PDAs). Notably, the scheme does not employ a Web browser, but instead employs a dedicated application for communicating with the HTTP Web server.

Details of the General Architecture are discussed beginning at Col. 5, line 10,

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[22] See generally the section entitled "The Map Author" beginning at Col. 7, line 18.

[23] Col. 7, lines 21-24.

with reference to FIG. 1 shown below (emphasis added):

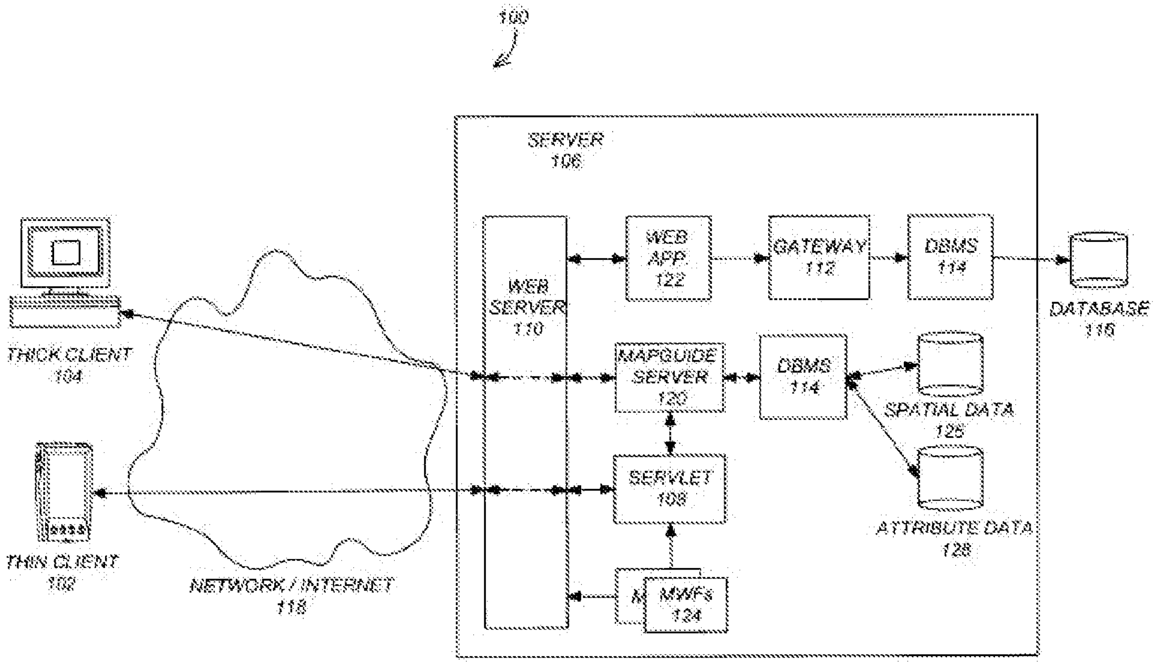


FIG. 1

Hardware Environment

***The use, on a PDA, of a modified MAPGUIDE GIS currently available from the assignee of the present invention is provided**. **The existing MAPGUIDE GIS** is more fully described in commonly assigned and co-pending U.S. Pat. No. 6,337,693, issued on Jan. 8, 2002 (Application Ser. No. 09/411,506), entitled "VECTOR-BASED GEOGRAPHIC DATA", by Gregory Andrew Roy, et. al., Attorney Docket No. 30566.171USU1, filed on Oct. 4, 1999, **which is a continuation patent application of U.S. Pat. No. 5,966,135 issued on Oct. 12, 1999 (application Ser. No. 08/757,706 filed on Oct. 30, 1996), by Gregory A. Roy et al., entitled "VECTOR-BASED GEOGRAPHIC DATA"**,[24] which is incorporated by reference herein.*

FIG. 1 schematically illustrates a hardware and software environment for the architecture in accordance with one or more embodiments of the invention. A typical distributed computer system 100 uses a network/Internet 118 to connect technicians ***utilizing clients such***

[24] US 6,642,925 (*Roy*) is likewise a continuation of 08/757,706, and includes the same detailed description as 6,337,693.

as a <u>thin client 102 (e.g. a PDA, WINCE, or PALM device)</u> or <u>a thick client 104 (e.g., a computer system running a browser)</u> to server computers 106.

A thick client 104 as utilized in the existing MAPGUIDE GIS may comprise a computer with a web browser (<u>enhanced with a plugin or viewer</u>) connected to a server 110 that utilizes a MapGuide server 120 to retrieve data (*e.g.*, raster data, spatial data format (SDF) data 126, attribute data 128, *etc.*).

A thin client includes three classes of devices: handheld personal computers (HPC), palm-held personal computers (PPC), personal digital assistants (PDA), and smart phones. Using these devices, a thin client 102 may not provide the full processing and memory capabilities as a thick client 104. For example, as described above with respect to PDAs, thin clients 102 often have memory less than 100K, storage of less than 2-4 MB, processor speeds of 13 MHz, and limited display attributes. Consequently, additional server 106 side support (e.g., more generalized display data, simplified project files, de-cluttering services, and possibly server management of user state) may be utilized. A typical combination of resources may include a network/Internet 118 comprising the Internet, LANs, WANs, SNA networks, or the like, clients 102 and 104 that are PDAs, personal computers or workstations, and servers 106 that are personal computers, workstations, minicomputers, or mainframes.

The network/Internet 118 connects client computers 102 and 104 executing the appropriate software applications to server computers 106 executing Web servers 110, servlets 108, MapGuide servers 120, *etc.* Servlets 108 may also be located within or part of Web server 110. The server 106 and its components may also be referred to as a back office system. Such a back office system maintains access to corporate databases, synchronization utilities, *etc.* ***The Web server 110 is typically a program such as IBM's HyperText Transport Protocol (HTTP) Server or Microsoft's Internet Information Server. The servlet 108 communicates with a thin client 102 through Web server 110 such that any additional processing required by a thin client 102 may be performed by the servlet 108.*** The servers 106 also execute a Common Gateway Interface (CGI) 112 (or Netscape Application Programming Interface (NSAPI), Internet Server Application Programming Interface (ISAPI), *etc.*), which interfaces between the Web server 110 and a database management system DBMS) 114 that may be utilized to retrieve relevant geographical data (such as SDF data, raster data, Open DataBase Connectivity (ODBC) data, *etc.*) from database 116.

In support of the rejections herein, the Examiner cites US Provisional Application 60/159,063 in connection with *Chithambaram*. This provisional application comprises a

MapGuide Personal Digital Assistant design document authored by Autodesk Corporation, the assignee of both the *Roy* and *Chithambaram* patents. As stated in the Introduction on page 4,

> This document presents the architectural plan for making MapGuide available on the Palm and other Personal Digital Assistant (PDA) platforms (henceforth referred to as MapGuidePDA). MapGuide is currently available on Windows, Unix and the Macintosh Platforms. MapGuide PDA would make MapGuide available on platforms like Windows CE and the Palm.

It is clearly evident from the MapGuide Personal Digital Assistant document and *Chithambaram* that the MapGuidePDA scheme does not employ a Web browser. For example, section 2.1.1 MapGuidePDA-App on page 4 states "MapGuide Thin Client application running on the PDA (*e.g.*, WinCE, Palm). Fig 3.1.2: Current and Proposed Architectures on page 12 clearly shows that the MapGuide thick client uses a plugin viewer, served by a MapGuide server, while the proposed architecture (*i.e.*, for the PDA implementation) shows a MapGuideThinClient that is served via a MapGuideServlet in the HTTP Server. Further, as stated in 3.1.2 Motivations for a 4-tier architecture on page 13,

> The current MapGuide architecture is a three tier, client-distributed-server solution using internet protocols for message and data transport. Allocations of responsibilities between client and server did not assume any severe client hardware limitations.
>
> Thin Clients represent new and more constrained MapGuide viewer environments. They will have more limited permanent storage, memory, and processing power than the other supported platforms. For these reasons, it is anticipated that they will need additional server side support, *e.g.*, more generalized display data, simplified project files, de-cluttering services, and possible server management of user state.
>
> The proposed architecture introduces an additional tier for serving thin clients, to compensate for the restraints introduced [by] these platforms. It is proposed that a Java servlet running inside a Web server be the mechanism to deliver these new features. It has the advantage of being platform independent, *i.e.*, a single code stream will run on any Web server that supports Java servlets either directly or through third party add-ons. The traditional MapGuide clients would be unaffected by this change.

Notably, the use of a browser is clearly not proposed or contemplated; rather the thin client is to be implemented as an application. Specifically, the 3.2.1 Tier 1: Thin Client Security bullet on page 15 states, "***Security – The thin client <u>would be an application</u> (vs. an applet in a browser, since the standard browsers NS, IE do not support the PDA platform)*** …" (Emphasis added.)

There can be no question that the MapGuide PDA scheme does not use a browser on the PDA. Thus, there is absolutely no retrieval or processing of HTML-based Web content whatsoever. Rather, communication between the thin client and HTTP Web server is facilitated via HTTP streams using the HTTP protocol. In particular the structure of the HTTP stream is defined in 4.2 PDA Servlet Response Definition, beginning on page 26.

<u>Example of MapGuide using a Plug-in Viewer</u>

As detailed in *Roy*, the MapGuide architecture employs a plug-in viewer that interfaces with server-side components to request and receive map data. The only content that is scaled is the map data, which clearly does not comprise HTML-based Web content. The only use of the Web browser is to render HTML home pages from which the map data can be accessed, and to facilitate transfer of the map data to the plug-in viewer via HTTP in response to requests by the plug-in viewer.

Autodesk MapGuide currently has widespread use throughout the world. While the MapGuide GIS has been enhanced since its introduction (approximately 1996), it still employs the same basic architecture, including a MapGuide Server and a client-side MapGuide Viewer.

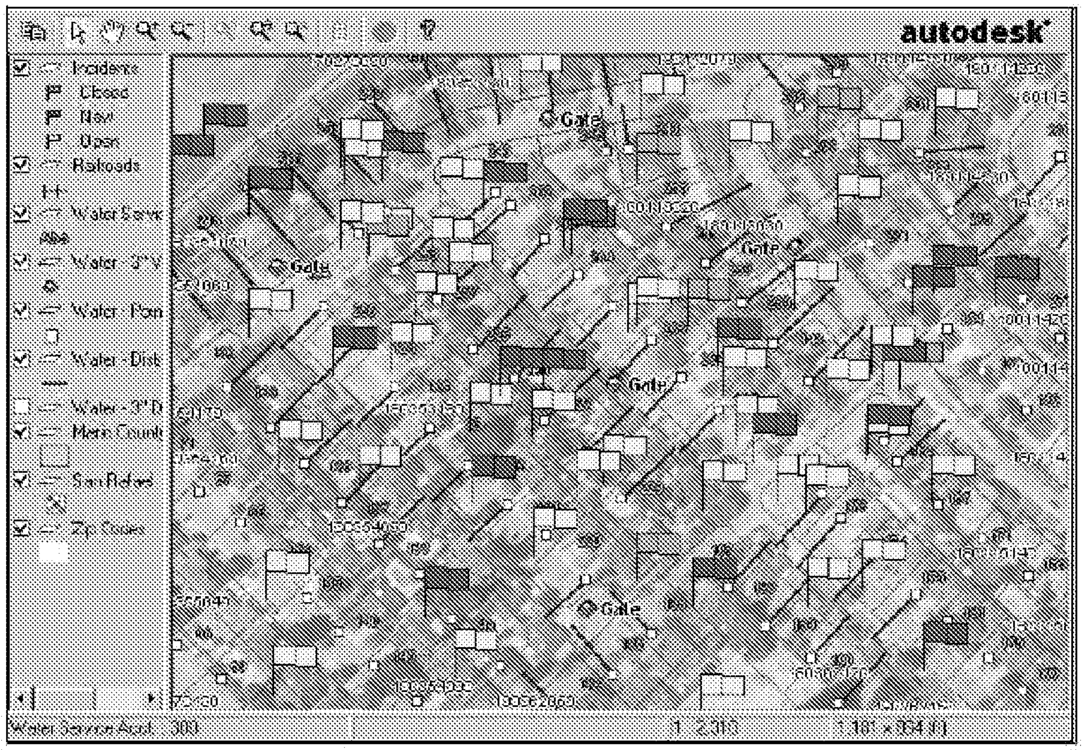
Submitted electronically herewith is a copy of the Autodesk MapGuide Release 6 User's Guide. As stated on Pages 30 – 31,

How Autodesk MapGuide Works

To create an interactive map or drawing, you use Autodesk MapGuide® Author to combine resource data, such as spatial data (spatial data files and raster image files) and attribute data (from databases) in a Map Window File (MWF). The MWF contains the complete specifications of how the map will look and function.

To publish the map, you copy the MWF file to a location where the Web server can access it. Web page authors can then embed the file in their Web pages or create links to it. To view the map, users can install Autodesk MapGuide Viewer free of charge. When the user opens a Web page that contains an MWF file or clicks a link to an MWF file, the Web browser automatically loads Autodesk MapGuide® Viewer to display the map.

The Viewer displays the map according to the MWF settings specified in Autodesk MapGuide Author.



A map displayed with Autodesk MapGuide Viewer

When you use either Autodesk MapGuide Author to create a map or Autodesk MapGuide Viewer to view a map, requests are made to Autodesk MapGuide Server to provide the required data in that map via the Internet, an intranet, or an extranet using the services of a Web server and a Web browser.

The following pages depict screen captures and corresponding text concerning an example Mapguide usage with Netscape Navigator 9, which employs a MapGuide Viewer plug-in. These maps can be accessed from the Pima County, Arizona, Department of Transportation site at www.dot.co.pima.az.us/gis/maps/mapguide.

The following Web page[25] appears in response to selecting the Main MapGuide

25 www.dot.co.pima.az.us/gis/maps/mapguide/mgmap.cfm?path=/gis/maps/mapguide/dotmap65.mwf&scriptpath=mgm

Map link from the site's homepage at the foregoing Web address. The HTML for loading the page is shown below:

```
<html>
<head>
<title>Pima County MapGuide Map</title>
  <script language="JavaScript" src="/javascript/disclaimer.js"></script>


</head>

<frameset rows="40,*">
  <frame name="title"
src="mgmaptitleframe.cfm?path=/gis/maps/az/mapguide/arizona65.mwf&scriptpath=m
gmapinitnullAPI.inc"   marginwidth="10" marginheight="10" scrolling="No"
frameborder="No">
  <frame name="map"
src="mgmapframe.cfm?path=/gis/maps/az/mapguide/arizona65.mwf&scriptpath=mgmapi
nitnullAPI.inc"        marginwidth="0"  marginheight="0"  scrolling="No"
frameborder="No">
</frameset>

<noframes>
  <body>
    This application requires frames.
  </body>
</noframes>


</html>
```

The HTML element `<frameset rows="40,*">` defines two horizontal frames; an upper frame 40 pixels in height, and a lower frame occupying the remainder of the browser display area, which is used by the MapGuide viewer. As defined by,

```
src="mgmaptitleframe.cfm?path=/gis/maps/az/mapguide/arizona6
5.mwf&scriptpath=mgmapinitnullAPI.inc"
```

the initial map windows file is loaded from /gis/maps/az/mapguide/arizona65.mwf. Since Netscape Navigator has no built-in support for handling .mwf files, it checks its configuration information to determine that it has a MapGuide Viewer plug-in for handling .mwf files and launches the viewer.

In response, the MapGuide viewer renders the portion of the browser window defined for the viewer – that is, the lower frame, which also defines the MapGuide

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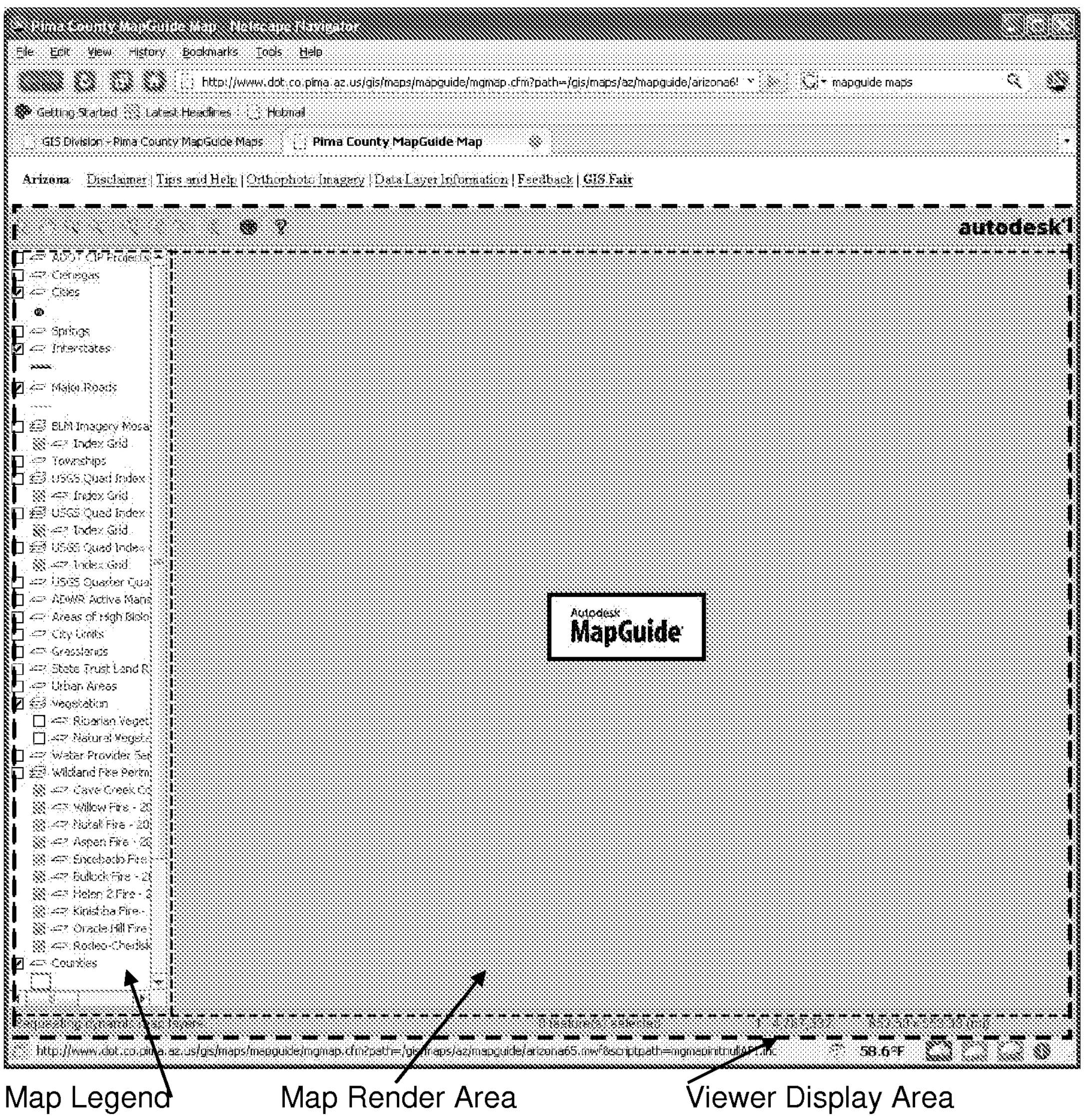
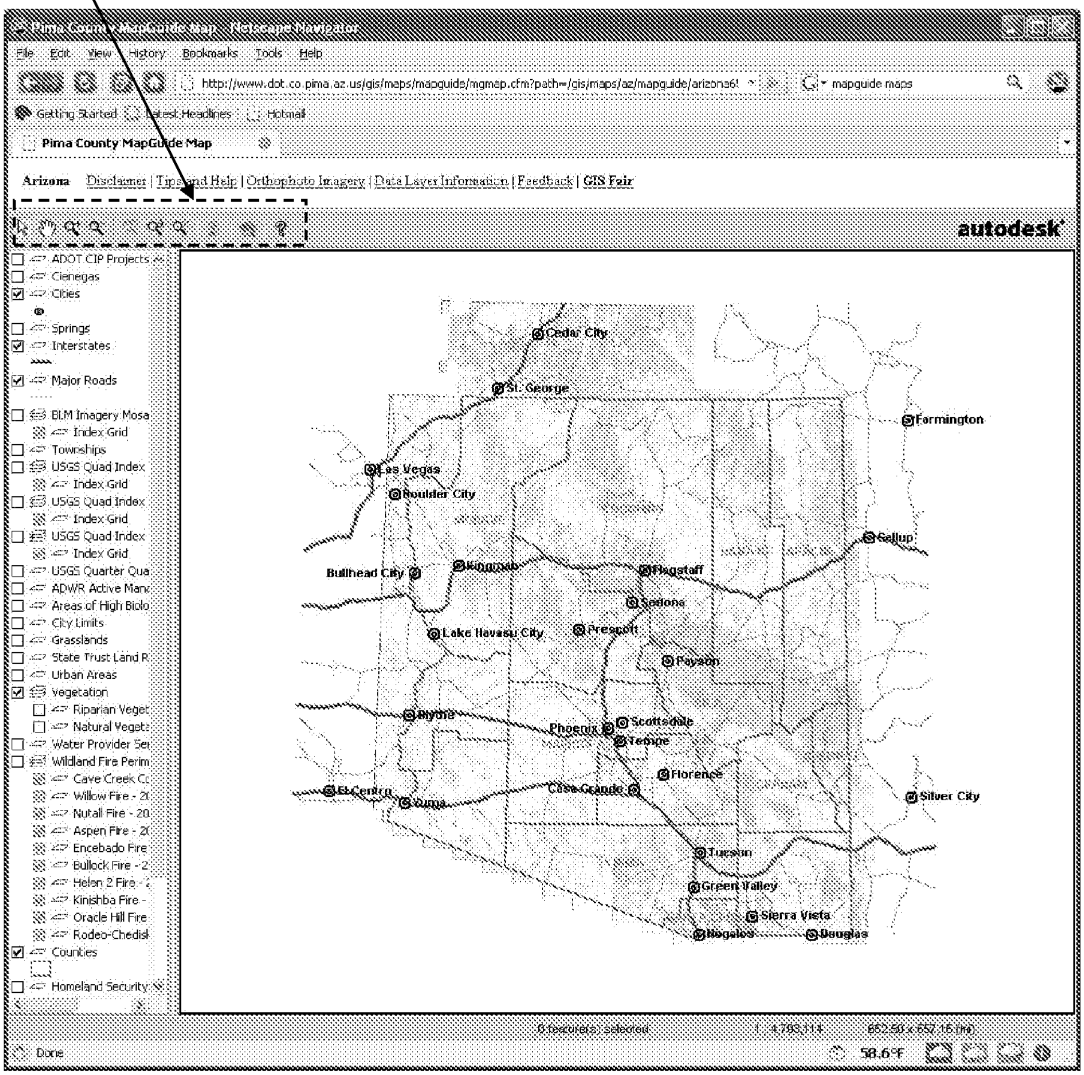
apinitnullAPI.inc

viewer display area. The MapGuide viewer, which functions as a separate application in a manner akin to other plug-ins, such as PDF readers, does not employ HTML for rendering its display area; rather, it uses the operating system graphic support for rendering the display independent of the Netscape Navigator browser. Upon initially being loaded, the MapGuide viewer downloads the .wmf file, as well as additional map data from the MapGuide server as defined by the .wmf file content. As the map data is loaded, the following screen is displayed, which includes indicia at the bottom of the MapGuide viewer display area stating “Requesting dynamic map layers…”

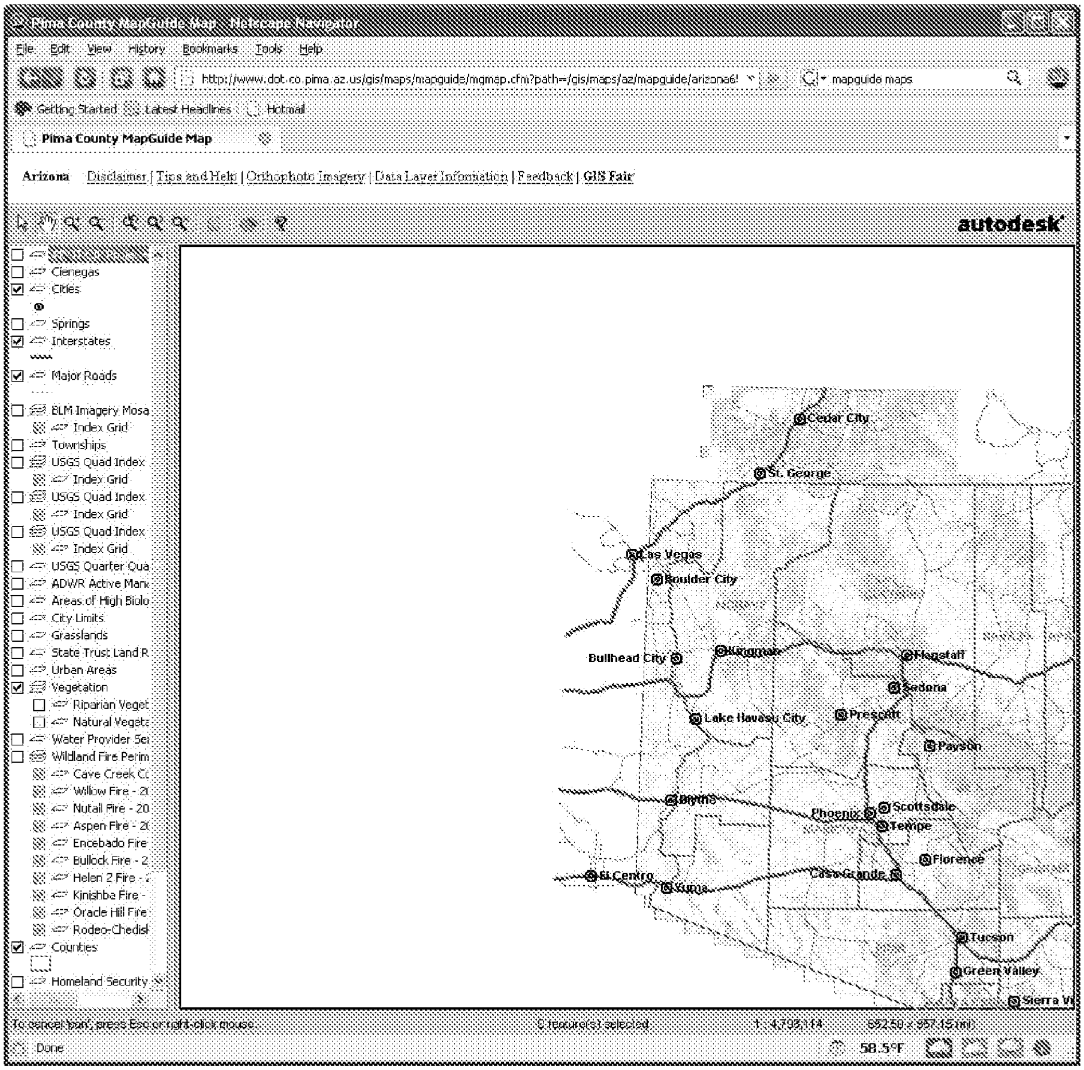


Menu Icons

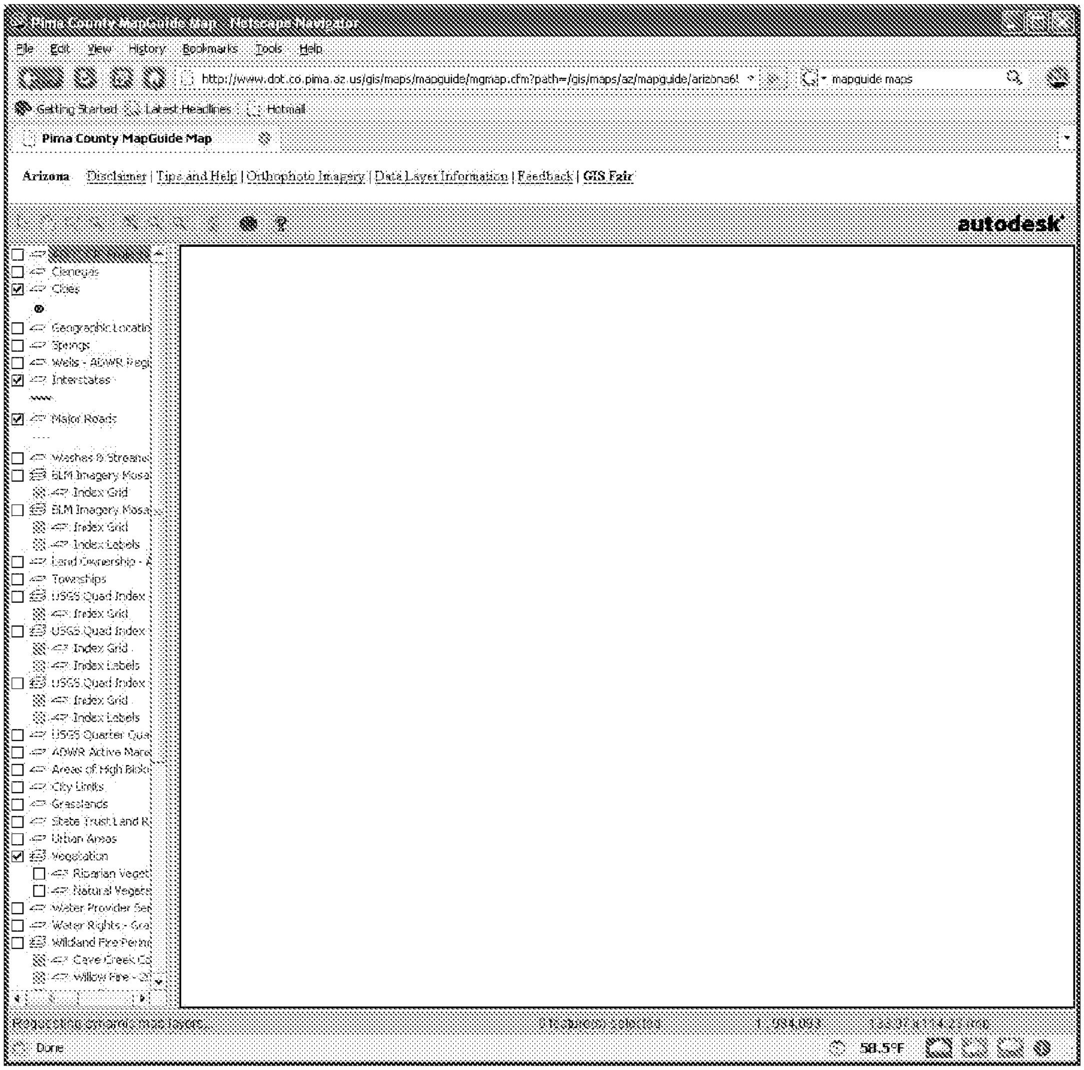


A screen shot of the initial map view upon loading of the map data is shown above. Once loaded, menu icons can be selected to pan or zoom the display of the map view, or to select or mouseover areas of the map. This functionality is provided entirely by the MapGuide viewer, and is completely independent of the Netscape Navigator Web browser.

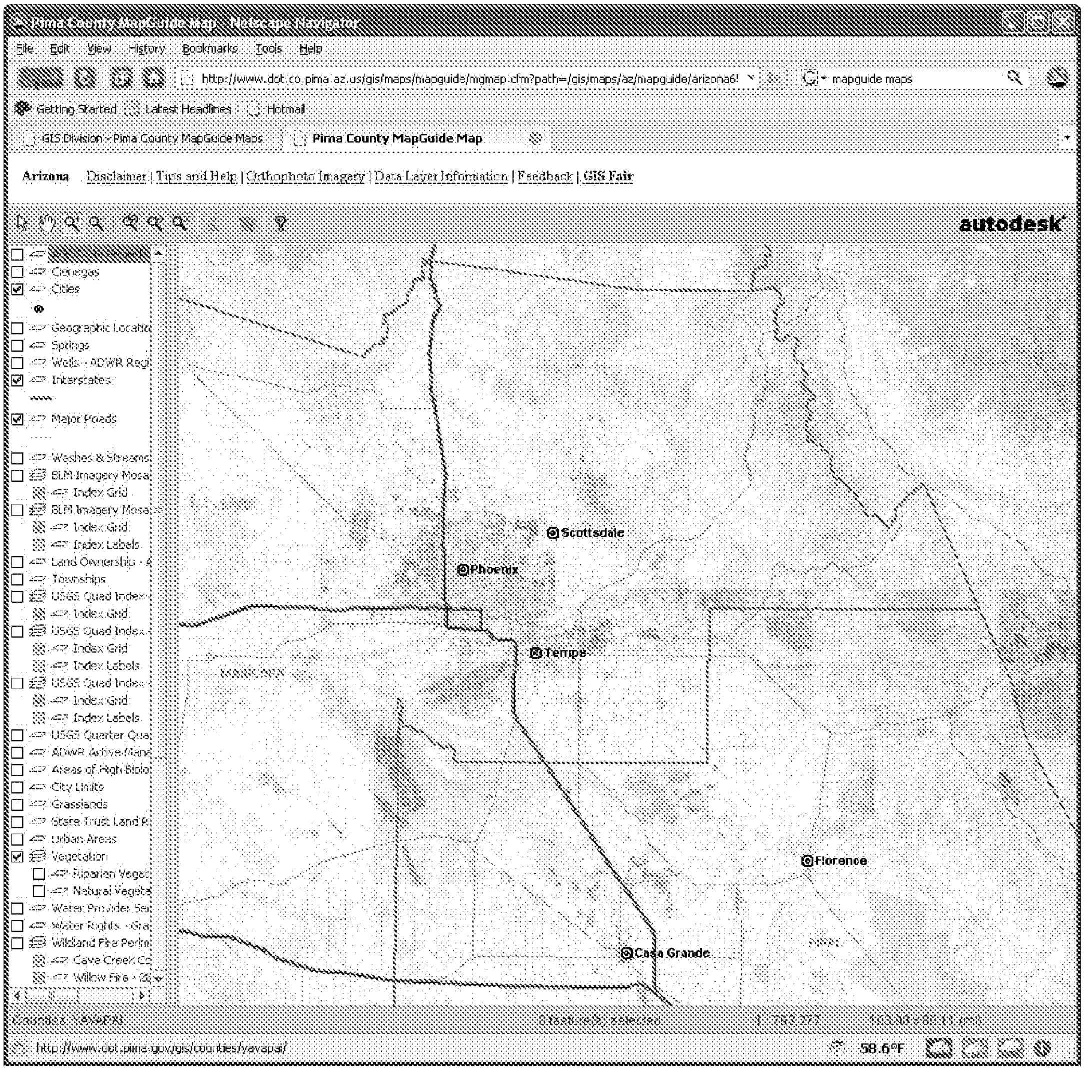
The following screen shot shows the result of a pan operation as applied to the initial map view. At the current zoom level, this pan operation was performed without having to retrieve additional map information.



The next two screen shots show the result of a zoom operation. The first of the two screen shots shows that when the zoom is first performed, the map rendering area (the main portion of the MapGuide viewer display area to the right of the map legend area) is blank, and the “Requesting dynamic map layers …” indicia is displayed. The second screen shot shows the result of the map once the zoom is completed. Under the Pima Country MapGuide implementation, it is necessary to download additional map data when performing a zoom. Part of this is because the zoom map shows further details beyond just scaling a view of the initial map. However, under other implementations, zooming can be performed by scaling an existing (*i.e.*, currently displayed) map.



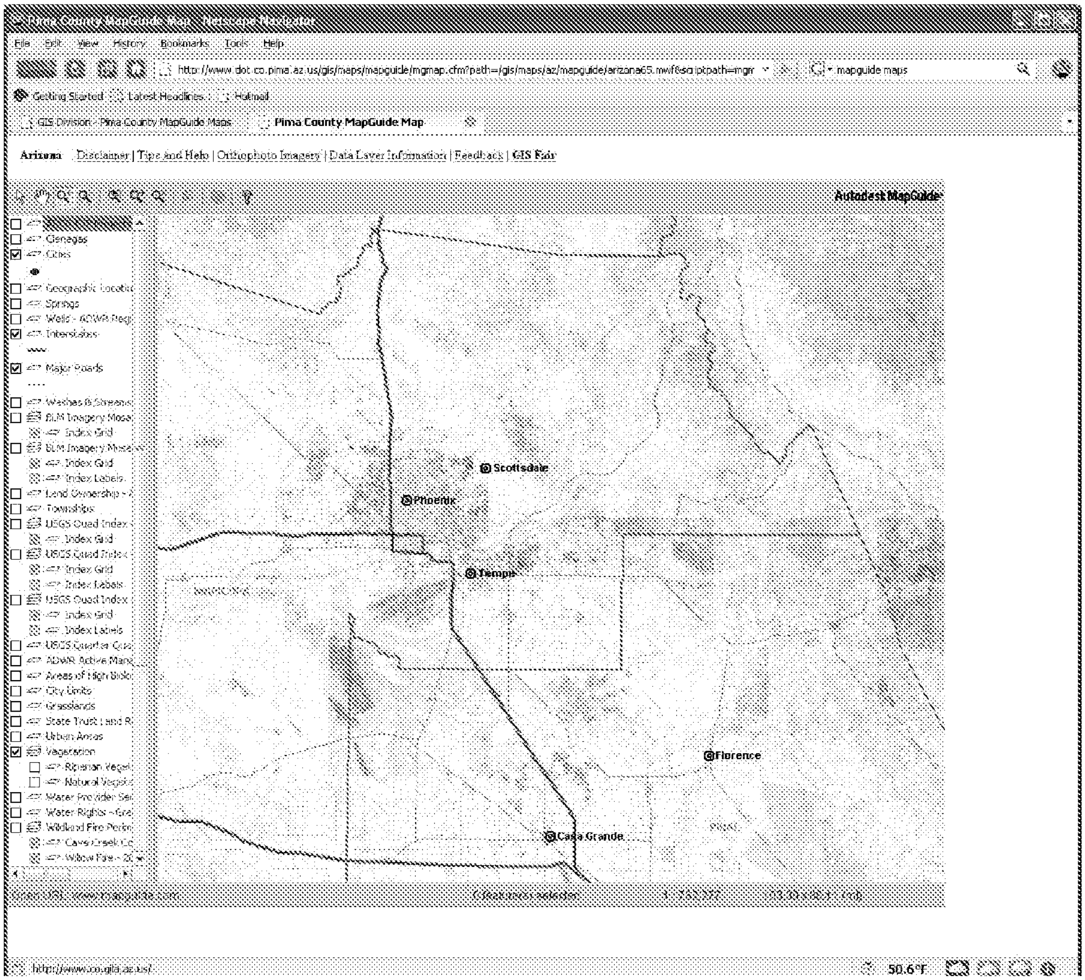
First screen shot after a zoom is selected



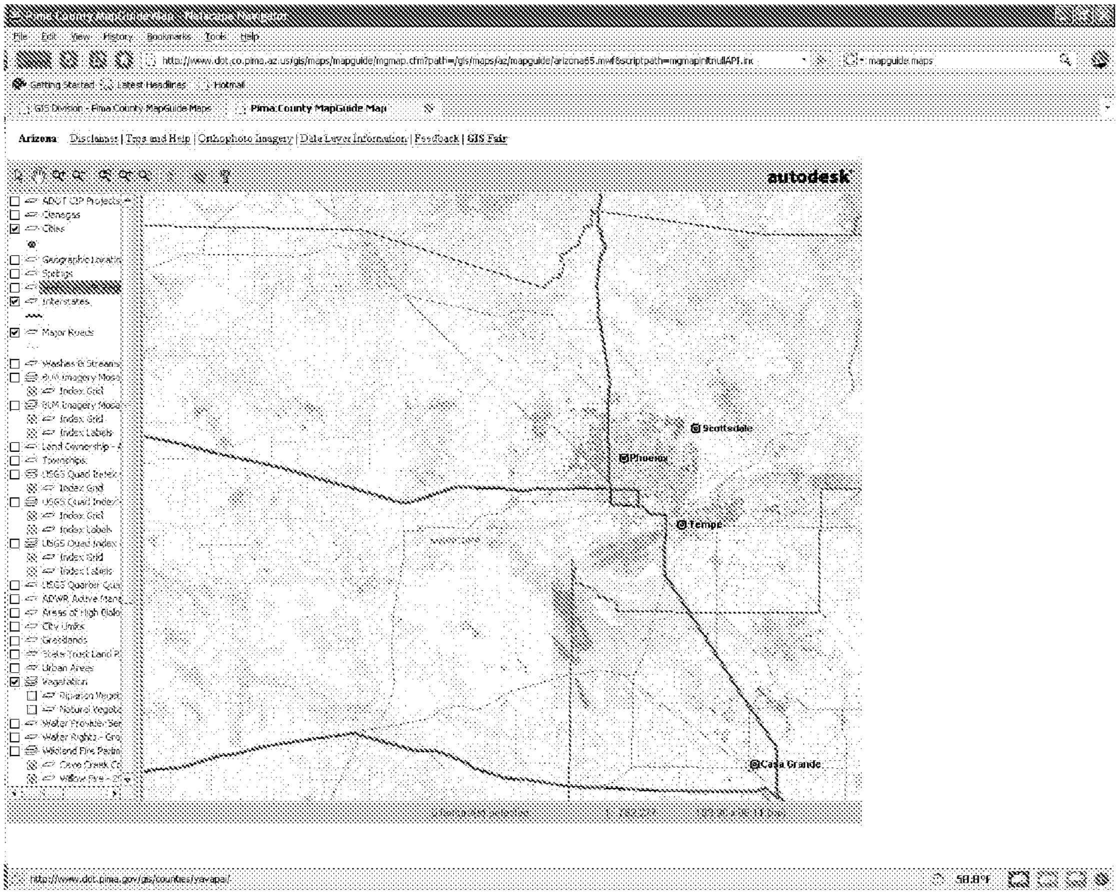
Result of zoom selection after download of new map layer data.

The following four screen shots demonstrate the independence of the Web browser and the MapGuide viewer plug in. As the user performs various zooms and pans of the map via the plug-ins user interface and built-in capabilities, the browser's page state does not change – in fact, the browser page state is completely oblivious to what the MapGuide viewer plug-in is doing. As an example, selecting the back arrow at the upper left hand corner of the browser will result in returning to the previous web page, rather than a previous zoom or pan view. Also, the user is enabled to change the size of the browser display area in a manner that is completely transparent to the

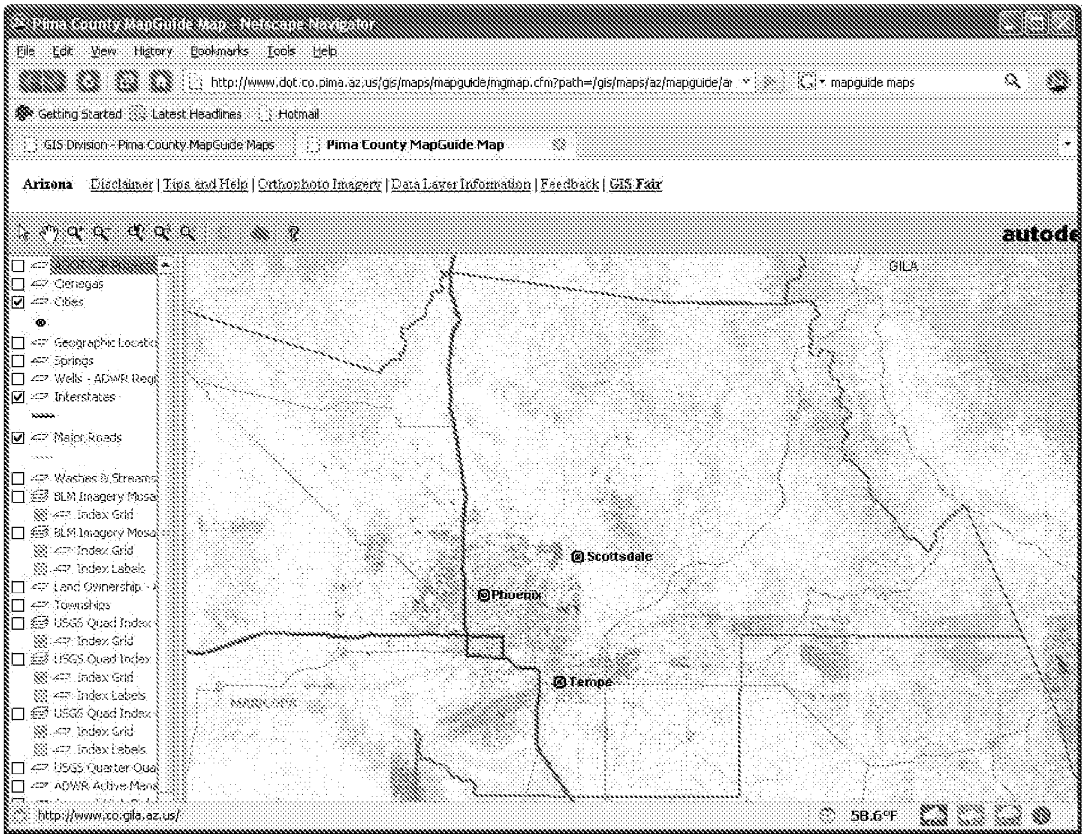
MapGuide viewer plug-in, as shown below.



Expansion of Netscape Navigator Browser Window



Expansion of Netscape Navigator Browser Window to Full Screen



Reduction of Netscape Navigator Browser Window

It is abundantly clear that the MapGuide architecture does not scale ***Web pages*** in any manner.

Returning to the claims, the Examiner asserts Claims 71-87, 92, 95-1 17, 122-123, 127-157, and 160-179 unpatentable under 35 U.S.C. §103(a) over *Chithambaram* in view of *Roy*.

By way of example and not limitation, under independent Claim 71, execution of the instructions performs operations including,

> rendering a browser interface via which a user is enabled to request access to a ***Web page***, the ***Web page*** *comprising* ***HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page***;

> ***retrieving the Web page*** via the wireless communication means, and ***translating*** at least a portion of the ***HTML-based Web content*** *from its original format into* ***scalable content*** *that supports a* ***scalable resolution-independent*** *display of the* ***Web page*** *that substantially retains the* ***original page layout and attributes*** *of the content defined by its original format when rendered*; and
>
> ***scaling*** the ***scalable content*** to render the ***Web page*** on the display such that the original width of the ***Web page*** is rendered to fit substantially across the display. (Emphasis added)

Notably, the foregoing operations enables literally 100's of millions of Web pages to be rendered on devices independent of the resolution of the devices' display capability (e.g., screen resolution) in a manner that substantially retains the original page layout and attributes of the Web pages' content defined by the pages' HTML code. Thus, familiar Web pages appear substantially the same on the devices as they do on desktop browsers, only they are rendered at different scales. As a result, a full browser user experience is supported by a variety of different devices having various screen sizes and resolutions. Moreover, in the claimed inventions herein all of the recited operation elements are performed by the client/device – there are no server operations recited. Applicants respectfully assert that the teachings of *Chithambaram* and *Roy* do not teach or suggest such inventions, or anything close.

To support the rejection of independent claim 71, the Examiner states *Chithambaram* teaches,

> A wireless device, a display, a memory, and storage means, (See Chithambaram Column 3, Lines 65-67, discloses a personal digital-assistance (PDA).)
>
> Comprising: wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed; a display; memory; and storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including, rendering a browser interface via which a user is enabled to request access to a Web page,

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (*e.g.* a PDA, WINCE, or PALM device) or a thick client 104 (*e.g.*, a computer system running a browser) to server computers 106.)

retrieving, via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the content Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and, scalinq the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display.

(See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network/Internet 118 to connect technicians utilizing clients such as a thin client 102 (*e.g.* a PDA, WINCE, or PALM device) or a thick client 104 (*e.g.*, a computer system running a browser) to server computers 106.

Also see Chithambaram Column 4 Line 60 3 Column 5, Line 10, teaching the indexing raster (*i.e.* Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.

Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (*e.g.*, paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

In addition, Chithambaram does not expressly teach, but Rov teaches:

the Web page including associated HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

(See Roy Column 10, Lines 1-15, discloses an HTML document using specify the width and height of the map in pixels with the WIDTH=NNN and HEIGHT=NNN parameters. For example: <EMBED SRC="http://www.mapguide.comlmap pictures/usa.mwf' WIDTH=300HEIGHT=200>. This entry displays a map of the US in the current document. The map picture is 300x200 pixels in size.)

> It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have modified the teaching Chithambaram, to include the Web page including associated HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page as taught by *Roy* to produce a predictable result, as evidence, using *Roy*'s specify the width and height of the map in pixels with the WIDTH=NNN and HEIGHT=NNN parameters with Chithambaram's SVG (Scalable Vector Graphics) and the offset for location of the object is obtained and the offset is encoded using bounding box of to zoom in and filtering out the unwanted object for display on the PDA (see Chithambaram Column *6* Lines 55-65, and also see Chithambaram Column 8 Lines 30-65).

The first operation performed by execution of the instructions in claim 71 comprises,

rendering a browser interface via which a user is enabled to request access to a ***Web page*** hosted by an Internet Web site, the ***Web page*** *comprising* ***HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page***; (Emphasis added)

From above, the Examiner asserts that *Chithambaram* teaches the elements of "rendering a browser interface via which a user is enabled to request access to a ***Web page*** hosted by an Internet Web site." As discussed above, *Chithambaram*'s thin client <u>does not</u> employ a Web browser. Thus, clearly *Chithambaram*'s thin client does not teach or fairly suggest this element. More accurately, *Chithambaram* teaches away from this element in view of the detailed explanation in the BACKGROUND OF THE INVENTION section to why PDA's did not have enough processing resources to support the scheme used by the MapGuide GIS at the filing date of the patent application (July 30, 2000), and thus the motivation for developing an alternative scheme that would work with thin clients. (It is noted that Applicants do not agree with *Chithambaram*'s assertion as a whole; however, that does not remove the fact that assertions to this effect are made by *Chithambaram*.)

The foregoing is immediately problematic, as the Examiner asserts that *Chithambaram*'s PDA teaches the structure of the claimed wireless device (*i.e.*, the processing means, wireless communications; display, memory, and storage means) while the same PDA clearly does not employ a browser (and thus cannot render a browser interface to enable a user to request access to a ***Web page*** hosted by an ***Internet Web site***). Moreover, *Chithambaram* teaches away from using a browser on a PDA.

Meanwhile, with respect to the element of "the ***Web page*** *comprising* ***HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page***, the Examiner asserts that such element is taught by *Roy* citing *Roy*'s disclosure of an

<EMBED SRC="http://www.mapguide.comlmap pictures/usa.mwf' WIDTH=300HEIGHT=200>.

HTML element. However, this HTML element has nothing to do with defining an original width and height of a ***Web Page***, but rather merely defines the Width and Height to be used by an embedded MapGuide Viewer when the Web page is initially rendered.

With respect to the operation of,

> ***retrieving the Web page*** via the wireless communication means, and ***translating*** at least a portion of the ***HTML-based Web content*** *from its original format into* ***scalable content*** *that supports a* ***scalable resolution-independent*** *display of the* ***Web page*** *that substantially retains the* ***original page layout and attributes*** *of the content defined by its original format when rendered*; (Emphasis Added)

the Examiner asserts that such is taught by *Chithambaram*. Applicants respectfully disagree.

It is clear that *Chithambaram*'s PDA <u>does not</u> retrieve Web pages. While the

MapGuide thick client employs a Web browser, there is absolutely no translation of HTML-based Web content whatsoever for any purpose. Under the MapGuide thick client architecture, a home page is used to access the initial map. Upon loading such a home page, the HTML content is parsed in the conventional manner to render the home page. There is no translation, and no scalable content is produced by the client device. Meanwhile, the map data is not HTML-based at all, but rather is some proprietary format used by the MapGuide plug-in Viewer (the .mwf file format). Moreover, the map content is received already in its scalable form from the MapGuide ***Server***.

Finally, with respect to the last operation of,

scaling the ***scalable content*** to render the ***Web page*** on the display such that the original width of the ***Web page*** is rendered to fit substantially across the display (Emphasis added)

neither *Chithambaram* or *Roy* produce any scalable content via either the thick or thin ***client*** in the first place, or use scalable content to render a ***Web page*** to fit substantially across the display. Moreover, the scalable content used by *Chithambaram* and *Roy* is clearly not derived from translating HTML-based Web content on a wireless device.

It is very clear that the combination of *Chithambaram* and *Roy* do not teach or fairly suggest each and every element of independent claim 71, as required by *In re* Vaeck to support a prima facie obviouness rejection. Accordingly, the rejection of claim 71 over *Chithambaram* and *Roy* must be withdrawn for at least this reason. Moreover, there would be no expectation of success in combining the teachings of *Chithambaram* and *Roy*. Notably, a primary motivation (as discussed in the BACKGROUND OF THE INVENTION section) for *Chithambaram*'s MapGuide PDA implementaton was to overcome the shortcomings of the existing MapGuide GIS architecture as applied to thin clients such as PDAs.

In view of the above argument, claim 71 is in condition for allowance.

Additionally, each of claims 72-92 and 94-98, which depend either directly or indirectly from claim 71, is in condition for allowance for at least the same reasons as claim 71.

Independent claim 99 recites,

99. A mobile device, comprising:

a processor,

a wireless communications device, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising ***HTML-based Web content*** defining an original page layout of content on the ***Web page***;

retrieving, via the wireless communications device, and ***processing the HTML-based Web content to produce scalable content***; and

employing at least one of the ***scalable content and data derived therefrom*** to,

render the ***Web page*** on the display; and

re-render the ***Web page*** in response to associated user inputs to enable the user to zoom in and out a display of the ***Web page***. (Emphasis added)

In support of the obviousness rejection of claim 99 over *Chithambaram* in view of *Roy*, the Examiner states “the rejection of claim 71 is fully incorporated, which cites above, and is similarly rejected under the same rational.”

In response, the Applicants assert that independent claim 99 is patentable over

Chithambaram and *Roy* for at least similar reasons argued above in support of the patentability of claim 71. As with claim 71, mobile device of claim 99 renders a browser interface via which a user is enabled to request access to a Web page. As discussed above, *Chithambaram*'s MapGuide PDA implementation does not use a browser, and in fact teaches away from using a browser. Moreover, neither *Chithambaram* nor *Roy* process HTML-based Web content to produce scalable content. Accordingly, since neither *Chithambaram* nor *Roy* process HTML-based Web content to produce scalable content, it is impossible for either *Chithambaram* or *Roy* to employ such scalable content or data derived from the scalable content to perform any operation.

As discussed above, there is no rendering of Web pages on *Chithambaram*'s PDA. Moreover, any zooming that is performed by *Roy* is done entirely by the MapGuide plug-in Viewer using non-HTML-based map data that is received in a scalable form from the MapGuide Server. First, the portion of the browser display occupied by the MapGuide viewer does not comprise a Web page. It is visual content that is rendered by an application (the plug-in viewer) that operates independent from the Web browser (with respect to rendering operations)[26]. Clearly, zooming natively scalable content rendered by a ***plug-in viewer*** does not teach or suggest zooming of a ***Web page***.

In view of the foregoing, it is clear the rejection of claim 99 over *Chithambaram* in view of *Roy* is improper, and should be withdrawn. Accordingly, claim 99 is in condition for allowance. Additionally, each of claims 100-127, which depend either directly or indirectly from claim 99, are in condition for allowance for at least the same reasons as claim 99.

With respect to Independent claim 128, the Examiner states, "the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected

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[26] It is noted that HTTP facilities of the Web browser is used to facilitate HTTP transfers between the plug-in and MapGuide Server.

under the same rationale." Applicants respectfully traverse the rejection of claim 128. Independent claim 128 recites,

128. A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display, to facilitate user input and display rendered content; and

storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by the processing means, the mobile device is enabled to perform operations, including,

rendering a browser interface via which a user is enabled to request access to a ***Web page comprising HTML-based Web*** content defining an original page layout of content on the ***Web page***;

retrieving the ***Web page*** via the wireless communications means, and processing at least a portion of the ***HTML-based Web content*** to produce ***scalable content***; and

employing at least one of the ***scalable content*** and data derived therefrom to,

render the ***Web page*** on the display; and

re-render the ***Web page*** in response to associated user inputs made via the display to enable the user to zoom in and out a display of the ***Web page***. (Emphasis added)

Applicants assert that independent claim 128 is patentable over *Chithambaram* and *Roy* for at least similar reasons argued above in support of the patentability of claim 71 and 99. As with claim 71 and 99, the mobile device of claim 128 renders a browser interface via which a user is enabled to request access to a Web page. As discussed above, *Chithambaram*'s MapGuide PDA implementation does not use a browser, and in fact teaches away from using a browser. Moreover, neither *Chithambaram* nor *Roy* process HTML-based Web content on a client/device to produce scalable content. Accordingly, since neither *Chithambaram* nor *Roy* process HTML-based Web content to produce scalable content, it is impossible for either *Chithambaram* or *Roy* to employ such scalable content or data derived from the scalable content to perform any operation.

Moreover, there is no rendering of Web pages on *Chithambaram*'s PDA, and any zooming that is performed by *Roy* is done entirely by the MapGuide plug-in Viewer using Non-HTML-based map data that is received in a native scalable form from the MapGuide Server. Additionally, it is clear that neither *Chithambaram* nor *Roy* teach or suggest zooming of a ***Web page***.

In view of the foregoing, it is clear the rejection of claim 128 over *Chithambaram* in view of *Roy* is improper, and should be withdrawn. Accordingly, claim 128 is in condition for allowance. Additionally, each of claims 129-142, which depend either directly or indirectly from claim 128, are in condition for allowance for at least the same reasons as claim 128.

With respect to Independent claim 143, the Examiner states, "the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected under the same rationale." Applicants respectfully traverse the rejection of claim 143.

For reasons similar to those presented in support of the patentability of claims 71, 99, and 128, Applicants respectfully assert that claim 143 is patentable over *Chithambaram* in view of *Roy*. For example, claim 143 recites the following operations of, each of which is performed by the claimed ***device***,

> ***rendering*** a browser interface on the display via which a user is enabled to request access to a ***Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining***

an original width and height of the Web page;

retrieving the ***Web page*** via the wireless communications interface;

rendering the ***Web page*** such that the ***Web page*** is rendered to fit substantially across the display; and

re-rendering the ***Web page*** in response to associated user inputs to enable the user to zoom in and out a display of the ***Web page***.

As discussed above, *Chithambaram*'s PDA implementation does no employ a browser or render Web pages. In addition, the rendering of a map by *Roy*'s ***plug-in MapGuide viewer*** clearly does not teach zooming in and out a display of a ***Web page***.

With respect to independent claim 174, the Examiner states,

> the rejection of claims 71 and 99 are fully incorporated, which cite above, and are similarly rejected under the same rationale. In addition, *Chithambaram* teaches:
>
> **translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered;**
>
> (See Chithambaram Fig. 1 Column 5, Lines 25-30, discloses a hardware and software environment for the architecture uses a network Internet 118 to connect technicians utilizing clients such as a thin client 102 (*e.g.* a PDA, WINCE, or PALM device) or a thick client 104 (*e.g.*, a computer system running a browser) to server computers 106.
>
> Also see Chithambaram Column 4 Line 60 *3* Column 5, Line 10, teaching the indexing raster (*i.e.* Raster maps provide multiple zoom levels with each zoom level, by scaling existing raster tiles) and vector based for interacting and highlighting with user objects.
>
> Also see Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (*e.g.*, paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.
>
> Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

and employing the scalable content to render the Web page on the display using a first scale factor; and enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display;

(See Chithambaram Column 6 Lines 55-65, teaching the SVG (Scalable Vector Graphics) allows vector graphic shapes (*e.g.*, paths consisting of straight lines and curves), images, and text. Graphical objects can be grouped, styled, transformed, and composite into previously rendered objects.

Also, see Chithambaram Column 8 Lines 30-65, teaching the offset for location of the object is obtained and the offset is encoded using bounding box to zoom in and filtering out the unwanted object for display on the PDA.)

As discussed above, *Chithambaram*'s PDA <u>does not</u> employ a browser nor render Web pages. Moreover, clearly neither *Chithambaram* nor *Roy* translate HTML-based Web content into scalable content for any reason, much less translate HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered. Additionally, it is clear that since such scalable content is never produced, it would be impossible to employ the scalable content to render a Web page using a first scale factor or enable the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display.

In view of the foregoing, it is clear that the rejection of claim 174 is improper, and should be withdrawn. Accordingly, claim 174 is in condition for allowance. Additionally, each of claims 175-179, which either depend directly or indirectly from claim 174, are patentable for at least the same reasons as claim 174.

<u>Additional Traversal of the Rejection of Selected Dependent Claims</u>

As argued above, each of independent claim 71, 99, 128, 143 and 174 are in condition for allowance. By definition, this places each of dependent claims 72-92 and 94-98, 100-127, 129-142, 144-173, and 175-179 in condition for allowance for at least the same reasons as their respective base independent claim. It shall be noted that lack of independent traversal of a dependent claim below does not imply that Applicants agree with the Examiner's rejection of such claims, as the patentability of such claims have already been shown.

With further respect to claims 72, 102, and 131, applicants respectfully assert that since *Chithambaram*'s PDA does not use a Web browser and thus does not display Web pages, *Chithambaram* cannot teach or suggest,

enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

With further respect to claims 73, applicants respectfully assert that since *Chithambaram*'s PDA does not use a Web browser and thus does not display Web pages, *Chithambaram* cannot teach or suggest,

wherein the display of the Web page is re-rendered to effect zooming operations.

With further respect to claims 74 and 105, applicants respectfully assert that since *Chithambaram*'s PDA does not use a Web browser and thus does not display Web pages, and since neither *Chithambaram* or *Roy* teach translating Web content to product scalable content, *Chithambaram* or *Roy* cannot teach or suggest,

Enabling a user to select [a] hyperlink [in a Web page]; and, in response thereto, retrieving and translating Web content associated with the hyperlink to produce additional scalable content, and employing the additional scalable content to render the Web content associated with the hyperlink on the display.

With further respect to claim 75, applicants respectfully assert that since *Chithambaram*'s PDA does not use a Web browser and thus does not display Web pages, *Chithambaram* cannot teach or suggest,

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, and graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to its corresponding vector.

With further respect to claim 76, applicants respectfully assert that since *Chithambaram*'s PDA <u>does not</u> use a Web browser and thus <u>does not</u> display Web pages, and *Roy* does not translate HTML-based Web content to produce scalable content, *Chithambaram* or *Roy* cannot teach or suggest,

enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs.

With further respect to claims 78, 108, 134, 149, 155, and 178, applicants respectfully assert that since *Chithambaram*'s PDA <u>does not</u> use a Web browser and thus <u>does not</u> display Web pages, and *Roy*'s Mapguide plug-in viewer <u>does not</u> render Web pages, *Chithambaram* or *Roy* cannot teach or suggest,

enabling a user to pan a display of the Web page in response to a corresponding user input.

With further respect to claims 81, 111, and 144, and respective claims 152, 167, and 170 dependent thereon, applicants respectfully assert that since *Chithambaram*'s PDA <u>does not</u> use a Web browser and thus <u>does not</u> display Web pages, and *Roy*'s Mapguide plug-in viewer <u>does not</u> render Web pages, *Chithambaram* or *Roy* cannot teach or suggest,

enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

Or (as applied to claims 152, 167, and 170)

wherein the corresponding user input comprises tapping on the column via the display.

With further respect to claims 83, 113, 136, and 146, and related claims 153, 168, 171, and 173 dependent thereon, applicants respectfully assert that since *Chithambaram*'s PDA <u>does not</u> use a Web browser and thus <u>does not</u> display Web pages, and *Roy*'s Mapguide plug-in viewer <u>does not</u> render Web pages, *Chithambaram* or *Roy* cannot teach or suggest,

enabling a user to zoom on an image [in the Web page] via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

Or (as applied to claims 153, 168, 171, and 173)

wherein the corresponding user input comprises tapping on the image via the display.

With further respect to claims 84, 114, and 147, and related claims 85, 115, 148, 154, 169, and 172 dependent thereon, applicants respectfully assert that since *Chithambaram*'s PDA <u>does not</u> use a Web browser and thus <u>does not</u> display Web pages, and *Roy*'s Mapguide plug-in viewer <u>does not</u> render Web pages, *Chithambaram* or *Roy* cannot teach or suggest,

enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

Or (as applied to claims 85, 115, and 148)

wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

Or (as applied to claims 154, 169, and 172) wherein the corresponding user input comprises tapping on the paragraph via the display.

With further respect to claim 87, applicants respectfully assert that since *Chithambaram*'s PDA does not use a Web browser and thus does not display Web pages, and *Roy*'s Mapguide plug-in viewer does not render Web pages, and that neither *Chithambaram* nor *Roy's* produce scalable content from HTML-based Web content, *Chithambaram* or *Roy* cannot teach or suggest,

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

Or, as similarly applied to claims 117 and 137,

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

Patentability of New Method and Beauregard Claims

New claims 180-364 have been added. These claims are method and Beauregard claims that are substantially analogous to the pending apparatus (device) claims. More particularly, the following table maps the new method and Beauregard claims to their analogous apparatus claim sets, wherein the independent claims of each claim set are shown.

Apparatus Ind. Claim	Method Ind. Claim	Beauregard Ind. Claim
71	180	271
99	211	303
128	Not Applicable	Not Applicable
143	244	337
174	265	359

It is noted that each of new dependent Beauregard claims 302, 336, and 358, which claim the instructions are embodied as a Web browser, do not have an analogous apparatus claim. Applicants respectfully assert that each of new claims 180-364 is in condition for allowance for reasons similar to their respective analogous apparatus claim, as argued above.

Conclusion

In view of the amendments and the remarks above, Applicant respectfully submits that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: December 9, 2007 /S/ R. Alan Burnett

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JANUARY 12, 2008
SUPPLEMENTAL AMENDMENT

Certificate of Electronic Filing

I hereby certify that this correspondence is being Electronically Filed via EFS

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Date of Electronic Filing

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett   January 12, 2008

Signature   Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
Rohrabaugh *et al.*	) Examiner: Tran, Quoc A.
	)
Serial No. 11/045,757	) Art Unit: 2176
	)
Filed: June 8, 2001	)
	)
For: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES	)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT

Sir:

Applicants request the Examiner to enter the following amendment and to reconsider all pending claims in view of the amendment and the following remarks.

Amendments begin on page 2. Remarks begin on page 62.

AMENDMENT

In the Drawings

A replacement set of drawing sheets is filed electronically herewith to replace all previously filed drawings sheets. In the replacement sheets for FIGs. 2A, 2B, and 2C, a typographical error has been corrected (XLM corrected to XML). The other replacement drawings sheets are being filed to provide a better resolution version of the Figures – the drawing sheets are output from their original application (Visio) to a PDF file as compared with scanning in the drawings to a PDF file (as done by the USPTO with the original drawings). A previous drawing amendment submission on Dec. 9, 2007 was deemed improper for use of "Substitute Sheet" rather than "Replacement Sheet" on the submitted drawing sheets; this error is corrected in the instant submission. No new matter has been added.

In the Claims

This listing of claims replaces all prior versions and listing of claims in the application. Amendments or cancellations of any claims are done without prejudice, waiver and/or disclaimer. Applicants reserve the right to claim the subject matter of any amendment and/or cancellation in a continuing application.

1-70. (Cancelled)

71. (Currently Amended) A wireless device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to [[a]] an original Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when scaled and rendered; and scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display,

wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content.

72. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

73. (Previously Presented) The wireless device of claim 72, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

74. (Previously Presented) The wireless device of claim 71, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

75. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, [[and]] <u>or</u> graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

76. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs<u>,</u>

<u>wherein the original page layout and attributes of the Web page content are substantially preserved at each of the different resolutions</u>.

77. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

78. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

79. (Previously Presented) The wireless device of claim 78, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

80. (Previously Presented) The wireless device of claim 71, wherein the page

layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.

81. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

82. (Previously Presented) The wireless device of claim 81, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

83. (Currently Amended) The wireless device of claim 71, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

84. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across the display~~ enlarged.

85. (Previously Presented) The wireless device of claim 84, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

86. (Previously Presented) The wireless device of claim 71, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

87. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

88. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

89. (Previously Presented) The wireless device of claim 88, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

90. (Previously Presented) The wireless device of claim 89, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

91. (Previously Presented) The wireless device of claim 90, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

92. (Previously Presented) The wireless device of claim 71, wherein the scalable

content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

93. (Cancelled)

94. (Previously Presented) The wireless device of claim 71, wherein at least a portion of the instructions comprise Java-based instructions.

95. (Previously Presented) The wireless device of claim 71, wherein the device comprises a mobile phone.

96. (Previously Presented) The wireless device of claim 71, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

97. (Previously Presented) The wireless device of claim 71, wherein the network comprises a mobile service provider network.

98. (Previously Presented) The wireless device of claim 71, wherein a portion of the scalable content comprises vector-based content.

99. (Currently Amended) A mobile device, comprising:

a processor,

a wireless communications device, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout <u>and attributes</u> of content on the Web page;

retrieving the Web page via the wireless communications device, and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content [[and]] <u>or</u> data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page <u>to enable the Web page to be viewed at various zoom levels while substantially preserving the original page layout and attributes of the Web page content at each zoom level</u>.

100. (Previously Presented) The mobile device of claim 99, wherein the device comprises a mobile phone.

101. (Previously Presented) The mobile device of claim 99, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

102. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

103. (Previously Presented) The mobile device of claim 102, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

104. (Previously Presented) The mobile device of claim 99, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

105. (Currently Amended) The mobile device of claim 99, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content [[and]] <u>or</u> data derived therefrom to render the Web content associated with the hyperlink on the display.

106. (Previously Presented) The mobile device of claim 99, wherein at least a portion of the scalable content comprises scalable vector-based content.

107. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

108. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

109. (Previously Presented) The mobile device of claim 108, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

110. (Currently Amended) The mobile device of claim 99, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content [[and]] <u>or</u> data derived therefrom is scaled to render a display having a different aspect ratio.

111. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

112. (Previously Presented) The mobile device of claim 111, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

113. (Previously Presented) The mobile device of claim 99, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

114. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across a display area of the display.

115. (Previously Presented) The mobile device of claim 114, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

116. (Previously Presented) The mobile device of claim 99, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

117. (Previously Presented) The mobile device of claim 99, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

118. (Previously Presented) The mobile device of claim 99, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

119. (Previously Presented) The mobile device of claim 118, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of

content.

120. (Previously Presented) The mobile device of claim 119, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

121. (Previously Presented) The mobile device of claim 120, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

122. (Previously Presented) The mobile device of claim 99, wherein the scalable content includes scalable text content, and wherein execution of the instructions

performs further operations comprising scaling a scalable font to render the scalable text content.

123. (Previously Presented) The mobile device of claim 99, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

124. (Previously Presented) The mobile device of claim 99, wherein at least a portion of the instructions comprise Java-based instructions.

125. (Previously Presented) The mobile device of claim 99, wherein a portion of the HTML-based Web content comprises XML code.

126. (Previously Presented) The mobile device of claim 99, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

127. (Previously Presented) The mobile device of claim 99, wherein a portion of the scalable content comprises vector-based content.

128. (Currently Amended) A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display, to facilitate user input and display rendered content; and

storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by the processing means, the mobile device is enabled to perform operations, including, rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout and attributes of content on the Web page;

retrieving the Web page via the wireless communications means, and processing at least a portion of the HTML-based Web content to produce scalable content; and

employing at least one of the scalable content [[and]] or data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs made via the display to enable the user to zoom in and out a display of the Web page,

wherein the original page layout and attributes of the Web page content are substantially preserved regardless of a zoom level of the Web page.

129. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a general-purpose processor.

130. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a special-purpose processor.

131. (Previously Presented) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

132. (Previously Presented) The mobile device of claim 131, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

133. (Previously Presented) The mobile device of claim 128, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

134. (Previously Presented) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user interface input.

135. (Previously Presented) The mobile device of claim 134, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned substantially in real-time.

136. (Previously Presented) The mobile device of claim 128, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

137. (Previously Presented) The mobile device of claim 128, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list objects on a virtual display in the dynamic memory; and

scaling display list objects to re-render the display of the Web page.

138. (Previously Presented) The mobile device of claim 128, wherein the network comprises a mobile service provider network.

139. (Previously Presented) The wireless device of claim 128, wherein the device comprises a mobile phone.

140. (Previously Presented) The wireless device of claim 128, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

141. (Previously Presented) The wireless device of claim 128, wherein a portion of the scalable content comprises vector-based content.

142. (Previously Presented) The mobile device of claim 128, wherein the processing means includes logic circuitry programmed with a portion of the instructions.

143. (Currently Amended) A mobile device, comprising:

a processor,

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display; <u>and</u>

non-volatile memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface on the display via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the Web page;

retrieving <u>the</u> Web page via the wireless communications interface;

rendering the Web page such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page<u> to enable the Web page to be viewed at various zoom levels while substantially preserving the original page layout and attributes of the Web page content at each zoom level</u>.

144. (Currently Amended) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

145. (Previously Presented) The mobile device of claim 144, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

146. (Currently Amended) The mobile device of claim 143, wherein the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

147. (Currently Amended) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across the display~~ enlarged.

148. (Previously Presented) The mobile device of claim 147, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

149. (Previously Presented) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

150. (Previously Presented) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

151. (Previously Presented) The mobile device of claim 143, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

152. (Previously Presented) The mobile device of claim 144, wherein the corresponding user input comprises tapping on the column via the display.

153. (Previously Presented) The mobile device of claim 146, wherein the corresponding user input comprises tapping on the image via the display.

154. (Previously Presented) The mobile device of claim 147, wherein the corresponding user input comprises tapping on the paragraph via the display.

155. (Previously Presented) The mobile device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input made via the display.

156. (Previously Presented) The mobile device of claim 155, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

157. (Previously Presented) The mobile device of claim 143, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

158. (Previously Presented) The mobile device of claim 143, wherein a portion of the HTML-based Web content comprises XML code.

159. (Previously Presented) The mobile device of claim 143, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

160. (Previously Presented) The mobile device of claim 143, wherein the network comprises a mobile service provider network.

161. (Previously Presented) The mobile device of claim 143, wherein the device comprises a mobile phone.

162. (Previously Presented) The mobile device of claim 143, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

163. (Previously Presented) The mobile device of claim 143, wherein the device comprises one of a notebook computer or laptop computer.

164. (Previously Presented) The wireless device of claim 71, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

165. (Previously Presented) The mobile device of claim 99, wherein the device comprises one of a notebook computer or laptop computer.

166. (Previously Presented) The mobile device of claim 128, wherein the device comprises one of a notebook computer or laptop computer.

167. (Previously Presented) The wireless device of claim 81, wherein the corresponding user input comprises tapping on the column via the display.

168. (Previously Presented) The wireless device of claim 83, wherein the corresponding user input comprises tapping on the image via the display.

169. (Previously Presented) The wireless device of claim 84, wherein the corresponding user input comprises tapping on the paragraph via the display.

170. (Previously Presented) The mobile device of claim 111, wherein the corresponding user input comprises tapping on the column via the display.

171. (Previously Presented) The mobile device of claim 113, wherein the corresponding user input comprises tapping on the image via the display.

172. (Previously Presented) The mobile device of claim 114, wherein the corresponding user input comprises tapping on the paragraph via the display.

173. (Previously Presented) The mobile device of claim 136, wherein the corresponding user input comprises tapping on the image via the display.

174. (Currently Amended) A wireless device, comprising:

a processor;

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

a storage device, on which a plurality of instructions are stored that when executed by the processor enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving, via the wireless communications interface, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when scaled and rendered;

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display,

wherein the original page layout and attributes of the Web page content are substantially preserved under both the first and second scale factors.

175. (Previously Presented) The wireless device of claim 174, wherein the display is re-rendered substantially in real-time.

176. (Previously Presented) The wireless device of claim 174, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

177. (Previously Presented) The wireless device of claim 174, wherein the device comprises one of a notebook computer or laptop computer.

178. (Previously Presented) The wireless device of claim 174, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

179. (Previously Presented) The wireless device of claim 178, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

180. (Currently Amended) A method, comprising:

rendering a browser interface on a device via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page via the device, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display,

wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content.

181. (Previously Presented) The method of claim 180, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

182. (Previously Presented) The method of claim 181, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

183. (Previously Presented) The method of claim 180, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

184. (Currently Amended) The method of claim 180, performs comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, [[and]] or graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

185. (Currently Amended) The method of claim 180, further comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs,

wherein the original page layout and attributes of the Web page content are substantially preserved at each of the different resolutions.

186. (Previously Presented) The method of claim 180, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

187. (Previously Presented) The method of claim 180, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

188. (Previously Presented) The method of claim 187, further comprising enabling the display of the Web page to be panned substantially in real-time.

189. (Previously Presented) The method of claim 180, wherein the page layout of

the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.

190. (Previously Presented) The method of claim 180, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

191. (Previously Presented) The method of claim 190, wherein the corresponding user input comprises tapping on the column via the display.

192. (Previously Presented) The method of claim 190, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

193. (Previously Presented) The method of claim 180, wherein the Web content includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

194. (Previously Presented) The method of claim 193, wherein the corresponding user input comprises tapping on the image via the display.

195. (Previously Presented) The method of claim 180, further comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

196. (Previously Presented) The method of claim 132, wherein the corresponding

user input comprises tapping on the paragraph via the display.

197. (Previously Presented) The method of claim 132, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

198. (Previously Presented) The method of claim 180, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

199. (Previously Presented) The method of claim 180, further comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

200. (Previously Presented) The method of claim 180, further comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

201. (Previously Presented) The method of claim 200, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

202. (Previously Presented) The method of claim 201, further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

203 (Previously Presented) The method of claim 202, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

204. (Previously Presented) The method of claim 180, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable

font to render the scalable text content.

205. (Previously Presented) The method of claim 180, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

206. (Previously Presented) The method of claim 180, wherein the device comprises a mobile phone.

207. (Previously Presented) The method of claim 180, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

208. (Previously Presented) The method of claim 180, further comprising accessing the Internet via a wireless connection to retrieve the Web page.

209. (Previously Presented) The method of claim 180, wherein a portion of the scalable content comprises vector-based content.

210. (Previously Presented) The method of claim 180, wherein the device comprises one of a notebook computer or laptop computer.

211. (Currently Amended) A method, comprising:

rendering a browser interface on a device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout <u>and attributes</u> of content on the Web page;

retrieving the Web page via the device, and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content [[and]] <u>or</u> data derived therefrom to,

render the Web page on a display of the device; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page to enable the Web page to be viewed at various zoom levels while substantially preserving the original page layout and attributes of the Web page content at each zoom level.

212. (Previously Presented) The method of claim 211, wherein the device comprises a mobile phone.

213. (Previously Presented) The method of claim 211, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

214. (Previously Presented) The method of claim 211, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

215. (Previously Presented) The method of claim 214, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

216. (Previously Presented) The method of claim 211, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

217. (Currently Amended) The method of claim 211, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content [[and]] or data derived therefrom to render the Web content associated with the hyperlink on the display.

218. (Previously Presented) The method of claim 211, wherein at least a portion of the scalable content comprises scalable vector-based content.

219. (Previously Presented) The method of claim 211, further comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

220. (Previously Presented) The method of claim 211, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

221. (Previously Presented) The method of claim 220, further comprising enabling the display of the Web page to be panned substantially in real-time.

222. (Currently Amended) The method of claim 211, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content [[and]] or data derived therefrom is scaled to render a display having a different aspect ratio.

223. (Currently Amended) The method of claim 211, further comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

224. (Previously Presented) The method of claim 223, wherein the corresponding user input comprises tapping on the column via the display.

225. (Previously Presented) The method of claim 223, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

226. (Currently Amended) The method of claim 211, wherein the Web content

includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

227. (Previously Presented) The method of claim 226, wherein the corresponding user input comprises tapping on the image via the display.

228. (Currently Amended) The method of claim 211, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across a display area of the display~~ enlarged.

229. (Previously Presented) The method of claim 228, wherein the corresponding user input comprises tapping on the paragraph via the display.

230. (Previously Presented) The method of claim 228, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

231. (Previously Presented) The method of claim 211, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

232. (Previously Presented) The method of claim 211, further comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in dynamic memory; and

scaling the display list content to re-render the display of the Web page.

233. (Previously Presented) The method of claim 211, further comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

234. (Previously Presented) The method of claim 233, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

235. (Previously Presented) The method of claim 234, wherein the device includes dynamic memory having at least a portion employed for rendering purposes, the method further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

236. (Previously Presented) The method of claim 235, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

237. (Previously Presented) The method of claim 211, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable font to render the scalable text content.

238. (Previously Presented) The method of claim 211, wherein the original format of the Web page defines a height and width for the Web page, the method further comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

239. (Previously Presented) The method of claim 211, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

240. (Previously Presented) The method of claim 211, wherein a portion of the HTML-based Web content comprises XML code.

241. (Previously Presented) The method of claim 211, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

242. (Previously Presented) The method of claim 211, wherein a portion of the scalable content comprises vector-based content.

243. (Previously Presented) The method of claim 211, wherein the device comprises one of a notebook computer or laptop computer.

244. (Currently Amended) A method, comprising:

rendering a browser interface on a display of a device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the Web page;

retrieving the Web page via the device;

rendering the Web page via the device such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to the device to enable the user to zoom in and out a display of the Web page,

wherein the original page layout of the Web page content is substantially preserved regardless of a zoom level of the Web page.

245. (Currently Amended) The method of claim 244, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

246. (Previously Presented) The method of claim 245, wherein the corresponding user input comprises tapping on the column via the display.

247. (Previously Presented) The method of claim 245, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

248. (Currently Amended) The method of claim 244, wherein the Web page includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

249. (Previously Presented) The method of claim 248, wherein the corresponding user input comprises tapping on the image via the display.

250. (Currently Amended) The method of claim 244, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across the display~~ enlarged.

251. (Previously Presented) The method of claim 250, wherein the corresponding user input comprises tapping on the paragraph via the display.

252. (Previously Presented) The method of claim 250, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

253. (Previously Presented) The method of claim 244, further comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

254. (Previously Presented) The method of claim 244, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

255. (Previously Presented) The method of claim 244, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

256. (Previously Presented) The method of claim 244, further comprising enabling a user to pan a display of the Web page in response to a corresponding user input made via the display.

257. (Previously Presented) The method of claim 256, further comprising enabling the display of the Web page to be panned substantially in real-time.

258. (Previously Presented) The method of claim 244, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

259. (Previously Presented) The method of claim 244, wherein a portion of the HTML-based Web content comprises XML code.

260. (Previously Presented) The method of claim 244, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

261. (Previously Presented) The method of claim 244, wherein the wireless connection comprises a wireless connection to a mobile service provider network.

262. (Previously Presented) The method of claim 244, wherein the device comprises a mobile phone.

263. (Previously Presented) The method of claim 244, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

264. (Previously Presented) The method of claim 244, wherein the device comprises one of a notebook computer or laptop computer.

265. (Currently Amended) A method, comprising:

rendering a browser interface on a display via which a user of a device is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving the Web page, via the device, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display,

wherein the original page layout and attributes of the Web page content are substantially preserved under both the first and second scale factors.

266. (Previously Presented) The method of claim 265, wherein the display is re-rendered substantially in real-time.

267. (Previously Presented) The method of claim 265, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

268. (Previously Presented) The method of claim 265, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

269. (Previously Presented) The method of claim 265, further comprising enabling

a user to pan a display of the Web page in response to a corresponding user input.

270. (Previously Presented) The method of claim 269, further comprising enabling the display of the Web page to be panned substantially in real-time.

271. (Currently Amended) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface via which a user is enabled to request access to a Web page hosted by an Internet Web site, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout and attributes of content on the Web page;

retrieving the Web page and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that the original width of the Web page is rendered to fit substantially across the display,

wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content.

272. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

273. (Previously Presented) The machine-readable medium of claim 272, wherein

the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

274. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

275. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, [[and]] <u>or</u> graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

276. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the Web

page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs,

wherein the original page layout and attributes of the Web page content are substantially preserved at each of the different resolutions.

277. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

278. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

279. (Previously Presented) The machine-readable medium of claim 278, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

280. (Previously Presented) The machine-readable medium of claim 271, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display having a different aspect ratio.

281. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

282. (Previously Presented) The machine-readable medium of claim 281, wherein the corresponding user input comprises tapping on the column via the display.

283. (Previously Presented) The machine-readable medium of claim 281, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

284. (Currently Amended) The machine-readable medium of claim 271, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

285. (Previously Presented) The machine-readable medium of claim 284, wherein the corresponding user input comprises tapping on the image via the display.

286. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across the display~~ enlarged.

287. (Previously Presented) The machine-readable medium of claim 286, wherein the corresponding user input comprises tapping on the paragraph via the display.

288. (Previously Presented) The machine-readable medium of claim 286, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

289. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

290. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

291. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

292. (Previously Presented) The machine-readable medium of claim 291, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

293. (Previously Presented) The machine-readable medium of claim 292, wherein

execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

294. (Previously Presented) The machine-readable medium of claim 293, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

295. (Previously Presented) The machine-readable medium of claim 271, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

296. (Previously Presented) The machine-readable medium of claim 271, wherein

at least a portion of the instructions comprise Java-based instructions.

297. (Previously Presented) The machine-readable medium of claim 271, wherein the device comprises a mobile phone.

298. (Previously Presented) The machine-readable medium of claim 271, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

299. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page is accessed via a mobile service provider network.

300. (Previously Presented) The machine-readable medium of claim 271, wherein a portion of the scalable content comprises vector-based content.

301. (Previously Presented) The machine-readable medium of claim 271, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

302. (Previously Presented) The machine-readable medium of claim 271, wherein the instructions are embodied as a Web browser.

303. (Currently Amended) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout <u>and attributes</u> of content on the Web page;

retrieving the Web page and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content [[and]] <u>or</u> data derived therefrom to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page,

wherein the original page layout and attributes of the Web page content are substantially preserved regardless of a zoom level of the Web page

304. (Previously Presented) The machine-readable medium of claim 303, wherein the device comprises a mobile phone.

305. (Previously Presented) The machine-readable medium of claim 303, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

306. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

307. (Previously Presented) The machine-readable medium of claim 306, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

308. (Previously Presented) The machine-readable medium of claim 303, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

309. (Previously Presented) The machine-readable medium of claim 303, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the display; and, in response thereto, retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content [[and]] <u>or</u> data derived therefrom to render the Web content associated with the hyperlink on the display.

310. (Previously Presented) The machine-readable medium of claim 303, wherein at least a portion of the scalable content comprises scalable vector-based content.

311. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

312. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

313. (Previously Presented) The machine-readable medium of claim 312, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

314. (Previously Presented) The machine-readable medium of claim 303, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content [[and]] <u>or</u> data derived therefrom is scaled to render a display having a different aspect ratio.

315. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in

response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

316. (Previously Presented) The machine-readable medium of claim 315, wherein the corresponding user input comprises tapping on the column via the display.

317. (Previously Presented) The machine-readable medium of claim 315, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

318. (Previously Presented) The machine-readable medium of claim 303, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

319. (Previously Presented) The machine-readable medium of claim 318, wherein the corresponding user input comprises tapping on the image via the display.

320. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across a display area of the display.

321. (Previously Presented) The machine-readable medium of claim 320, wherein the corresponding user input comprises tapping on the paragraph via the display.

322. (Previously Presented) The machine-readable medium of claim 320, wherein the content of the paragraph is reformatted to fit characteristics of the display area

when the display is re-rendered.

323. (Previously Presented) The machine-readable medium of claim 303, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

324. (Previously Presented) The machine-readable medium of claim 303, wherein the device includes dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

325. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

326. (Previously Presented) The machine-readable medium of claim 325, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

327. (Previously Presented) The machine-readable medium of claim 326, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

328. (Previously Presented) The machine-readable medium of claim 327, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and pan by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

329. (Previously Presented) The machine-readable medium of claim 303, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

330. (Previously Presented) The machine-readable medium of claim 303, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page substantially across a display area of the display; and

employing the scale factor to render the display area.

331. (Previously Presented) The machine-readable medium of claim 303, wherein at least a portion of the instructions comprise Java-based instructions.

332. (Previously Presented) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises XML code.

333. (Previously Presented) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

334. (Previously Presented) The machine-readable medium of claim 303, wherein a portion of the scalable content comprises vector-based content.

335. (Previously Presented) The machine-readable medium of claim 303, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

336. (Previously Presented) The machine-readable medium of claim 303, wherein

the instructions are embodied as a Web browser.

337. (Currently Amended) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a wireless device to perform operations comprising:

rendering a browser interface on a display of the wireless device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page and defining an original width and height of the Web page;

retrieving the Web page via the wireless device;

rendering the Web page such that the Web page is rendered to fit substantially across the display; and

re-rendering the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page to enable the Web page to be viewed at various zoom levels while substantially preserving the original page layout and attributes of the Web page content at each zoom level.

338. (Currently Amended) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially across the display~~ enlarged.

339. (Previously Presented) The machine-readable medium of claim 338, wherein the corresponding user input comprises tapping on the column via the display.

340. (Previously Presented) The machine-readable medium of claim 338, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

341. (Currently Amended) The machine-readable medium of claim 337, wherein the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially across the display~~ enlarged.

342. (Previously Presented) The machine-readable medium of claim 341, wherein the corresponding user input comprises tapping on the image via the display.

343. (Currently Amended) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially across the display~~ enlarged.

344. (Previously Presented) The machine-readable medium of claim 343, wherein the corresponding user input comprises tapping on the paragraph via the display.

345. (Previously Presented) The machine-readable medium of claim 343, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

346. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

347. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

348. (Previously Presented) The machine-readable medium of claim 337, wherein the display of the Web page is re-rendered substantially in real-time to effect zooming operations.

349. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input made via the display.

350. (Previously Presented) The machine-readable medium of claim 349, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

351. (Previously Presented) The machine-readable medium of claim 337, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

352. (Previously Presented) The machine-readable medium of claim 337, wherein a portion of the HTML-based Web content comprises XML code.

353. (Previously Presented) The machine-readable medium of claim 337, wherein a portion of the HTML-based Web content comprises cascaded style sheet data.

354. (Previously Presented) The machine-readable medium of claim 337, wherein the wireless device is configured to connect to a mobile service provider network.

355. (Previously Presented) The machine-readable medium of claim 337, wherein

the device comprises a mobile phone.

356. (Previously Presented) The machine-readable medium of claim 337, wherein the device comprises one of a Personal Digital Assistant (PDA) or handheld computer.

357. (Previously Presented) The machine-readable medium of claim 337, wherein the device comprises one of a notebook computer or laptop computer.

358. (Previously Presented) The machine-readable medium of claim 337, wherein the instructions are embodied as a Web browser.

359. (Currently Amended) A machine-readable medium having a plurality of instructions comprising a Web browser stored thereon, which when executed enable a device to perform operations comprising:

launching a Web browser including a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout and attributes of corresponding content on the Web page;

retrieving, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent display of the Web page that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable content to render the Web page in the Web browser using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display of the Web page,

wherein the original page layout and attributes of the Web page content are substantially preserved under both the first and second scale factors.

360. (Previously Presented) The machine-readable medium of claim 359, wherein the display is re-rendered substantially in real-time.

361. (Previously Presented) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on a device comprising one of a Personal Digital Assistant (PDA) or handheld computer.

362. (Previously Presented) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on at least one of a desktop computer, notebook computer or laptop computer.

363. (Previously Presented) The machine-readable medium of claim 359, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web page in response to a corresponding user input.

364. (Previously Presented) The machine-readable medium of claim 363, wherein execution of the instructions performs further operations comprising enabling the display of the Web page to be panned substantially in real-time.

365. (New) The wireless device of claim 81, wherein the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

366. (New) The wireless device of claim 83, wherein the display is re-rendered such that the image is displayed substantially across the display.

367. (New) The wireless device of claim 84, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

368. (New) The mobile device of claim 144, wherein the display is re-rendered such

that content corresponding to the selected column is displayed substantially across the display.

369. (New) The mobile device of claim 146, wherein the display is re-rendered such that the image is displayed substantially across the display.

370. (New) The mobile device of claim 147, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

371. (New) The method of claim 223, wherein the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

372. (New) The method of claim 226, wherein the display is re-rendered such that the image is displayed substantially across the display.

373. (New) The method of claim 228, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

374. (New) The method of claim 245, wherein the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

375. (New) The method of claim 248, wherein the display is re-rendered such that the image is displayed substantially across the display.

376. (New) The method of claim 250, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

377. (New) The machine-readable medium of claim 281, wherein the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

378. (New) The machine-readable medium of claim 284, wherein the display is re-rendered such that the image is displayed substantially across the display.

379. (New) The machine-readable medium of claim 286, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

380. (New) The machine-readable medium of claim 338, wherein the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

381. (New) The machine-readable medium of claim 341, wherein the display is re-rendered such that the image is displayed substantially across the display.

382. (New) The machine-readable medium of claim 343, wherein the display is re-rendered such that content corresponding to the selected paragraph is displayed substantially across the display.

383. (New) The wireless device of claim 71, wherein the device enables a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

384. (New) The mobile device of claim 99, wherein the device enables a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page

content.

385. (New) The mobile device of claim 143, wherein the device enables a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

386. (New) The method of claim 211, further comprising enabling a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

387. (New) The method of claim 265, further comprising enabling a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

388. (New) The machine-readable medium of claim 271, wherein execution of the instructions enables a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

389. (New) The machine-readable medium of claim 337, wherein execution of the instructions enables a user to view, zoom, and the HTML-based Web page content of pan substantially any Web page in a manner that substantially preserves the original layout of the Web page content.

390. (New) The machine-readable medium of claim 359, wherein execution of the instructions enables a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original

layout and attributes of the Web page content.

391. (New) A hand-held wireless device, comprising:

a processor,

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

non-volatile memory, operatively coupled to the processor, in which software comprising a browser is stored, the browser comprising a plurality of instructions that when executed by the processor enable the device to perform operations including,

rendering a browser interface on the display via which a user is enabled to request access to a Web page including at least one image, at least one column, and a plurality of hyperlinks and having a width and height;

retrieving the Web page via the wireless communications interface;

rendering the Web page on the display such that at least one of the width and height of the Web page is fully displayed; and

enabling the user to,

zoom and pan a display of the Web page;

activate any viewable hyperlink while at any zoom level and pan position by tapping on the hyperlink, wherein in response to an activation of a hyperlink to an external reference, Web content associated with the external reference is retrieved and rendered on the display;

zoom in on an image of the Web page by tapping on the image via the display;

zoom in on a column of the Web page by tapping on the column via the display; and

zoom out to a previous view of the Web page.

392. (New) The hand-held wireless device of claim 391, wherein the Web page comprises HTML-based Web page content defining an original page layout and attributes of the Web page content, and wherein the browser renders the Web page such that the original page layout and attributes of the Web page are substantially preserved at any zoom level.

393. (New) The hand-held wireless device of claim 392, wherein the user is enabled to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content.

REMARKS

This Supplemental Amendment amends claims submitted in the Office Action response electronically filed December 9, 2007, and also corrects inadvertent typographical errors in the drawings. In the Supplemental Amendment, claims 71, 75, 76, 99, 128, 143, 174, 180, 184, 185, 211, 244, 265, 271, 275, 276, 303, 337, and 359 are amended to more clearly recite elements of their respective claimed inventions. New claims 365-393 have been added. Accordingly, claims 71-92 and 94-393 are now pending. No new matter has been added and all previous and new claims are supported by the original disclosure of 09/878,097 and other priority applications incorporated therein by reference (Application Serial Nos. 60/217,345, 60/211,019, and 09/828,511). Entry of this Supplemental Amendment is respectfully solicited.

Applicants respectfully assert that each of pending claims 71-92 and 94-393 is in condition for allowance.

<u>Replacement of “and” with “or” in Claims 75, 99, 105, 110, 184, 211, 217, 222, 275, 303, 309, and 314</u>

Under the current amendment, the word “and” has been replaced with the word “or” in each of claims 75, 99, 105, 110, 184, 211, 217, 222, 275, 303, 309, and 314. The purpose of the amendment does not relate to patentability, but rather is to comply with the decision in *SuperGuide Corporation v. DirecTV Enterprises, Inc.,* et al., 358 F.3d 870 (Fed. Cir. 2004). Accordingly, no *Festo* presumption of surrender should apply. In *SuperGuide*, terminology reciting “at least one of A, B, C *and* D (emphasis added) was construed to mean at least one of each of A, B, C, and D. Although this was contrary to years of patent prosecution practice, the outcome of *SuperGuide* is applicable law until and unless the claim construction gets overturned. As a result, each of claims 75, 99, 105, 110, 184, 211, 217, 222, 275, 303, 309, and 314 has been amended to comply with *SuperGuide*.

By way of example, claim 75 recites, in part (emphasis added), parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including ***at least one of*** ***text objects, graphic layout objects,*** ***or*** ***graphic image objects included in the Web page***

It will be understood that this recitation means the plurality of objects may include any of the following singular or combinations:

1. text objects
2. graphic layout objects
3. graphic image objects
4. a combination of text objects and graphic layout objects
5. a combination of text objects and graphic image objects
6. a combination of graphic layout objects and graphic image objects
7. a combination of text objects, graphic layout objects, and graphic image objects.

Similar amendments have been made to claims 184 and 275.

By way of another example, claim 99 recites, in part (emphasis added)

employing ***at least one of*** ***the scalable content*** ***or*** ***data derived therefrom*** to,

render the Web page on the display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

It will be understood that employing at least one of the scalable content or data derived therefrom means,

1. Employing the scalable content to perform the render and re-render operations.
2. Employing data derived from the scalable content to perform the render and re-render operations.
3. Employing a combination of the scalable content and data derived from

the scalable content to perform the render and re-render operations.

Similar amendments have been made to claims 105, 110, 211, 217, 222, 303, 309, and 314.

Discussion of Terminology "Substantially any Web Page" in New Claims 383-390 and 393

Each of new claims 383-390 and 393 includes the element of [enables/enabling] "a user to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that substantially preserves the original layout and attributes of the Web page content." Although the HTML language definition is standardized (by the W3C HTML Working Group, *e.g.*, XHTML 1.0 (extension of the HTML 4.01 standard) and ISO/IEC 15445:2000), there is no mechanism to ensure Web pages themselves meet such standards. For example, Web pages may be "hand-coded," automatically coded by a Web page design application or the like, or employ a combination of the two. Both hand-coding and automatic coding may be prone to errors, although better Web page design applications typically provide built-in measures to assist the developer in developing appropriately formed HTML documents. Since the only checking when hand coding is performed by the person doing the hand coding (or potentially others connected with the publication of corresponding hand-coded Web pages), there is no mechanism to ensure the HTML code is appropriately formed (i.e., valid). As a result, there are Web pages that are accessible via the Internet that do not render properly or otherwise in a predictable manner (and sometimes not at all). For example, the tagged elements in an HTML document may not be nested properly, end tags may be missing, or the HTML Web page definition is otherwise improperly formed. As a result, such pages may not support (under the teachings of the present disclosure) enabling a user to view, zoom, and pan the HTML-based Web page content (of such pages) in a manner that that substantially preserves the original layout and attributes of the Web page content, since the original layout (HTML) code may be erroneous.

In addition, some Web page design applications may (when automatically generating HTML code for rendering a page designed via the application) add additional code elements that may be problematic for some HTML rendering engines[1] (*i.e.*, the software used to lay out and render the Web page via processing the Web page's HTML document(s)), while function fine for other HTML rendering engines. This is particularly the case where a Web page design application generates Web pages targeted to a specific HTML rendering engine or browser. For example, Web page design applications developed and sold by Microsoft (*e.g.*, Frontpage, Web Expressions) will generally generate Web pages containing HTML code that is compatible with Microsoft Internet Explorer browsers, but may not be 100% compatible with other browsers.

It is further noted that some Web sites provide access to Web pages that are designed for specific consumers, *i.e.*, specific browsers or devices. For example, Web sites such as Yahoo.com serve separate versions of Web pages to computers using the Internet Explorer or Mozilla (rendering-engine) -based browsers (*e.g.*, Firefox and Netscape Navigator). In other words, in response to a request to access the Yahoo.com home page, a computer using an Internet Explorer browser will receive different Web page content than a computer using a Firefox or Netscape Navigator browser. Moreover, Web sites such as Yahoo.com may serve a separate version of a Web page to computers with browsers that are neither a version of Internet Explorer or a Mozilla-based browser, or an unsupported older version of either browser. In addition, many Web sites serve separate pages designed for Mobile devices – these pages are substantially different than their corresponding brethren that are designed for desktop browsers, often with a substantial reduction in page content. Thus, there will be some Web pages that will not render properly and/or will generate an error if

[1] Also commonly referred to as a layout engine.

accessed by an unsupported browser.

Overall, the percentage of Web pages that are either browser/device-specific or contain invalid HTML (of significance) is rather small (when considered among the literally billions of estimated Web pages); however, as discussed above, such pages do exist. As a result, one of skill in the art would not expect any browser implementation to be able to render all Web pages as designed and/or coded.

Under the claimed inventions of claims 383-390 and 393, users are enabled to view, zoom, and pan the HTML-based Web page content of substantially any Web page in a manner that preserves the original layout and attributes of the Web page content. This capability will generally be dependent on the rendering engine compatibility with the Web page definition (as defined by the Web page's corresponding HTML). That is, this will generally depend on whether the rendering engine can render the original HTML-based Web page content appropriately at its original resolution or as originally defined by the Web page's HTML.[2]. Under the principles and teachings of the present disclosure, Web pages that can be rendered (by the applicable rendering engine) at the original resolution or as originally defined by the Web page's corresponding HTML are enabled to be viewed, zoomed, and panned in a manner that preserves the original layout and attributes of the Web page (as rendered at the original resolution).

---

[2] That is the resolution the Web page was designed to be rendered at in accordance with the original HTML-based content defining the original layout and attributes of the Web page content. The original resolution for a predefined width corresponds to the width and height of a Web page (as to be rendered) in pixels. For example, many or today's Web pages are designed for a screen with a width resolution of 1024 pixels (or greater), while earlier Web pages were designed for screen widths of 800 (SVGA) or 640 (VGA) pixels. Meanwhile, some Web pages are coded (via corresponding HTML) to be centered or otherwise fit within the width of a current browser window. In this case, the width of the Web page is not predefined, but rather will be a function of the width of the current browser window. As a result, the rendering engine determines the applicable layout of the Web page in view of the current browser window width (which it obtains from the browser or operating system).

In view of the foregoing, the terminology "substantially any Web page" has been included in claims 383-390 and 393 to identify that the claimed devices, methods, and instructions need not be able to enable a user to view, zoom, and pan the HTML-based Web page content of <u>all</u> Web pages while substantially preserving the original page layout and attributes of the Web page content, but rather this capability will generally be supported for the vast majority of Web pages (depending on the particular rendering engine that is employed).

<u>Conclusion</u>

In view of the amendments and the remarks above, Applicants respectfully submit that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: January 12, 2008 /S/ R. Alan Burnett

R. Alan Burnett
Reg. No. 46,149

4108 131st Ave SE
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JANUARY 22, 2008 SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT

Certificate of Electronic Filing

I hereby certify that this correspondence is being Electronically Filed via EFS on January 22, 2008

Date of Electronic Filing

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett January 22, 2007

Signature Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
Rohrabaugh *et al.*	) Examiner: Tran, Quoc A.
	)
Serial No. 11/045,757	) Art Unit: 2176
	)
Filed: June 8, 2001	)
	)
For: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES	)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT REMARKS

Sir:

Applicants respectfully request the Examiner consider the following remarks which are provided in conjunction with a concurrently filed Supplemental Information Disclosure.

REMARKS

Concurrently filed herewith is a Supplemental Information Disclosure Statement by which the Applicants are attempting to disclose information concerning the Opera 3.60 browser software application (hereinafter *Opera 3.60* may also be used to designate this software application). In accordance with *In re Epstein*, 32 F.3d 1559, 1567-68, 31 USPQ2d 1817, 1823 (Fed. Cir. 1994), it is believed that the *Opera 3.60* software application (itself) and textual content in the application's html and txt files qualifies as prior art under *35 U.S.C. §102(b)* as being "…in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States …" As is well understood, "the date of application" in a continuation or divisional application refers to the priority date of the continuation or divisional application. Similarly, if the parent application is based on a provisional application, the filing date of the provisional application applies for the purpose of the "critical date" under *35 U.S.C. §102(b)*. The critical date of the instant application is the filing date of the first provisional application referenced in the priority chain (60/211,019), that being June 12, 2000. It is believed by the Applicants that the *Opera 3.60* software application was at least one of in use or on sale in this country prior to June 12, 1999. In view of this belief and in accordance with Applicants' and the undersigned representative's duties under Rule 56 (*37 C.F.R. § 1.56*), Applicants hereby submit a copy of the *Opera 3.60* browser software application and supporting material.

With emphasis added through underlining, M.P.E.P. § 2128 states:

> An electronic publication, including an on-line database or Internet publication, is considered to be a "printed publication" within the meaning of 35 U.S.C. 102(a) and (b) <u>provided the publication was accessible to persons concerned with the art to which the document relates</u>. See *In re Wyer*, 655 F.2d 221, 227, 210 USPQ 790, 795 (CCPA

> 1981) ("Accordingly, whether information is printed, handwritten, or on microfilm or a magnetic disc or tape, etc., the one who wishes to characterize the information, in whatever form it may be, as a 'printed publication' * * * should produce sufficient proof of its dissemination or that it has otherwise been available and accessible to persons concerned with the art to which the document relates and thus most likely to avail themselves of its contents.'" (citations omitted).).

With emphasis added through underlining, M.P.E.P. § 2128 further states:

> Prior art disclosures on the Internet or on an on-line database are considered to be publicly available as of the date the item was <u>publicly posted</u>. *>Absent evidence of the date that the disclosure was publicly posted, if< the publication >itself< does not include a publication date (or retrieval date), it cannot be relied upon as prior art under 35 U.S.C. 102(a) or (b)

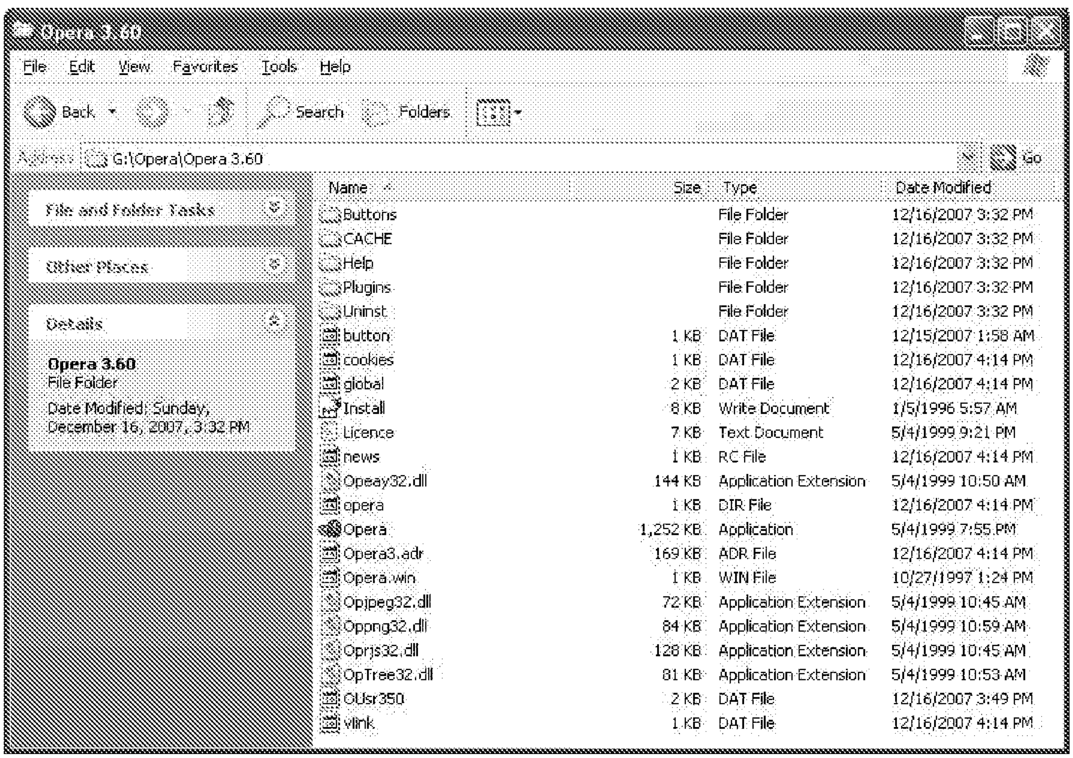
Applicants acknowledge the basis for the belief that *Opera 3.60* was in use and/or on sale in the United States prior to June 12, 1999 is based on hearsay evidence that would normally be excluded under the Federal Rules of Evidence. However, as discussed in *Epstein*, "The general rule is that administrative agencies like the PTO are not bound by the rules of evidence that govern judicial proceeding." In consideration of hearsay evidence being allowed, the belief that *Opera 3.60* was in use or on sale in the United States basis is based on the following.

Substantially all versions of the Opera browser, including version 3.60, are purportedly available for download from a German Web page with a URL of

http://opera-fansite.de/wiki/download+alte+Versionen.

A printout of the corresponding Web page is submitted herewith. Another Web page concerning a timeline of Opera Browser Releases (also having a printout submitted herewith) indicates that Opera version 3.60 was released on May 12, 1999. Presumably, the 3.60 version of Opera was available over the Internet on or shortly after this date, as the software application was developed in Norway by a Norwegian company, and distribution of the software was typically via the Internet. In considering this documentary evidence, it is believed that download of *Opera 3.60* was available to a person in the United States at least prior to June 12, 1999, the §102(b) bar date.

To further support the dates purported on the attached Web pages, the software accessible via the German Web page has been downloaded and installed on several computers operated by Applicant Gary Rohrabaugh and the undersigned representative, further details of which are submitted herewith. The dates of the software components are depicted below in the following screenshot of the file listing in a copy of the directory in which Opera was installed on one computer:



Explorer Listing of *Opera 3.60* Components (top level folder)

As is clearly evident, several of the software components, including the Opera application itself, have a date of 5/4/1999. This adds support to the belief that Opera 3.60 was in fact released on May 12, 1999.

In a separate filing to be mailed approximately January 22, 2008, Applicants will provide three copies of the following on CD-R Media:

1) A software copy of the *Opera 3.60* self-extracting (.exe) file downloaded by the aforementioned German Web page (360.exe in Opera 3.60 Self Extract folder).
2) A software copy of the *Opera 3.60* components in their installation configuration. (Opera 3.60 Folder)
3) Software copies of the PDF files corresponding to the Opera 3.60 Help documentation (Opera 3.60 Documentation (PDF) folder).
4) A software copy of a self-extracting file from which the version 1.1.2 Java Plug-in may be installed. (Java 1.1.2 Plug-in folder)
5) Software copies of the PDF files corresponding to the screenshots. (Opera 3.60 Screenshots subfolders)
6) Software copies of the MS Word documents from which the PDF files of the screenshots were derived, to provide access to JPEG screenshot images. (Opera 3.60 Screenshots subfolder)
7) Software copies of the PDF files corresponding to the aforementioned German Web page and Opera version release Web page. (Opera Release Web Pages folder)

The *Opera 3.60* self-extracting (.exe) file may be run to install *Opera 3.60* on a computer running a Windows-based operating system. Successful installation and operation has been confirmed on computers running Windows 98, Windows 2000 Professional, and Windows XP operating systems. Confirmation of compatibility with Windows Vista OS has not been attempted.

Similarly, the Java 1.1.2 plug-in can be installed by running the corresponding plugin-112-win32.exe file. Further details for installing the Java 1.1.2 plug-in are shown below:

Java support for the 32bit version

Opera 3.50 now supports Java applets! Not natively, but via the plug-in from Sun. However, this is **only** working in the 32bit version, as the plug-in itself is only available in a 32bit version. It is large though. The U.S. version is 4.9 MB and the International version is 7.5 MB.

How to get it to work:

This is how to install the Sun Java Plug-in:

1. Download the plug-in from the **download site** at Sun's site.
2. Make sure the file you downloaded is named "plugin-112-win32.exe" and not "download2.cgi", or you will have to rename it. The file might be named "download2.cgi" if you download it using Opera. Next, after renaming the file, double-click it or right-click **it** and press 'Open' to run the installer.
3. Find "NPJava32.dll" in the "bin" folder of the plug-in's directory, and place it in Opera's plug-in folder. In order to view *.dll files by default, you will need to set Windows up so that it will show you all files on your system, even hidden ones and *.dll files. Do so by going to "My computer/View/[Folder] Options..." and click the "View" tag and elect to "Show all files". This will make the "NPJava32.dll"-file visible. Copy the file "NPJava32.dll" from the the plug-ins "bin" directory to Opera's "plugins" folder.
4. Go to "Preferences/Associate..." and press the "Find Plugins" button in the "Action" part of the menu. Alternately, you can close Opera down and open it again, which will make the program find and activate the file itself.

Note: Please note you cannot install the plug-**in** in Opera's plug-in directory, as this will make the program **not** find the plug-in instead of fixing it as it's supposed to. Instructions are also available on the **Support Site**.

It is noted the Java plug-in is not needed to run Javascript, which is alleged to be supported in the *Opera 3.60* documentation. It is further noted that there was no difference observed when running *Opera 3.60* with or without the Java 1.1.2 plug-in, although *Opera 3.60* was not tested extensively.

In attempting to submit the software copies referenced above, the undersigned representative researched the MPEP and consulted a number of other patent attorneys at various well-respected law firms. It was the general consensus that there is no provision in the MPEP to submit copies of software applications, although there are provisions for submitting materials relevant to patentability on CD-R Media (for example, biological sequence listings). Accordingly, applicants are attempting to meet the Rule 56 disclosure criteria, in part, via submission of the above-mentioned materials on CD-R Media.

It is understood that the software provided on the CD-R Media may not be accepted (under provisions unknown to the undersigned representative or otherwise). Moreover, it is understood that the USPTO may have rules that prevent examiners from installing software application submitted in this manner for testing purposes. According, Applicants also submit herewith a number of screenshots captured while running *Opera 3.60* on computers running Microsoft Windows 98 and Windows 2000 Professional operating systems. Applicants acknowledge the screen shots are merely representative of the behavior of *Opera 3.60* when viewing a handful of Web pages; submission of additional screenshots is believed to be cumulative.

Use of Wayback Machine (Internet Archive)

The sets of screenshots that are submitted in the associated Information Disclosure Statement filed herewith were accessed using the "Wayback Machine" (*a.k.a.* Internet Archive), which may be accessed at www.archive.org/. This website is operated as a non-profit organization established to preserve Web sites by taking regular "snapshots." As stated on the website,

> The Internet Archive is a 501(c)(3) non-profit that was founded to build an Internet library, with the purpose of offering permanent access for researchers, historians, and scholars to historical collections that exist in digital format. Founded in 1996 and located in the Presidio of San Francisco, the Archive has been receiving data donations from Alexa Internet and others. In late 1999, the organization started to grow to include more well-rounded collections. Now the Internet Archive includes texts, audio, moving images, and software as well as archived web pages in our collections.

For the purpose of this submission, it is presumed that the information concerning the archival dates is valid (or otherwise close to accurate). Several of the Web pages have dates on them, adding validity to the alleged dates.

The purpose of using the Internet Archive was to observe the behavior of *Opera 3.60* when rendering Web pages that were available proximate to its release date (May 12, 1999). Try as he may, the undersigned representative could not find any Web pages with dates from May 12 – June 12 1999 – that is between the release date of *Opera 3.60* and the one year §102(b) date. In view of this, Web pages with publication dates proximate to May 12, 1999 were selected (as available). It is reasonable to believe these Web pages were likely available on May 12, 1999, or shortly thereafter. Accordingly, applicants respectfully assert that the disclosed screenshots qualify as prior art under 35 U.S.C. §102(b) in view of the *In re Epstein*, as discussed above.

Applicants respectfully note that the versions of the Web pages returned by the Internet Archive are augmented with the following script (or similar) located at the end of the page source document:

```
<SCRIPT language="Javascript">
<!--

// FILE ARCHIVED ON 19991010025744 AND RETRIEVED FROM THE
// INTERNET ARCHIVE ON 20080121053652.
// JAVASCRIPT APPENDED BY WAYBACK MACHINE, COPYRIGHT INTERNET ARCHIVE.
// ALL OTHER CONTENT MAY ALSO BE PROTECTED BY COPYRIGHT (17 U.S.C.
// SECTION 108(a)(3)).

   var sWayBackCGI = "http://web.archive.org/web/19991010025744/";

   function xResolveUrl(url) {
      var image = new Image();
      image.src = url;
      return image.src;
   }
   function xLateUrl(aCollection, sProp) {
      var i = 0;
      for(i = 0; i < aCollection.length; i++) {
         if (typeof(aCollection[i][sProp]) == "string") {
          if (aCollection[i][sProp].indexOf("mailto:") == -1 &&
             aCollection[i][sProp].indexOf("javascript:") == -1) {
            if(aCollection[i][sProp].indexOf("http") == 0) {
                aCollection[i][sProp] = sWayBackCGI +
aCollection[i][sProp];
            } else {
                aCollection[i][sProp] = sWayBackCGI +
xResolveUrl(aCollection[i][sProp]);
            }
         }
         }
      }
   }

   xLateUrl(document.getElementsByTagName("IMG"),"src");
   xLateUrl(document.getElementsByTagName("A"),"href");
   xLateUrl(document.getElementsByTagName("AREA"),"href");
   xLateUrl(document.getElementsByTagName("OBJECT"),"codebase");
   xLateUrl(document.getElementsByTagName("OBJECT"),"data");
   xLateUrl(document.getElementsByTagName("APPLET"),"codebase");
   xLateUrl(document.getElementsByTagName("APPLET"),"archive");
   xLateUrl(document.getElementsByTagName("EMBED"),"src");
   xLateUrl(document.getElementsByTagName("BODY"),"background");
   var forms = document.getElementsByTagName("FORM");
   if (forms) {
       var j = 0;
```

```
        for (j = 0; j < forms.length; j++) {
               f = forms[j];
               if (typeof(f.action)  == "string") {
                  if(typeof(f.method)  == "string") {
                      if(typeof(f.method) != "post") {
                         f.action = sWayBackCGI + f.action;
                      }
                   }
               }
        }
    }

//-->
</SCRIPT>
```

Applicants do not believe the added script has any adverse affect to the rendering of the pages. Rather, the script appears to be for the purpose of resolving URLs referenced within the HTML page definition.

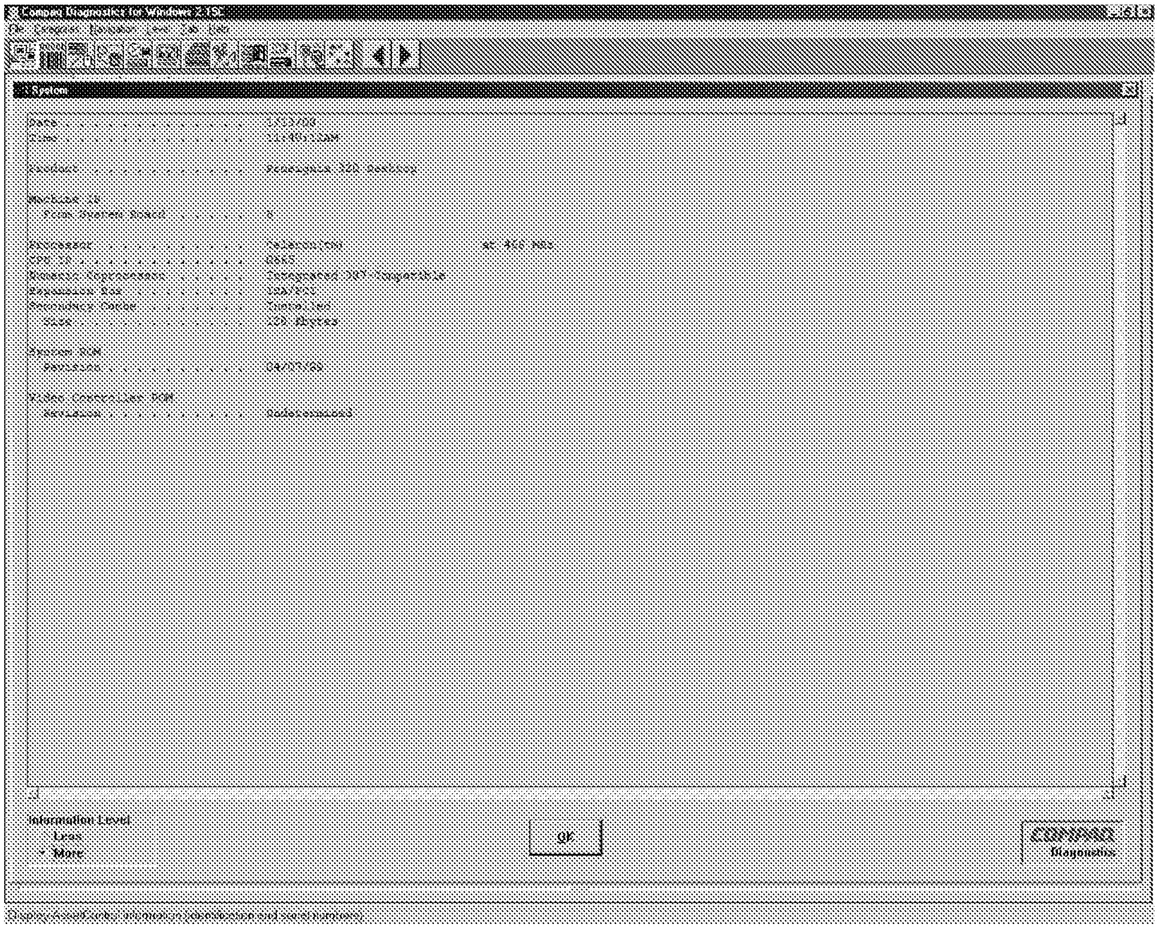
In addition to the screenshot documents identified in the Information Disclosure Statement form 1449, there are some additional screenshots documents that are not being submitted as IDS references (since they are not purported to qualify as prior art references under *Epstein*), but are being submitted for more complete observation of the *Opera 3.60* behavior. It is noted that all of the screenshots captured in the documents listed in the IDS were captured using a machine running the Windows 2000 Professional operating system. Applicants note that there was no observed behavior difference of any significance when rendering pages with *Opera 3.60* under Windows 98 and Windows 2000 Professional, as evidenced by the screenshot documents submitted herewith but not listed in on IDS form 1449. It is noted that Windows 2000 was not available at the time of *Opera 3.60's* release date (it became available in early 2000).

<u>Test Environments</u>

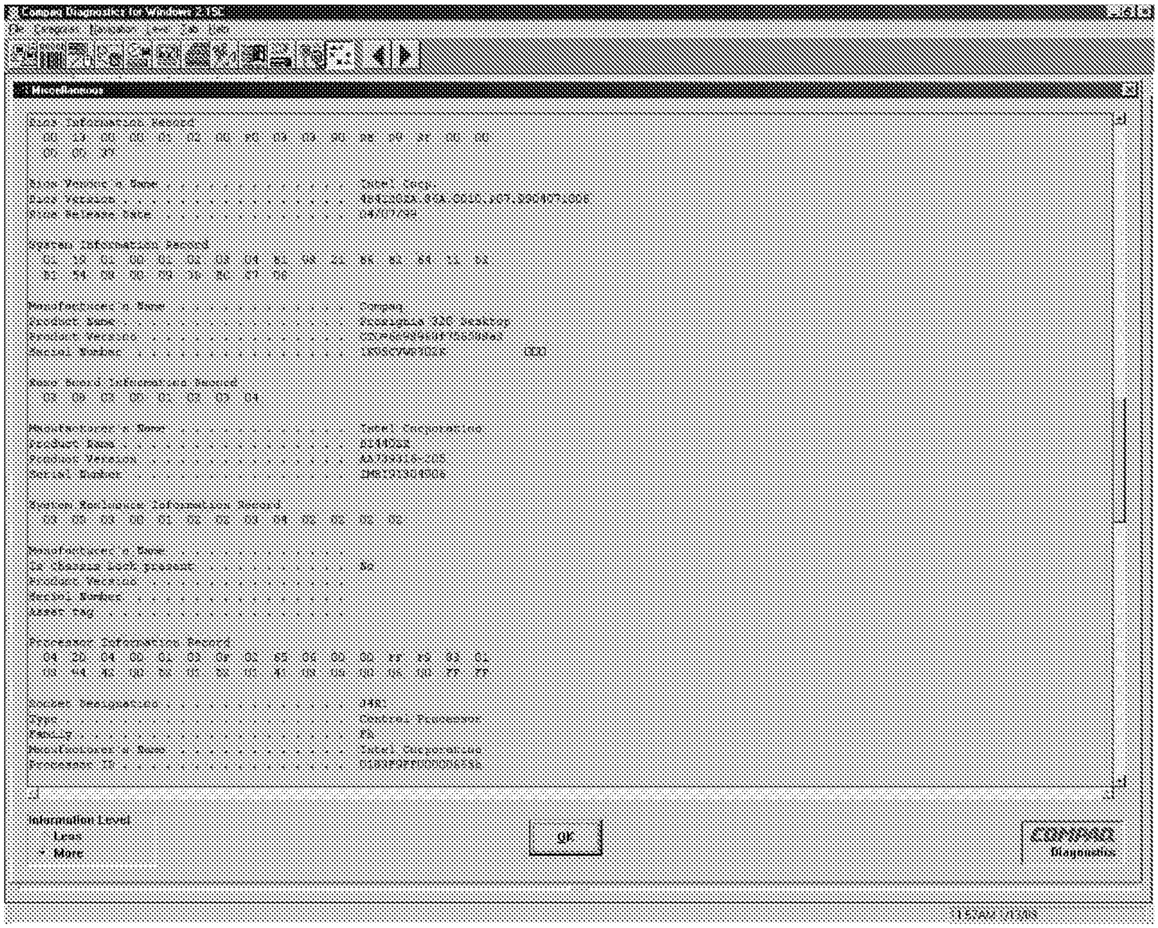
As discussed above, *Opera 3.60* was tested on computers running Microsoft Windows 98, Windows 2000 Professional, and Windows XP operating systems. However, only screenshots from computers running Windows 98 and Windows 2000 Professional are submitted herewith.

In general, the purpose of the screenshots is to demonstrate the behavior of the self-described (by *Opera 3.60* documentation) “page zooming” feature. The page zooming feature is (presumably) designed to enable users to view Web pages at different zoom levels; however, the performance of this feature was rather unpredictable and inconsistent, as evidence by the attached screenshots.

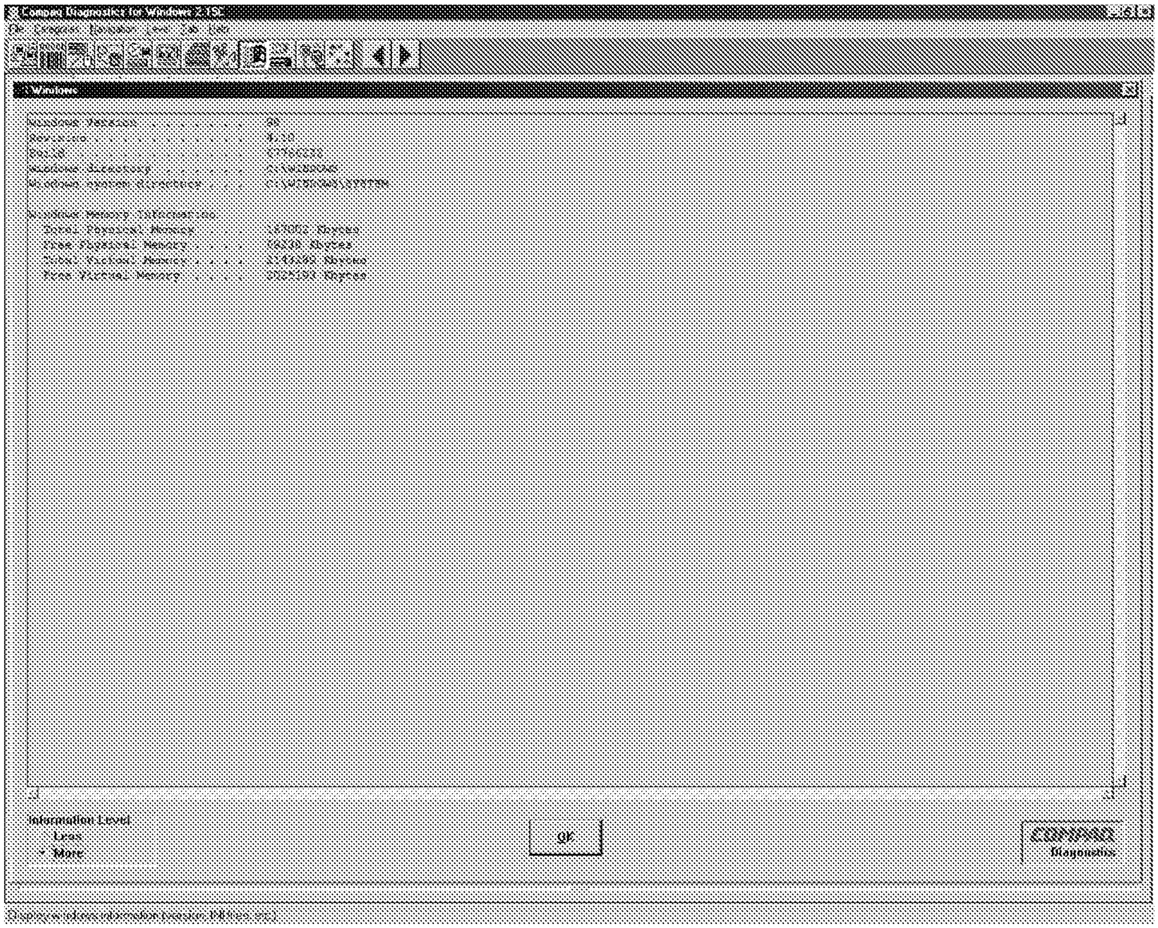
The first test machine comprised a Compaq Prosignia 320 desktop computer running Windows 98. More specific details of this computer and operating system are evidenced by the following screenshots, which were generated by a Compaq Diagnostics utility application. It is noted the Java 1.1.2 Plug-in was not installed on this computer.



This screenshot shows a System Panel identifying basic system information, including the system having an Intel Celeron processor running at 466 MHz and a System ROM revision date of 04/07/99



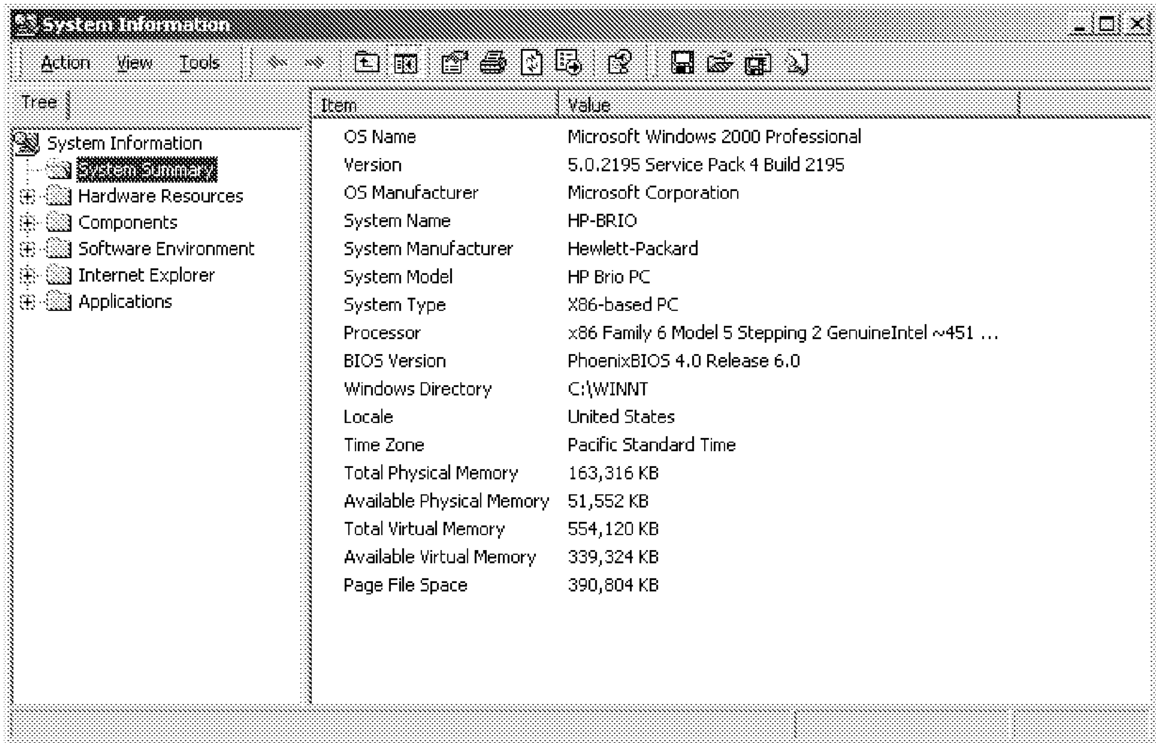
Screen shot of a portion of a Miscellaneous screen providing further details of the System, including Bios version, processor details, etc.



Screenshot of Windows version information. The Windows version is Windows 98, revision 4.10, build 67766222.

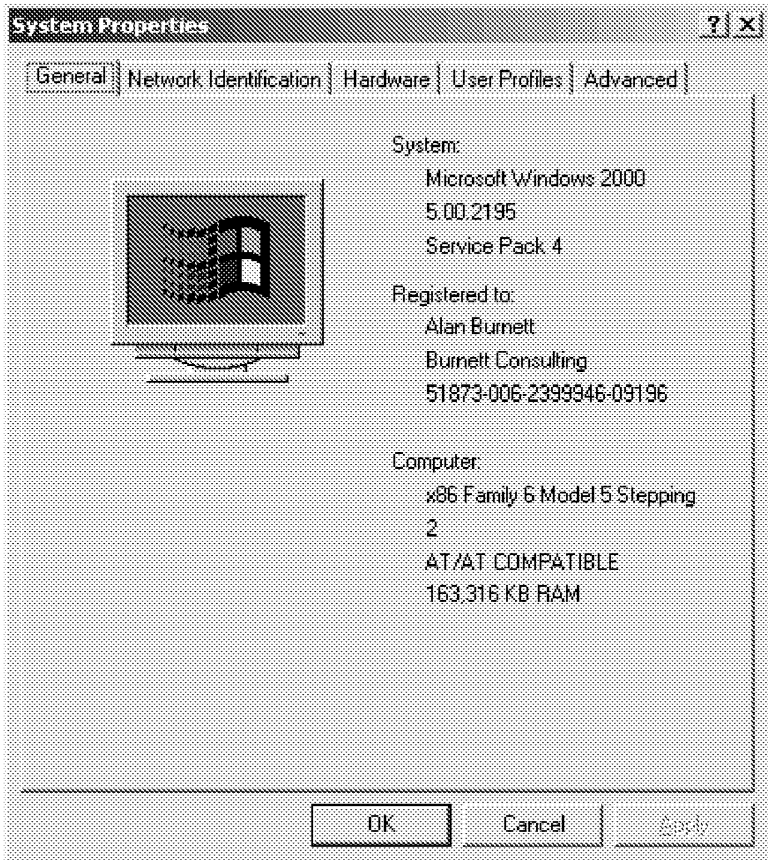
Screenshot that were captured using this computer are labeled “Compaq Prosignia 320 – Windows 98.”

The second computer used for the screenshots was a Hewlett-Packard Brio computer running Windows 2000 Professional. Unfortunately, the Brio did not come with a diagnostics utility similar to the Compaq. Accordingly, the following configuration information generated by a Windows utility is provided.

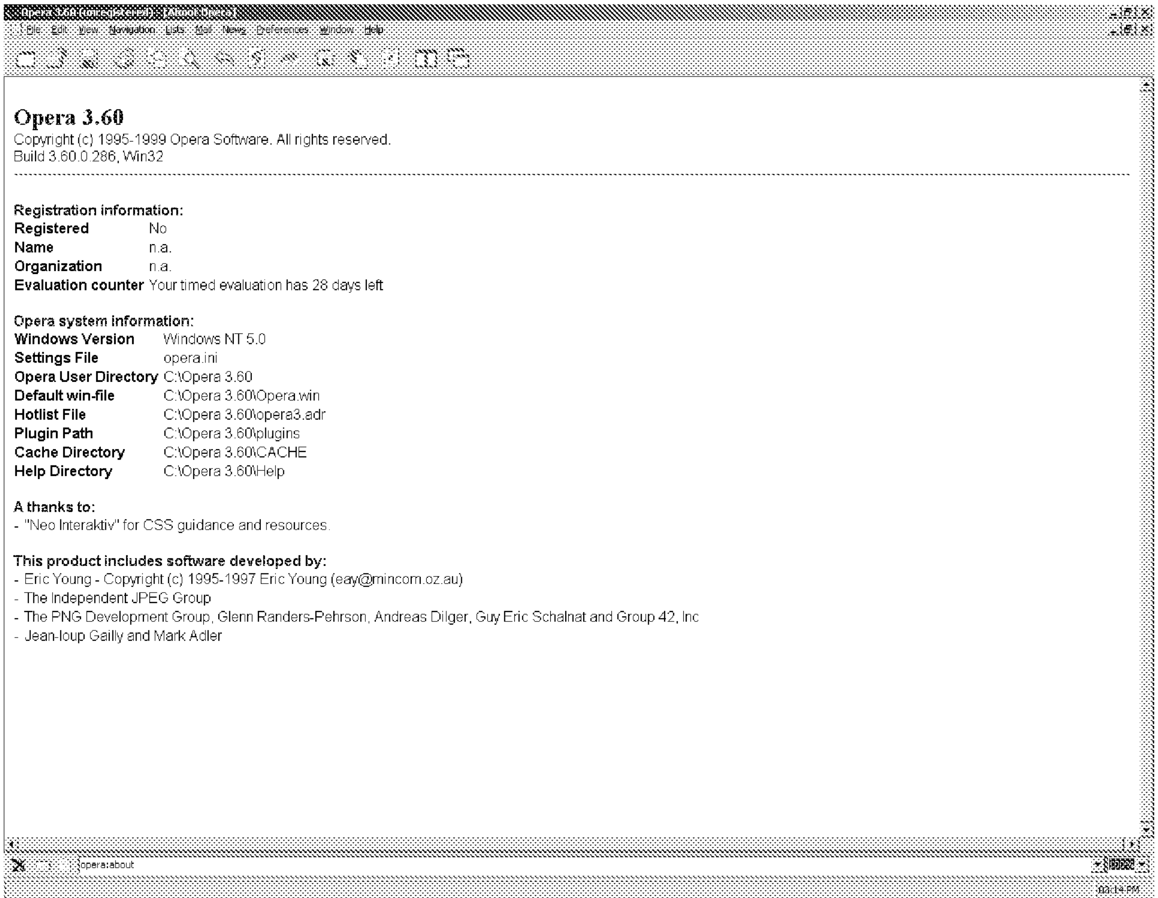


This screenshot shows basic system information, including identifying the OS name and version, system (computer) information, BIOS version, etc.

This screenshot was generated by selecting the About Windows option



This screenshot was generated by selecting System from the Control Panel Window



This screenshot was captured by selecting the *Opera 3.60* help menu item "About Opera." It is unknown why Opera detected the Windows version as Windows NT 5.0 – the actual OS was Windows 2000 Professional.

Screenshots that were captured using this second computer are labeled "HP Brio – Windows 2000 Professional." It is noted that the Java 1.1.2 Plug-in was installed on the HP Brio computer.

Brief Discussion of Results

First, *Opera 3.60* behaved similarly on both operating systems. In general, there was no perceptible difference in behavior between *Opera 3.60* running on Windows 98 or Windows 2000 Professional, which is expected, since allegedly these Microsoft Windows operating systems are backwards compatible, meaning an application that would run on Windows 98 should run in a similar manner on Windows 2000.

As discussed above, the overall behavior of the "page zooming" feature was inconsistent and somewhat unpredictable. More specific details of the results of various example Web pages are contained in the auxiliary screenshot documents submitted herewith; however, the screenshot documents listed in the IDS are submitted without comment[1].

Of the auxiliary screenshot documents, the most demonstrable one includes screenshots illustrating the comparison between the www.arbidol.org original home page and its modified version. At 100% (that is, the rendering engine's interpretation of the Web page's content, layout, and attributes as defined by the page's HTML-based content), the original and modified versions of the page render substantially identically (at the browser window size used in for the comparison test). However, while page zooming of the original page functions fairly well (that is, it substantially preserves the page layout and attributes at most zoom levels), the page layout and attributes of the modified page are clearly not preserved at many zoom levels. This demonstrates that the rendered versions of the pages at zoom levels other than 100% are not based on the rendering engine's interpretation of the page at 100% - that is the interpretation of the page designer's intent of what the page is designed to render like. As a result, the scheme used for page zooming by Opera 3.60 will not produce scaled versions of the original page (as defined via the page's HTML-based content) in a manner that preserves the original page layout and attributes of the content for many Web pages.

In addition to reviewing the submitted screenshots, the Examiner is encouraged to install *Opera 3.60* and test it on his own. Applicant's note, it is

[1] There is textual information provided with these documents identifying various test parameters.

easier to observe how the page zooming feature behaves when zooming in person. For example, one can observe the page layout change using incremental zooming. Using the CTRL key in combination with the mouse scroll wheel (if available) is particularly useful for incremental zooming.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: January 22, 2008 /S/ R. Alan Burnett

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Attachments:

Auxiliary screenshot documents:

3_60_Arbidol_Win_2K_and_98.pdf

3_60_Arbidol_Win_2K_Compare.pdf

3_60_Google_Win_2K_and_98.pdf

3_60_Newport_Win_2K_and_98.pdf

3_60_Opera_Company_Win_2K_and98.pdf

3_60_Win_2K_Opera_10-10-99.pdf

Web page printouts:

Die_inoffizielle_Opera-Fansite_Download-alte_Versionen.pdf

Opera_Browser_Releases_timeline.pdf

MAY 20, 2008
SUPPLEMENTAL AMENDMENT

Certificate of Electronic Filing

I hereby certify that this correspondence is being Electronically Filed via EFS

on May 20, 2008

Date of Deposit

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett May 20, 2008

Signature Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
Rohrabaugh et al.	) Examiner: Tran, Quoc A.
	)
Serial No. 11/045,757	) Art Unit: 2176
	)
Filed: June 8, 2001	)
	)
For: SCALABLE DISPLAY OF INTERNET	)
CONTENT ON MOBILE DEVICES	)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

SUPPLEMENTAL AMENDMENT

Sir:

Applicants request the Examiner to enter the following amendment and to reconsider all pending claims in view of the amendment and the following remarks.

Amendments begin on page 2. Remarks begin on page 65.

AMENDMENT

In the Specification

Please amend paragraph [0008] as follow:

[0008] According to additional aspects of the invention, methods and software for enabling support for resolution-independent scalable display of Web content [[is]] are provided. The methods and software enable users of various devices, from handheld devices with small screens, to desktop PC's and laptops, to very large screen devices, to view and interact with Web pages in a manner independent of the screen resolution of such device's built-in or associated display, while maintaining the look and feel of browsing such pages with a conventional desktop browser. Thus, users of various devices having different screen resolutions are enabled to ~~access millions~~ browse Web pages from among literally billions of Web pages ~~on various devices having different screen resolutions~~ while providing a full Web browsing experience.

In the Claims

This listing of claims replaces all prior versions and listing of claims in the application. Amendments or cancellations of any claims are done without prejudice, waiver and/or disclaimer. Applicants reserve the right to claim the subject matter of any amendment and/or cancellation in a continuing application.

1-70. (Cancelled)

71. (Currently Amended) A wireless device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to an original Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

in response to a user request to access the Web page,

retrieving the Web page via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~

design of the content defined by its original format when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that ~~the original~~ a width of the Web page is rendered to fit ~~substantially~~ across the display~~,~~

~~wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content~~.

72. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

73. (Currently Amended) The wireless device of claim 72, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

74. (Previously Presented) The wireless device of claim 71, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

75. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, or graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

76. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved at each of the different resolutions.

77. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

78. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input.

79. (Currently Amended) The wireless device of claim 78, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

80. (Currently Amended) The wireless device of claim 71, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display <u>of the Web page</u> having a different aspect ratio.

81. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

82. (Previously Presented) The wireless device of claim 81, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

83. (Previously Presented) The wireless device of claim 71, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

84. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

85. (Previously Presented) The wireless device of claim 84, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is

re-rendered.

86. (Previously Presented) The wireless device of claim 71, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

87. (Previously Presented) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

88. (Currently Amended) The wireless device of claim 71, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

89. (Previously Presented) The wireless device of claim 88, wherein execution of

the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

90. (Previously Presented) The wireless device of claim 89, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

91. (Currently Amended) The wireless device of claim 90, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

92. (Previously Presented) The wireless device of claim 71, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

93. (Cancelled)

94. (Previously Presented) The wireless device of claim 71, wherein at least a portion of the instructions comprise Java-based instructions.

95. (Previously Presented) The wireless device of claim 71, wherein the device comprises a mobile phone.

96. (Previously Presented) The wireless device of claim 71, wherein the device comprises one of a Personal Digital Assistant (PDA) or hand-held computer.

97. (Previously Presented) The wireless device of claim 71, wherein the network comprises a mobile service provider network.

98. (Previously Presented) The wireless device of claim 71, wherein a portion of the scalable content comprises vector-based content.

99. (Currently Amended) A mobile hand-held device, comprising:

a processor,

a wireless communications device, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile hand-held device to perform operations including, rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

retrieving the Web page via the wireless communications device, and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content or data derived therefrom to,

render the Web page on the display; and

~~re-rendering~~ re-render the display ~~Web page~~ in response to associated user inputs ~~to enable the user to zoom in and out a display of the Web page~~ to enable the Web page to be ~~viewed~~ browsed at various zoom levels and panned views while ~~substantially~~ preserving the original page layout ~~and attributes~~, functionality, and design of the Web page content at each zoom level and panned view.

100. (Currently Amended) The mobile hand-held device of claim 99, wherein the device comprises a mobile phone.

101. (Currently Amended) The mobile hand-held device of claim 99, wherein the device comprises one of a Personal Digital Assistant (PDA) or hand-held computer.

102. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

103. (Currently Amended) The mobile hand-held device of claim 102, wherein the user interface input enables the user to define ~~a window~~ an area of a current view of the Web page on which to zoom in on.

104. (Currently Amended) The mobile hand-held device of claim 99, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

105. (Currently Amended) The mobile hand-held device of claim 99, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content or data derived therefrom to render the Web content associated with the hyperlink on the display.

106. (Currently Amended) The mobile hand-held device of claim 99, wherein at least a portion of the scalable content comprises scalable vector-based content.

107. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

108. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

109. (Currently Amended) The mobile hand-held device of claim [[108]] 99, wherein execution of the instructions performs further operations comprising enabling

the ~~display~~ panned view of the Web page to be panned ~~substantially~~ in real-time.

110. (Currently Amended) The mobile hand-held device of claim 99, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content or data derived therefrom is scaled to render a display of the Web page having a different aspect ratio.

111. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

112. (Currently Amended) The mobile hand-held device of claim 111, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

113. (Currently Amended) The mobile hand-held device of claim 99, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

114. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across a display area of the display.

115. (Currently Amended) The mobile hand-held device of claim 114, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

116. (Currently Amended) The mobile hand-held device of claim 99, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

117. (Currently Amended) The mobile hand-held device of claim 99, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

118. (Currently Amended) The mobile hand-held device of claim 99, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

119. (Currently Amended) The mobile hand-held device of claim 118, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

120. (Currently Amended) The mobile hand-held device of claim 119, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

121. (Currently Amended) The mobile hand-held device of claim 120, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

122. (Currently Amended) The mobile hand-held device of claim 99, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

123. (Currently Amended) The mobile hand-held device of claim 99, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page ~~substantially~~ to fit across a browser display area of the display; and

employing the scale factor to render the browser display area.

124. (Currently Amended) The mobile hand-held device of claim 99, wherein at least a portion of the instructions comprise Java-based instructions.

125. (Currently Amended) The mobile hand-held device of claim 99, wherein a portion of the HTML-based Web content comprises XML code.

126. (Currently Amended) The mobile hand-held device of claim 99, wherein a portion of the HTML-based Web content comprises cascaded style sheet data defining aspects of the Web page design that are preserved at each zoom level and panned view.

127. (Currently Amended) The mobile hand-held device of claim 99, wherein ~~a~~

~~portion of the scalable content comprises vector-based content~~ the network comprises a Local Area Network or Wide Area Network.

128. (Currently Amended) A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display, to facilitate user input and display rendered content; and

storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by the processing means, the mobile device is enabled to perform operations, including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

retrieving the Web page via the wireless communications means, and processing at least a portion of the HTML-based Web content to produce scalable content; and

employing at least one of the scalable content or data derived therefrom to,

render the Web page on the display; and

re-render the display ~~Web page~~ in response to associated user inputs made via the display to enable ~~the user to zoom in and out a display of~~ the Web page to be browsed at various zoom levels and panned views while preserving~~,~~

~~wherein~~ the original page layout ~~and attributes~~, functionality, and design of the Web page content ~~are substantially preserved regardless of a~~ at each zoom level and panned view of the Web page.

129. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a general-purpose processor.

130. (Previously Presented) The mobile device of claim 128, wherein the processing means includes a special-purpose processor.

131. (Previously Presented) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

132. (Currently Amended) The mobile device of claim 131, wherein the user interface input enables the user to define ~~a window~~ <u>an area</u> of a current view of the Web page on which to zoom in on.

133. (Currently Amended) The mobile device of claim 128, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

134. (Currently Amended) The mobile device of claim 128, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ <u>view</u> of the Web content in response to a corresponding user interface input <u>made via the display</u>.

135. (Currently Amended) The mobile device of claim [[134]] <u>128</u>, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ <u>view</u> of the Web content to be panned ~~substantially~~ in real-time.

136. (Currently Amended) The mobile device of claim 128, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding

user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

137. (Previously Presented) The mobile device of claim 128, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list objects on a virtual display in the dynamic memory; and

scaling display list objects to re-render the display of the Web page.

138. (Previously Presented) The mobile device of claim 128, wherein the network comprises a mobile service provider network.

139. (Currently Amended) The ~~wireless~~ mobile device of claim 128, wherein the device comprises a mobile phone.

140. (Currently Amended) The ~~wireless~~ mobile device of claim 128, wherein the device comprises one of a Personal Digital Assistant (PDA) or hand-held computer.

141. (Currently Amended) The ~~wireless~~ mobile device of claim 128, wherein a portion of the scalable content comprises vector-based content.

142. (Previously Presented) The mobile device of claim 128, wherein the processing means includes logic circuitry programmed with a portion of the instructions.

143. (Currently Amended) A mobile hand-held device, comprising:

a processor,

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

non-volatile memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile hand-held device to perform operations including,

rendering a browser interface on the display via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout, functionality, and design of content on the Web page ~~and defining an original width and height of the Web page~~;

in response to a user request of the Web page,

retrieving the Web page via the wireless communications interface;

rendering the Web page such that a width of the Web page is rendered to fit ~~substantially~~ across the display; and

re-rendering the display ~~Web page~~ in response to associated user inputs to enable ~~the user to zoom in and out a display of the Web page to enable~~ the Web page to be ~~viewed~~ browsed at various zoom levels and panned views while ~~substantially~~ preserving the original page layout ~~and attributes~~, functionality, and design of the Web page content at each zoom level and panned view.

144. (Currently Amended) The mobile hand-held device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

145. (Currently Amended) The mobile hand-held device of claim 144, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

146. (Currently Amended) The mobile hand-held device of claim 143, wherein

the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

147. (Currently Amended) The mobile hand-held device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

148. (Currently Amended) The mobile hand-held device of claim 147, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

149. (Currently Amended) The mobile hand-held device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the web page while in a zoomed state under which a portion of the web page is displayed.

150. (Currently Amended) The mobile hand-held device of claim 143, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

151. (Currently Amended) The mobile hand-held device of claim 143, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

152. (Currently Amended) The mobile hand-held device of claim 144, wherein the corresponding user input comprises tapping on the column via the display.

153. (Currently Amended) The mobile hand-held device of claim 146, wherein the corresponding user input comprises tapping on the image via the display.

154. (Currently Amended) The mobile hand-held device of claim 147, wherein the corresponding user input comprises tapping on the paragraph via the display.

155. (Currently Amended) The mobile hand-held device of claim 143, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

156. (Currently Amended) The mobile hand-held device of claim [[155]] 143, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

157. (Currently Amended) The mobile hand-held device of claim 143, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

158. (Currently Amended) The mobile hand-held device of claim 143, wherein a portion of the HTML-based Web content comprises XML code.

159. (Currently Amended) The mobile hand-held device of claim 143, wherein a portion of the HTML-based Web content comprises cascaded style sheet data defining aspects of the Web page design that are preserved at each zoom level and panned view.

160. (Currently Amended) The mobile hand-held device of claim 143, wherein the network comprises a mobile service provider network.

161. (Currently Amended) The mobile hand-held device of claim 143, wherein the device comprises a mobile phone.

162. (Currently Amended) The mobile hand-held device of claim 143, wherein the device comprises one of a Personal Digital Assistant (PDA) or hand-held computer.

163. (Currently Amended) The mobile device of claim 143, wherein the ~~device comprises one of a notebook computer or laptop computer~~ network comprises a Local Area Network or a Wide Area Network.

164. (Previously Presented) The wireless device of claim 71, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

165. (Currently Amended) The mobile hand-held device of claim 99, wherein the device comprises one of a notebook computer or laptop computer.

166. (Previously Presented) The mobile device of claim 128, wherein the device comprises one of a notebook computer or laptop computer.

167. (Previously Presented) The wireless device of claim 81, wherein the corresponding user input comprises tapping on the column via the display.

168. (Previously Presented) The wireless device of claim 83, wherein the corresponding user input comprises tapping on the image via the display.

169. (Previously Presented) The wireless device of claim 84, wherein the corresponding user input comprises tapping on the paragraph via the display.

170. (Currently Amended) The mobile hand-held device of claim 111, wherein

the corresponding user input comprises tapping on the column via the display.

171. (Currently Amended) The mobile hand-held device of claim 113, wherein the corresponding user input comprises tapping on the image via the display.

172. (Currently Amended) The mobile hand-held device of claim 114, wherein the corresponding user input comprises tapping on the paragraph via the display.

173. (Previously Presented) The mobile device of claim 136, wherein the corresponding user input comprises tapping on the image via the display.

174. (Currently Amended) A wireless device, comprising:

a processor;

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

a storage device, on which a plurality of instructions are stored that when executed by the processor enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout ~~and attributes~~, functionality, and design of corresponding content on the Web page;

retrieving, via the wireless communications interface, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~ design of the content defined by its original format when scaled and rendered;

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved under both the first and second scale factors.

175. (Currently Amended) The wireless device of claim 174, wherein the display is re-rendered ~~substantially~~ in real-time.

176. (Currently Amended) The wireless device of claim 174, wherein the device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

177. (Currently Amended) The wireless device of claim 174, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

178. (Currently Amended) The wireless device of claim 174, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input.

179. (Currently Amended) The wireless device of claim 178, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

180. (Currently Amended) A method, comprising:

rendering a browser interface on a display of a device via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

in response to a user request to access the Web page,

retrieving the Web page via the device, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~ design of the content defined by its original format when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that ~~the original~~ a width of the Web page is rendered to fit ~~substantially~~ across the display~~,~~

~~wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content~~.

181. (Previously Presented) The method of claim 180, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

182. (Currently Amended) The method of claim 181, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

183. (Previously Presented) The method of claim 180, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and employing the additional scalable content to render the Web content associated with the hyperlink on the display.

184. (Currently Amended) The method of claim 180, ~~performs~~ further comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, or graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

185. (Currently Amended) The method of claim 180, further comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved at each of the different resolutions.

186. (Previously Presented) The method of claim 180, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

187. (Currently Amended) The method of claim 180, further comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user

input.

188. (Currently Amended) The method of claim 187, further comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

189. (Currently Amended) The method of claim 180, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display of the Web page having a different aspect ratio.

190. (Currently Amended) The method of claim 180, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

191. (Previously Presented) The method of claim 190, wherein the corresponding user input comprises tapping on the column via the display.

192. (Previously Presented) The method of claim 190, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

193. (Currently Amended) The method of claim 180, wherein the Web content includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

194. (Previously Presented) The method of claim 193, wherein the corresponding user input comprises tapping on the image via the display.

195. (Currently Amended) The method of claim 180, further comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

196. (Currently Amended) The method of claim [[132]] 195, wherein the corresponding user input comprises tapping on the paragraph via the display.

197. (Currently Amended) The method of claim [[132]] 195, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

198. (Previously Presented) The method of claim 180, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

199. (Previously Presented) The method of claim 180, further comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

200. (Currently Amended) The method of claim 180, further comprising:

parsing markup language code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

201. (Previously Presented) The method of claim 200, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

202. (Previously Presented) The method of claim 201, further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

203 (Currently Amended) The method of claim 202, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

204. (Previously Presented) The method of claim 180, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable font to render the scalable text content.

205. (Previously Presented) The method of claim 180, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

206. (Previously Presented) The method of claim 180, wherein the device comprises a mobile phone.

207. (Currently Amended) The method of claim 180, wherein the device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

208. (Previously Presented) The method of claim 180, further comprising accessing the Internet via a wireless connection to retrieve the Web page.

209. (Previously Presented) The method of claim 180, wherein a portion of the scalable content comprises vector-based content.

210. (Currently Amended) The method of claim 180, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

211. (Currently Amended) A method, comprising:

rendering a browser interface on a hand-held device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

retrieving the Web page via the hand-held device, and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content or data derived therefrom to,

render the Web page on a display of the hand-held device; and

re-render the display ~~Web page~~ in response to associated user inputs ~~to enable the user to zoom in and out a display of the Web page~~ to enable the Web page to be ~~viewed~~ browsed at various zoom levels and panned views while ~~substantially~~ preserving the original page layout ~~and attributes~~, functionality, and design of the Web page content at each zoom level and panned view.

212. (Currently Amended) The method of claim 211, wherein the hand-held device comprises a mobile phone.

213. (Currently Amended) The method of claim 211, wherein the hand-held device comprises one of a Personal Digital Assistant (PDA) or hand-held computer.

214. (Previously Presented) The method of claim 211, further comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

215. (Currently Amended) The method of claim 214, wherein the user interface input enables the user to define ~~a window~~ an area of a current view of the Web page on which to zoom in on.

216. (Currently Amended) The method of claim 211, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

217. (Previously Presented) The method of claim 211, wherein the Web page includes at least one hyperlink, the method further comprising:

enabling the user to select the hyperlink via the display; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content or data derived therefrom to render the Web content associated with the hyperlink on the display.

218. (Previously Presented) The method of claim 211, wherein at least a portion of the scalable content comprises scalable vector-based content.

219. (Previously Presented) The method of claim 211, further comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

220. (Currently Amended) The method of claim 211, further comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

221. (Currently Amended) The method of claim [[220]] 211, further comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

222. (Currently Amended) The method of claim 211, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content or data derived therefrom is scaled to render a display of the Web page having a different aspect ratio.

223. (Previously Presented) The method of claim 211, further comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

224. (Previously Presented) The method of claim 223, wherein the corresponding user input comprises tapping on the column via the display.

225. (Previously Presented) The method of claim 223, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

226. (Previously Presented) The method of claim 211, wherein the Web content includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

227. (Previously Presented) The method of claim 226, wherein the corresponding user input comprises tapping on the image via the display.

228. (Previously Presented) The method of claim 211, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

229. (Previously Presented) The method of claim 228, wherein the corresponding user input comprises tapping on the paragraph via the display.

230. (Previously Presented) The method of claim 228, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

231. (Previously Presented) The method of claim 211, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

232. (Currently Amended) The method of claim 211, wherein the hand-held device includes dynamic memory having at least a portion employed for rendering purposes, the method further comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in dynamic memory; and

scaling the display list content to re-render the display of the Web page.

233. (Currently Amended) The method of claim 211, further comprising:

parsing HTML-based code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

234. (Previously Presented) The method of claim 233, further comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

235. (Currently Amended) The method of claim 234, wherein the hand-held device includes dynamic memory having at least a portion employed for rendering

purposes, the method further comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

236. (Currently Amended) The method of claim 235, further comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

237. (Previously Presented) The method of claim 211, wherein the scalable content includes scalable text content, the method further comprising scaling a scalable font to render the scalable text content.

238. (Currently Amended) The method of claim 211, wherein the original format of the Web page defines a height and width for the Web page, the method further comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page ~~substantially~~ across a browser display area of the display; and

employing the scale factor to render the browser display area.

239. (Previously Presented) The method of claim 211, wherein the method is facilitated, at least in part, via execution of Java-based instructions.

240. (Previously Presented) The method of claim 211, wherein a portion of the HTML-based Web content comprises XML code.

241. (Currently Amended) The method of claim 211, wherein a portion of the HTML-based Web content comprises cascaded style sheet data defining aspects of the Web page design that are preserved at each zoom level and panned view.

242. (Previously Presented) The method of claim 211, wherein a portion of the scalable content comprises vector-based content.

243. (Cancelled)

244. (Currently Amended) A method, comprising:

rendering a browser interface on a display of a device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout, functionality, and design of content on the Web page ~~and defining an original width and height of the Web page~~;

in response to a user request of the Web page via the browser interface,

retrieving the Web page via the device;

rendering the Web page via the device such that a full width of the Web page is rendered ~~to fit substantially across~~ on the display; and

re-rendering the Web page in response to associated user inputs to the hand-held device to enable ~~the user to zoom in and out a display of~~ the Web page to be browsed at various zoom levels and panned views while preserving~~,~~

~~wherein~~ the original page layout, functionality, and design of the Web page content ~~is substantially preserved regardless of a~~ at each zoom level and panned view of the Web page[[.]],

wherein the method enables a user of the device to browse, zoom, and pan billions of Web pages in a manner that preserves the original layout, functionality, and design of the HTML-based Web page content of each Web page.

245. (Previously Presented) The method of claim 244, further comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

246. (Previously Presented) The method of claim 245, wherein the corresponding user input comprises tapping on the column via the display.

247. (Previously Presented) The method of claim 245, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

248. (Previously Presented) The method of claim 244, wherein the Web page includes at least one image, the method further comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

249. (Previously Presented) The method of claim 248, wherein the corresponding user input comprises tapping on the image via the display.

250. (Previously Presented) The method of claim 244, further comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input,

wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

251. (Previously Presented) The method of claim 250, wherein the corresponding user input comprises tapping on the paragraph via the display.

252. (Previously Presented) The method of claim 250, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

253. (Currently Amended) The method of claim 244, further comprising enabling a user to pan a ~~display~~ view of the web page while in a zoomed state under which a portion of the web page is displayed in response to a user input made via the display.

254. (Previously Presented) The method of claim 244, further comprising returning the display of the Web page to a previous view in response to a corresponding user input.

255. (Currently Amended) The method of claim 244, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

256. (Currently Amended) The method of claim 244, further comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

257. (Currently Amended) The method of claim [[256]] 244, further comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

258. (Previously Presented) The method of claim 244, wherein the Web page includes text, layout attributes, and images, the method further comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

259. (Previously Presented) The method of claim 244, wherein a portion of the HTML-based Web content comprises XML code.

260. (Currently Amended) The method of claim 244, wherein a portion of the HTML-based Web content comprises cascaded style sheet data <u>defining aspects of the Web page design that are preserved at each zoom level and panned view</u>.

261. (Previously Presented) The method of claim 244, wherein the ~~wireless connection comprises~~ <u>Web page is retrieved via</u> a wireless connection to <u>one of</u> a mobile service provider network<u>, local area network, or wide area network</u>.

262. (Previously Presented) The method of claim 244, wherein the device comprises a mobile phone.

263. (Currently Amended) The method of claim 244, wherein the device comprises ~~one of a Personal Digital Assistant (PDA) or~~ <u>a</u> hand-held ~~computer~~ <u>device</u>.

264. (Currently Amended) The method of claim 244, wherein the device comprises one of a <u>desktop computer,</u> notebook computer or laptop computer.

265. (Currently Amended) A method, comprising:

rendering a browser interface on a display via which a user of a device is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout ~~and attributes~~<u>,</u> <u>functionality, and design</u> of corresponding content on the Web page;

retrieving the Web page, via the device, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~ design of the content defined by its original format when scaled and rendered; and

employing the scalable content to render the Web page on the display using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render the display,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved under both the first and second scale factors.

266. (Currently Amended) The method of claim 265, wherein the display is re-rendered ~~substantially~~ in real-time.

267. (Currently Amended) The method of claim 265, wherein the device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

268. (Previously Presented) The method of claim 265, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

269. (Currently Amended) The method of claim 265, further comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input.

270. (Currently Amended) The method of claim 269, further comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

271. (Currently Amended) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface via which a user is enabled to request access to a Web page hosted by an Internet Web site, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

retrieving the Web page via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~ design of the content defined by its original format when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that ~~the original~~ a width of the Web page is rendered to fit ~~substantially~~ across the display~~,~~

~~wherein the rendered Web page comprises a scaled representation of the original Web page that substantially preserves the original page layout and attributes of the Web page content~~.

272. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

273. (Currently Amended) The machine-readable medium of claim 272, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

274. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions

performs further operations comprising:

enabling the user to select the hyperlink; and, in response thereto,

retrieving and translating Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content to render the Web content associated with the hyperlink on the display.

275. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including at least one of text objects, graphic layout objects, or graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

276. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by scaling the scalable content to re-render the display in response to associated user inputs,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved at each of the different resolutions.

277. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

278. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input.

279. (Currently Amended) The machine-readable medium of claim 278, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

280. (Currently Amended) The machine-readable medium of claim 271, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content is scaled when rendered so as to produce a display of the Web page having a different aspect ratio.

281. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

282. (Previously Presented) The machine-readable medium of claim 281, wherein the corresponding user input comprises tapping on the column via the display.

283. (Previously Presented) The machine-readable medium of claim 281, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

284. (Previously Presented) The machine-readable medium of claim 271, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

285. (Previously Presented) The machine-readable medium of claim 284, wherein the corresponding user input comprises tapping on the image via the display.

286. (Previously Presented) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

287. (Previously Presented) The machine-readable medium of claim 286, wherein the corresponding user input comprises tapping on the paragraph via the display.

288. (Previously Presented) The machine-readable medium of claim 286, wherein the content of the paragraph is reformatted to fit characteristics of the display when the display is re-rendered.

289. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

290. (Previously Presented) The machine-readable medium of claim 271, wherein

execution of the instructions performs further operations comprising:

generating a vector-based display list associated with the scalable content; and

employing the display list to re-render the display at different scale factors to zoom the Web page.

291. (Currently Amended) The machine-readable medium of claim 271, wherein execution of the instructions performs further operations comprising:

parsing markup language code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

292. (Previously Presented) The machine-readable medium of claim 291, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

293. (Previously Presented) The machine-readable medium of claim 292, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in memory.

294. (Currently Amended) The machine-readable medium of claim 293, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user; and

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

295. (Previously Presented) The machine-readable medium of claim 271, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

296. (Previously Presented) The machine-readable medium of claim 271, wherein at least a portion of the instructions comprise Java-based instructions.

297. (Previously Presented) The machine-readable medium of claim 271, wherein

the device comprises a mobile phone.

298. (Currently Amended) The machine-readable medium of claim 271, wherein the device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

299. (Previously Presented) The machine-readable medium of claim 271, wherein the Web page is accessed via a mobile service provider network.

300. (Previously Presented) The machine-readable medium of claim 271, wherein a portion of the scalable content comprises vector-based content.

301. (Previously Presented) The machine-readable medium of claim 271, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

302. (Previously Presented) The machine-readable medium of claim 271, wherein the instructions are embodied as a Web browser.

303. (Currently Amended) A machine-readable medium having a plurality of instructions comprising a Web browser tangibly stored thereon, which when executed enable a device to perform operations comprising:

rendering a browser interface on a display associated with the device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout ~~and attributes~~, functionality, and design of content on the Web page;

retrieving the Web page and processing HTML-based Web content to produce scalable content; and

employing at least one of the scalable content or data derived therefrom to,

render the Web page on the display; and

re-render the display ~~Web page~~ in response to associated user inputs to enable ~~the user to zoom in and out a display of~~ the Web page to be browsed at various zoom levels and panned views while preserving~~,~~

~~wherein~~ the original page layout ~~and attributes~~, functionality, and design of the Web page content ~~are substantially preserved regardless of a~~ at each zoom level and panned view of the Web page[[.]],

wherein the Web browser enables a user of the device to browse, zoom, and pan billions of Web pages in a manner that preserves the original layout, functionality, and design of the HTML-based Web page content of each Web page at each zoom level and panned view.

304. (Previously Presented) The machine-readable medium of claim 303, wherein the device comprises a mobile phone.

305. (Currently Amended) The machine-readable medium of claim 303, wherein the device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

306. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input.

307. (Currently Amended) The machine-readable medium of claim 306, wherein the user interface input enables the user to define ~~a window~~ an area of a current view of the Web page on which to zoom in on.

308. (Currently Amended) The machine-readable medium of claim 303, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming

operations.

309. (Currently Amended) The machine-readable medium of claim 303, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink ~~via the display~~; and, in response thereto,

retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing at least one of the additional scalable content or data derived therefrom to render the Web content associated with the hyperlink on the display.

310. (Previously Presented) The machine-readable medium of claim 303, wherein at least a portion of the scalable content comprises scalable vector-based content.

311. (Previously Presented) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the display.

312. (Currently Amended) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

313. (Currently Amended) The machine-readable medium of claim [[312]] 303, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

314. (Currently Amended) The machine-readable medium of claim 303, wherein

the page layout of the Web page is defined to have an original aspect ratio, and wherein said at least one of scalable content or data derived therefrom is scaled to render a display of the Web page having a different aspect ratio.

315. (Currently Amended) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web content via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

316. (Previously Presented) The machine-readable medium of claim 315, wherein the corresponding user input comprises tapping on the column via the display.

317. (Previously Presented) The machine-readable medium of claim 315, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

318. (Currently Amended) The machine-readable medium of claim 303, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

319. (Previously Presented) The machine-readable medium of claim 318, wherein the corresponding user input comprises tapping on the image via the display.

320. (Currently Amended) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the

selected paragraph is ~~displayed substantially~~ rendered to fit across a browser display area of the display.

321. (Previously Presented) The machine-readable medium of claim 320, wherein the corresponding user input comprises tapping on the paragraph via the display.

322. (Previously Presented) The machine-readable medium of claim 320, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

323. (Previously Presented) The machine-readable medium of claim 303, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

324. (Currently Amended) The machine-readable medium of claim 303, wherein the device includes dynamic memory having at least a portion employed for rendering purposes, and wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering display list content on a virtual display in the dynamic memory; and

scaling the display list content to re-render the display of the Web page.

325. (Currently Amended) The machine-readable medium of claim 303, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the ~~received~~ retrieved Web ~~content~~ page to determine the original page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to the vector that is generated.

326. (Previously Presented) The machine-readable medium of claim 325, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

327. (Currently Amended) The machine-readable medium of claim 326, ~~further comprising~~ wherein the device includes dynamic memory having at least a portion employed for rendering purposes, and wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display in the dynamic memory.

328. (Currently Amended) The machine-readable medium of claim 327, wherein execution of the instructions performs further operations comprising:

enabling a user to view the Web page at a user-selectable zoom level and ~~pan~~ panned view by,

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and ~~pan~~ panned view corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box;

applying an appropriate scale factor to the content associated with that object bounding box to produce scaled content; and

rendering the portion of scaled content within the virtual display bounding box to render the content on the display.

329. (Previously Presented) The machine-readable medium of claim 303, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

330. (Currently Amended) The machine-readable medium of claim 303, wherein the original format of the Web page defines a height and width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to display at least one of the width and height of the Web page ~~substantially~~ across a browser display area of the display; and

employing the scale factor to render the browser display area.

331. (Previously Presented) The machine-readable medium of claim 303, wherein at least a portion of the instructions comprise Java-based instructions.

332. (Previously Presented) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises XML code.

333. (Currently Amended) The machine-readable medium of claim 303, wherein a portion of the HTML-based Web content comprises cascaded style sheet data defining aspects of the Web page design that are preserved at each zoom level and panned view.

334. (Previously Presented) The machine-readable medium of claim 303, wherein a portion of the scalable content comprises vector-based content.

335. (Previously Presented) The machine-readable medium of claim 303, wherein the device comprises one of a desktop computer, notebook computer or laptop computer.

336. (Cancelled)

337. (Currently Amended) A machine-readable medium having a plurality of instructions tangibly stored thereon, which when executed enable a wireless device to perform operations comprising:

rendering a browser interface on a display of the wireless device via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout, functionality, and design of content on the Web page ~~and defining an original width and height of the Web page~~;

in response to a user request of the Web page,

retrieving the Web page via the wireless device;

rendering the Web page such that a width of the Web page is rendered to fit ~~substantially~~ across the display; and

re-rendering the Web page in response to associated user inputs to enable ~~the user to zoom in and out a display of the Web page to enable~~ the Web page to be ~~viewed~~ browsed at various zoom levels and panned views while ~~substantially~~ preserving the original page layout ~~and attributes~~, functionality, and design of the Web page content at each zoom level <u>and panned view</u>.

338. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is enlarged.

339. (Previously Presented) The machine-readable medium of claim 338, wherein the corresponding user input comprises tapping on the column via the display.

340. (Previously Presented) The machine-readable medium of claim 338, wherein the content of the column is reformatted to fit characteristics of the display when the display is re-rendered.

341. (Previously Presented) The machine-readable medium of claim 337, wherein the Web page includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image via a corresponding user input, wherein in response thereto, the display is re-rendered such that the image is enlarged.

342. (Previously Presented) The machine-readable medium of claim 341, wherein the corresponding user input comprises tapping on the image via the display.

343. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page via a corresponding user input, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is enlarged.

344. (Previously Presented) The machine-readable medium of claim 343, wherein the corresponding user input comprises tapping on the paragraph via the display.

345. (Previously Presented) The machine-readable medium of claim 343, wherein the content of the paragraph is reformatted to fit characteristics of the display when re-rendered.

346. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the web page while in a zoomed state under which a portion of the web page is displayed.

347. (Previously Presented) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input.

348. (Currently Amended) The machine-readable medium of claim 337, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

349. (Currently Amended) The machine-readable medium of claim 337, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input made via the display.

350. (Currently Amended) The machine-readable medium of claim [[349]] 337, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

351. (Previously Presented) The machine-readable medium of claim 337, wherein

the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

352. (Previously Presented) The machine-readable medium of claim 337, wherein a portion of the HTML-based Web content comprises XML code.

353. (Currently Amended) The machine-readable medium of claim 337, wherein a portion of the HTML-based Web content comprises cascaded style sheet data defining aspects of the Web page design that are preserved at each zoom level and panned view.

354. (Currently Amended) The machine-readable medium of claim 337, wherein the wireless device is configured to connect to a mobile service provider network and retrieve the Web page via the mobile service provider network.

355. (Currently Amended) The machine-readable medium of claim 337, wherein the wireless device comprises a mobile phone.

356. (Currently Amended) The machine-readable medium of claim 337, wherein the wireless device comprises ~~one of~~ a ~~Personal Digital Assistant (PDA) or~~ hand-held ~~computer~~ device.

357. (Currently Amended) The machine-readable medium of claim 337, wherein the wireless device comprises one of a notebook computer or laptop computer.

358. (Previously Presented) The machine-readable medium of claim 337, wherein the instructions are embodied as a Web browser.

359. (Currently Amended) A machine-readable medium having a plurality of instructions comprising a Web browser stored thereon, which when executed enable a device to perform operations comprising:

launching a Web browser including a browser interface via which a user is enabled to request access to a Web page, the Web page comprising HTML-based Web content having an original format including HTML code defining an original page layout ~~and attributes~~, functionality, and design of corresponding content on the Web page;

retrieving, and translating at least a portion of the HTML-based Web content into scalable content that supports a scalable resolution-independent ~~display~~ representation of the Web page that ~~substantially retains~~ preserves the original page layout, functionality and ~~attributes~~ design of the content defined by its original format when scaled and rendered; and

employing the scalable content to render the Web page [[in]] on the Web browser using a first scale factor; and

enabling the Web page to be displayed at a different resolution by scaling the scalable content using a second scale factor to re-render ~~the display of~~ the Web page on the Web browser,

wherein the original page layout ~~and attributes~~, functionality, and design of the Web page content are ~~substantially~~ preserved under both the first and second scale factors, and

wherein the Web browser enables a user of the device to browse billions of Web pages at multiple scale factors in a manner that preserves the original layout, functionality, and design of the HTML-based Web page content of each Web page at each scale factor.

360. (Currently Amended) The machine-readable medium of claim 359, wherein

the display is re-rendered ~~substantially~~ in real-time.

361. (Currently Amended) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on a hand-held device ~~comprising one of a Personal Digital Assistant (PDA) or hand-held computer~~.

362. (Previously Presented) The machine-readable medium of claim 359, wherein the Web browser is configured to be installed on at least one of a desktop computer, notebook computer or laptop computer.

363. (Currently Amended) The machine-readable medium of claim 359, wherein execution of the instructions performs further operations comprising enabling a user to pan a ~~display~~ view of the Web page in response to a corresponding user input.

364. (Currently Amended) The machine-readable medium of claim 363, wherein execution of the instructions performs further operations comprising enabling the ~~display~~ view of the Web page to be panned ~~substantially~~ in real-time.

365. (Currently Amended) The wireless device of claim 81, wherein the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

366. (Currently Amended) The wireless device of claim 83, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

367. (Currently Amended) The wireless device of claim 84, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

368. (Currently Amended) The mobile hand-held device of claim 144, wherein

the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

369. (Currently Amended) The mobile hand-held device of claim 146, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

370. (Currently Amended) The mobile hand-held device of claim 147, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

371. (Currently Amended) The method of claim 223, wherein the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

372. (Currently Amended) The method of claim 226, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

373. (Currently Amended) The method of claim 228, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

374. (Currently Amended) The method of claim 245, wherein the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

375. (Currently Amended) The method of claim 248, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

376. (Currently Amended) The method of claim 250, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

377. (Currently Amended) The machine-readable medium of claim 281, wherein the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

378. (Currently Amended) The machine-readable medium of claim 284, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

379. (Currently Amended) The machine-readable medium of claim 286, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

380. (Currently Amended) The machine-readable medium of claim 338, wherein the display is re-rendered such that content corresponding to the selected column is ~~displayed substantially~~ rendered to fit across the display.

381. (Currently Amended) The machine-readable medium of claim 341, wherein the display is re-rendered such that the image is ~~displayed substantially~~ rendered to fit across the display.

382. (Currently Amended) The machine-readable medium of claim 343, wherein the display is re-rendered such that content corresponding to the selected paragraph is ~~displayed substantially~~ rendered to fit across the display.

383. (Currently Amended) The wireless device of claim 71, wherein the device enables a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of~~

~~substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

384. (Currently Amended) The mobile device of claim 99, wherein the device enables a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

385. (Currently Amended) The mobile hand-held device of claim 143, wherein the device enables a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

386. (Currently Amended) The method of claim 211, further comprising enabling a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

387. (Currently Amended) The method of claim 265, further comprising enabling a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

388. (Currently Amended) The machine-readable medium of claim 271, wherein

execution of the instructions enables a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

389. (Currently Amended) The machine-readable medium of claim 337, wherein execution of the instructions enables a user to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of pan substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

390. (Cancelled)

391. (Currently Amended) A hand-held wireless device, comprising:

a processor,

a wireless communications interface, to facilitate wireless communication with a network that supports access to the Internet;

a display; and

non-volatile memory, operatively coupled to the processor, in which software comprising a browser is stored, the browser comprising a plurality of instructions that when executed by the processor enable the device to perform operations including,

rendering a browser interface on the display via which a user is enabled to request access to a Web page including at least one image, at least one column, ~~and a plurality of hyperlinks~~ at least one hyperlink to an external reference and having a width and height;

retrieving the Web page via the wireless communications interface;

rendering the Web page on the display such that at least one of the width and height of the Web page is fully displayed; and enabling the user to,

zoom and pan a ~~display~~ view of the Web page;

activate ~~any viewable~~ a currently displayed hyperlink to an external reference while at ~~any~~ a given zoom level and ~~pan position~~ panned view ~~by tapping on the hyperlink~~, wherein in response to an activation of a hyperlink to an external reference, Web content associated with the external reference is retrieved and rendered on the display;

zoom in on an image of the Web page by tapping on the image via the display;

zoom in on a column of the Web page by tapping on the column via the display; and

zoom out to a previous view of the Web page.

392. (Currently Amended) The hand-held wireless device of claim 391, wherein the Web page comprises HTML-based Web page content defining an original page layout ~~and attributes~~, functionality, and design of the Web page content, and wherein the browser renders the Web page such that the original page layout ~~and attributes~~, functionality, and design of the Web page are ~~substantially~~ preserved at any selectable zoom level.

393. (Currently Amended) The hand-held wireless device of claim 392, wherein the user is enabled to ~~view~~ browse, zoom, and pan ~~the HTML-based Web page content of substantially any Web page~~ billions of Web pages in a manner that ~~substantially~~ preserves the original layout ~~and attributes~~, functionality, and design of the HTML-based Web page content of each Web page.

REMARKS

This Amendment is in response to the Office Action mailed October 23, 2007. In the Office Action,

In the Amendment, claims 73, 76, 78, 79, 88, 91, 99-127, 128, 133-136, 139-141, 143-163, 165, 170-172, 174-180, 182, 184, 185, 187-190, 193, 195-197, 200, 203, 207, 210, 211-213, 215, 216, 220-222, 232, 233, 235, 236, 238, 141, 144, 153, 255-257, 260, 263-267, 269-271, 273, 276, 278-280, 291, 294, 298, 303, 305, 307-309, 312-315, 318, 320, 324, 325, 327, 328, 330, 333, 337, 348-350, 353-357, 359-361, 363-389, and 391-393 have been amended to clarify the claimed invention. Claims 243, 336, and 390 have been cancelled. Claims 71-92 and 94-242, 244-335, 337-389, and 391-393 are now pending. No new matter has been added, and all claims are supported by the original disclosure of 09/878,097 and other priority applications incorporated therein by reference (Application Serial Nos. 60/217,345, 60/211,019, and 09/828,511). Entry of this amendment is respectfully solicited.

Examiner Interview

An in-person examiner interview was conducted at the USPTO on May 5, 2008. The attendees included Examiner Quoc A. Tran, Primary Examiner Rachna Desai, Inventor Gary Rohrabaugh, and attorney representative R. Alan Burnett.

Demonstration of Device

During the interview, a demonstration of a device and software based on the underlying teachings of the claimed invention was presented. The demonstration device was a Toshiba Pocket PC running a version of the SoftView™ browser, as discussed in the response to Office Action filed December 9, 2007. Inventor Gary Rohrabaugh demonstrated the SoftView™ browser's ability to scale and render Web pages to fit the Toshiba's display, selectively zoom on user-defined windows, images, columns, and paragraphs, and generally zoom and pan Web pages and performing browser functions such as navigation via hyperlinks while preserving the layout, functionality, and design of the Web pages in a manner similar to desktop browser such as Internet Explorer, Firefox, Netscape Navigator, *etc.* Claims corresponding to each of these features are included in the present application.

Discussion of 35 U.S.C. § 103 Rejections

A discussion of the rejections under 35 U.S.C. §103(a) as being unpatentable over *Chithambaram*, in view of *Roy* was conducted. In connection with the discussion was a video demonstrating how the Autodesk MapGuide technology disclosed in *Chithambaram* and *Roy* works (in addition, see further discussion below). The video shows a desktop browser display of various MapGuide sites, and clearly demonstrates that the MapGuide implementation employs an embedded application (plug-in) that operates separately from the browser. The video shows the tracking of packets (using a packet-sniffer utility) received from the MapGuide host site, and demonstrates that the data delivered to the MapGuide plug-in does not comprise HTML-based content, but rather comprises proprietary MapGuide data and related data associated with HTTP Requests and Responses. There was a further discussion of this art as applied to independent claim 71 in particular, where Applicant Rohrabaugh and Representative Burnett made clear that even when the client was considered to be a desktop, the combination of *Chithambaram* and *Roy* fails the prima facie obviousness test for at least the reason that there is no generation of scalable content based on HTML-based content, and that the only content that could be construed as scalable was MapGuide data, which is received by the desktop client in a scalable form to begin with.

Obviousness-type Double Patenting

A pending provisional obviousness-type double patenting rejection was also discussed. Applicants asserted that the present claims are not obvious over the issued claims of the parent 7,210,099 patent claims. Examiner Tran said he would need to reconsider this rejection in view of his new understanding of the claims and arguments presented in response to the current Office Action. Applicants respectfully request the Examiner to consider in detail the arguments made in the December 9, 2007 response, as well as the amendments to the pending claims in reassessing this rejection. Applicants have chosen not to file a terminal disclaimer at this time.

Rejections under 35 U.S.C. § 112, Second Paragraph – use of "Substantially"

In the office action of October 23, 2007, Examiner Tran rejected a number of claims reciting the term "substantially" under 35 U.S.C. § 112, Second Paragraph as rendering the claims indefinite. During the interview, it became clear that Examiner Tran was construing the term "substantially" in an extremely broad manner that was much broader than the intended claim language. By way of example, Examiner Tran took a piece of paper and asked, "is this substantial?" He then folded the paper and asked "is this substantial?" He folded the paper one more time (so it was now a quarter of its original size), and again asked "is this substantial?" Moreover, both Examiners Tran and Desai identified that the use of "substantially" in the context of the recited claim language was not explicitly defined in the specification. When representative Burnett pointed out that there is a significant portion of US patents that include the word "substantially" in at least one claim, many of which do not use the word "substantially" anywhere in the specification outside of the claims, Examiner Tran indicated those were examined by other examiners, and not him. To illustrate how the use of "substantially" can be supported via drawings alone, representative Burnett presented a copy of US 5,956,025 to Goulden *et al*. In particular, each of claims 3, 4, 11, and 12 recite, in part "wherein the respective first are comprises a band *substantially across the display*." The support for this claim element is via the drawing figures, as the term "substantially" is not present in the specification. In response to this argument, Examiner Tran stated that he did not examine this patent (US 5,956,025), and what another Examiner did was not material to examination of the present application.

In view of the foregoing, it became clear that the use of "substantially" in a claim in the present application was going to render the claim indefinite due to the broad interpretation of the term by Examiner Tran. Accordingly, the Applicants have elected to remove the word "substantially" from the pending claims. However, it is noted that the intended scope of the corresponding claims (*i.e.,* as originally intended by the Applicants) has not changed due to the removal of the word "substantially," as the Applicants never intended the term to have the breadth accorded by Examiner Tran. Accordingly, no *Festo*[1] estoppel shall apply, as no equivalence has been surrendered, as argued more specifically below.

It is well established that statements in the file history may be used to interpret the scope of the claim elements. See, *e.g., Warner-Jenkinson Co. v. Hilton Davis Chem. Co.*, 117 S. Ct. 1040, 41 USPQ2d 1865 (1997); *Markman v. Westview Instruments*, 52 F.3d 967, 34 USPQ2d 1321 (Fed. Cir. 1995), aff'd 116 S. Ct. 1384, 38 USPQ2d 1461 (1996); *Vitronics Corp. v. Conceptronic Inc.,* 90 F.3d 1576, 39 USPQ2d 1573 (Fed. Cir. 1996). Moreover, file histories of more recently issued patents and pending applications which have been published are available to the public via PAIR. Accordingly, applicants respectfully assert that the scope of the terminology and claim elements discusses below clearly renders each claim element to be definite, as such discussion is publically made available to those skilled in the art, as well as the public in general.

<u>Scope of the terminology "the Web page is rendered to fit across the display"</u>

Each of claims 71, 143, 180, 244, 271, and 337 contain claim elements

[1] *Festo Corp. v. Shoketsu Kinzoku Kogyokabushiki Co.* 535 U.S. 722 (2002) 234 F.3d 558.

including the language “the Web page is rendered to fit across the display,” replacing the prior language “… fit substantially across the display.” A discussion of the intended scope of this terminology was presented in the December 9, 2007 response to the Office Action of October 23, 2007; an augmented argument (to account for the removal of the word substantially) is presented below.

Figs. 7A, 8A, and 9A show examples of Web pages rendered to fit across the display of the illustrated Palm IIIc touchscreen display. One of skill in the art would recognize that it may be desirable to provide a border of a few pixels or more around the edges of the rendered Web page for readability purposes and/or aesthetics. Additionally, depending on the scrolling scheme employed, a portion of the browser may be used for scroll bars or the like, such as shown in Figs. 7A, 8A, and 9A. Generally, depending on the underlying operating system (and possibly browser features), the width of the scroll bars may vary, no scroll bars may be displayed, or scroll bars may be overlaid over a portion of the browser’s page rendering area, enabling the entire width of the display to be used for browser page rendering. Examples of operating systems and/or browser implementations with different scroll bar widths are shown below:

NYT Web page as rendered on a Mozilla Firefox desktop browser running under the Microsoft Windows XP operating system

Sony Clié running Palm OS	Pocket PC running Windows CE OS
	
Image 1A	Image 1B

Image 1A shows a Web page rendered by a SoftView™ browser on a Sony Clié running a version of Palm OS, while Image 1B shows a Web page rendered by a SoftView™ browser on a Pocket PC running a version of Windows CE OS. (It is noted that the principle developers of the SoftView™ browsers were Gary Rohrabaugh and Scott Sherman, the inventors of the claimed inventions in the present application, and the SoftView™ browsers employ the resolution-independent Web page scaling, zooming, and scrolling (panning) techniques disclosed in the application.)

As illustrated in Image 1A, and similarly illustrated in Figs. 7A, 8A, and 9A of the present application (the Palm IIIc also ran on a version of Palm OS), the SoftView™ browser implementation running on a Palm OS employs a vertical and horizontal scroll bar with arrows at the ends that are wider than the bars themselves. Also, the completely filled horizontal scroll bars in each of Image 1A, Figs. 7A, 8A, and 9A, indicates that horizontal scrolling is not applicable, as the Web page view has been rendered to fit across the width of the browser display area.[2] The scroll bars used by Windows CE are somewhat different – they include separate arrow controls that are the same width as the scroll bars. In a manner similar to the Palm OS examples, the Web page in Image 1B is rendered to fit across the width of the browser display area. Of course, for operating systems/browsers that use overlaid scroll bars, the actual browser display area would be slightly larger. Thus, depending on the type of scroll bar implementation, the portion of the display available to render the Web page (*i.e.,* the browser display area) will vary a small amount. As noted above, border areas may also be desired for readability and/or aesthetics. Accordingly, the scope of the terminology "the Web page is rendered to fit across the display" is intended to cover each of the foregoing scroll bar schemes and/or border areas schemes and combinations thereof.

Scope of the terminology "determining an applicable scale factor to display at least one of the width and height of the Web page to fit across a display area of the display"

Each of claims 123, 238, and 330 recite the language, "determining an applicable scale factor to display at least one of the width and height of the Web page to fit across a browser display area of the display." The scope of this language is intended to cover a Web page being displayed such that at least one of the width and

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[2] It is noted that one of ordinary skill in the art would recognize the browser display area is the portion of the rendered display reserved for rendering the Web page content. This typically includes the display area that is not occupied by browser menu items and/or icons, tool bars (as applicable) and scroll bars (as applicable).

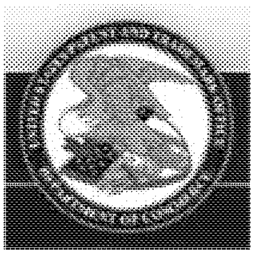
height of the Web page occupies the browser display area (which will vary depending on the scroll bar scheme), with the optional use of small borders.

Scope of the terminology "the content corresponding to the selected column is rendered to fit across the display"

Each of claims 111, 190, 315, 365, 368, 371, 374, 377, and 380 recites the language, "the content corresponding to the selected column is rendered to fit across the display." The scope of this language is intended to cover the rendering of a column (in response to a zoom to column user input) such that the column is rendered to span the width of the applicable browser display area, with optional small borders (such as illustrated in FIG. 7B), in a manner similar to that discussed above when rendering a Web page.

Scope of the terminology "the display is re-rendered such that the image is rendered to fit across the display"

Each of claims 113, 136, 193, 318, 366, 369, 372, 375, 378, and 381 recites the language, "the display is re-rendered such that the image is rendered to fit across the display." The scope of this language is intended to cover the rendering of an image (in response to a zoom to image user input) such that the image is rendered to span the width of the applicable browser display area, with optional small borders (such as illustrated in FIG. 8B), in a manner similar to that discussed above when rendering a Web page to fit across the display. This does not imply that the claimed zoom to image operation will cause *all* images to be rendered to fit across the display, as the claim language clearly does not state this. One of skill in the art would recognize that when a selected image has a native resolution (*i.e.,* the 1:1 resolution for the image) that is less than the resolution of the applicable browser display area, it generally would be preferable to render the image at its 1:1 resolution, as rendering the image beyond this resolution (*e.g.,* "blowing" up the image) will generally result in a blurred image. For example, if an image has a native resolution of 150 x 150 pixels and the applicable browser display area is 300 pixels wide, it is preferable to display the image at 1:1 (150 pixels wide) rather than render the image to span the width of the display area. This is illustrated below:



USPTO Seal on http://www.uspto.gov/ at native 1:1 resolution (131 x 131 pixels)

Same USPTO Seal blown up 200% (262 x 262 pixels)

On the flip side, when the native resolution of an image is greater than or equal to the applicable display area, it is advantageous to render the image to fit the applicable display area, as claimed. An a manner analogous to that described above, “re-rending an image to fit across the display” is intended to cover situations where the image is rendered to span the width of the applicable display area, with the optional use of small borders.

<u>Scope of the terminology “the content corresponding to the selected paragraph is</u>

rendered to fit across the display"

Each of claims 195, 367, 370, 373, 376, 379, and 382 recites the language, "the content corresponding to the selected paragraph is rendered to fit across the display." The scope of this language is intended to cover the rendering of paragraph content (in response to a zoom to paragraph user input) such that the content is rendered to span the width of the applicable browser display area, with optional small borders (such as illustrated in FIG. 9B), in a manner similar to that discussed above when rendering a Web page. Likewise, the terminology, "the content corresponding to the selected paragraph is rendered to fit across a display area of a display" recited in each of claims 114 and 320 is intended to have similar scope.

Scope of the terminology "in real-time"

The term "substantially" in "substantially in real-time" has been removed from each of claims 73, 79, 104, 109, 133, 135, 151, 156, 175, 179, 182, 188, 216, 221, 255, 257, 266, 270, 273, 279, 308, 313, 348, 350, 360, and 364. In general, "in real time" pertains to zooming and/or panning operations (as applicable) in each of these claims. The scope of the terminology "in real-time" is intended to pertain to the concept of real-time as perceived by humans when interacting with software, as opposed to the use of real-time to describe machine operations (*e.g.,* a real-time operating system), as argued in the December 9, 2007 response below (a portion of which is augmented to account for the removal of "substantially."

One of skill in the art would recognize the meaning of the terminology "real time" varies depending on the particular use context. For example, for an embedded real-time operating system or implementation, real-time might mean a timeframe in the millisecond or even microsecond range. In this context, the time context is machine time and real-time means instantaneous. In another use context, such as replying to e-mail, real-time is significantly longer. For example, many people refer to responding to e-mail in "real time" – this means the people respond to new e-mails as they come in, as compared with waiting until the end of the day or some other time to respond to e-mails in more of a batch manner. In a real time flight tracking context, the data that is provided may actually reflect a tracking position that is several seconds, or even minutes, old.

One of skill in the art would recognize that in a software user-interface context, which is applicable to the present claims, the use of real-time typically means the user is enabled to continue an operation in a non-disrupted manner, meaning the user doesn't have to wait a period of time of significance for the operation to be performed. In this context, real-time is perceived by the user's sense of time.

As defined by SearchSMB.com Definitions[3]

real time

DEFINITION- Also see real-time clock and real-time operating system.

Real time is a level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present visualizations of the weather as it constantly changes). *Real-time* is an adjective pertaining to computers or processes that operate in real time. Real time describes a human rather than a machine sense of time.

In the days when mainframe batch computers were predominant, an expression for a mainframe that interacted immediately with users working from connected terminals was *online in real time*.

The inclusion of "substantially' in the use of a "substantially in real-time" context (as recited in the claims prior to the instant amendments) was to differentiate the claim from meaning it occurs instantaneously, which would be an erroneous interpretation under the proper use context. Rather, the operation is performed in a non-disrupted manner, as experienced by the user. For the purpose of a defined time period, "in real time" as used herein means the operation is performed in a few seconds or less.

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[3] http://searchsmb.techtarget.com/sDefinition/0,,sid44_gci214344,00.html

Under the Examiner's interpretation of the term "substantially" in general (as discussed above), the prior claims reciting "substantially in real-time" did not have the foregoing claim scope. Accordingly, there is no equivalence lost due to *Festo* estoppel, as the intended scope of these claims is the same as argued in the December 9, 2007 response.

Discussion of new claim terminology, "preserves the original page layout, functionality, and design of the Web page content."

In accordance with teachings disclosed in the present application (and its related applications incorporated herein), users of various devices, from handheld devices with small screens, to desktop PC's and laptops, to very large screen devices, are enabled to view and interact with Web pages in a manner independent of the screen resolution of such devices' built-in or associated display, while preserving the look and feel (*i.e.,* functionality) of browsing such pages with a conventional desktop browser. As a result, users are enabled to access millions of Web pages on various devices having different screen resolutions while providing a full Web browsing experience similar to that experienced when browsing the same Web pages using a desktop browser.

In order to clarify this result, Applicants have amended many of the claims to recite, in part, "preserves the original page layout, functionality, and design of the [HTML-based Web page] content." For example, amended independent claim 1 now recites (emphasis added),

71. A wireless device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network that supports access to the Internet;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to an original Web page, the Web page comprising HTML-based Web content having an original format defining an original width and height of the Web page and an ***original page layout, functionality, and design of content on the Web page***;

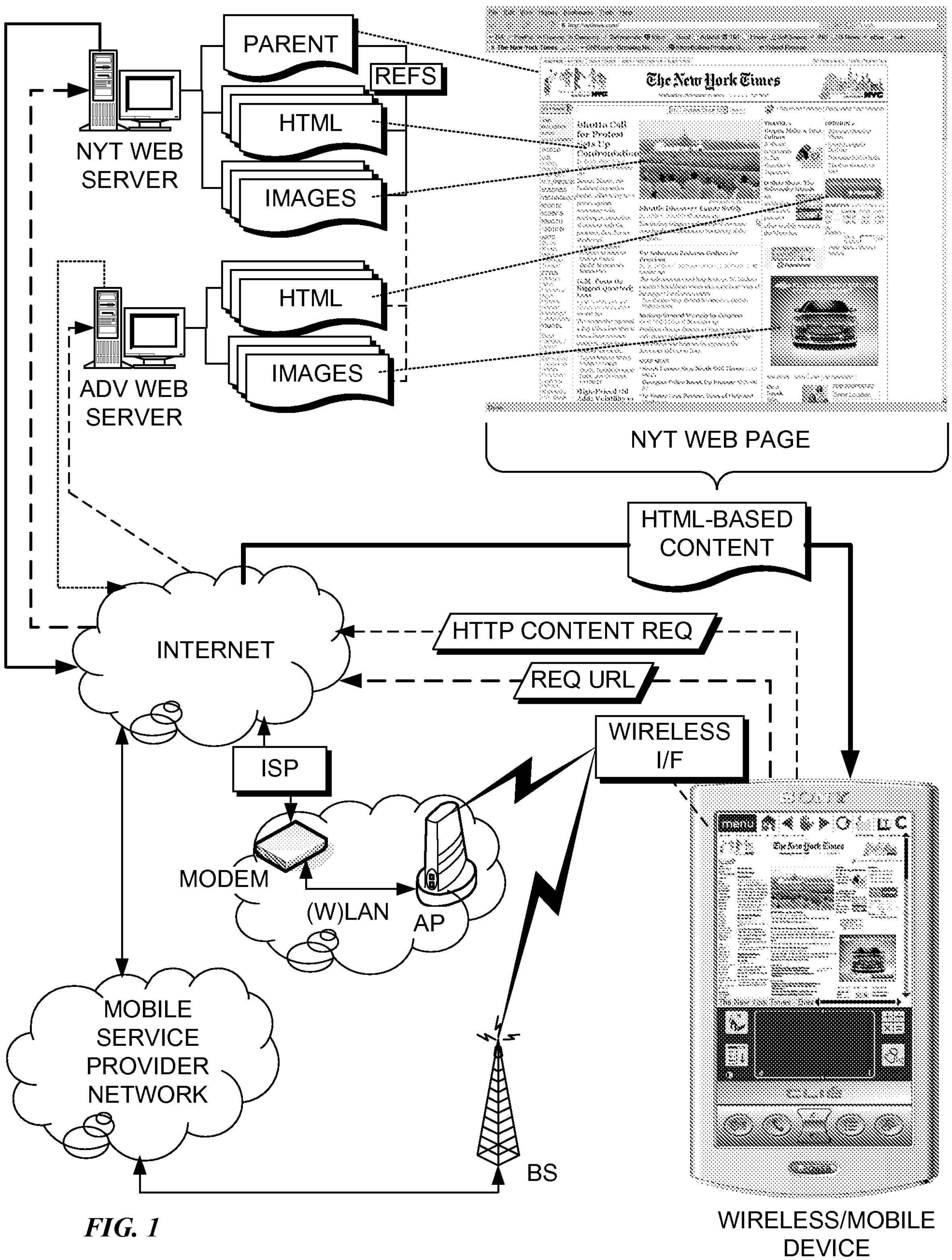
retrieving the Web page via the wireless communication means, and translating at least a portion of the HTML-based Web content from its original format into scalable content that supports a scalable resolution-independent representation of the Web page that ***preserves the original page layout, functionality and design of the content defined by its original format*** when scaled and rendered; and

scaling the scalable content to render the Web page on the display such that a width of the Web page is rendered to fit across the display.

A discussion of operations pertaining to an exemplary use case of a device enabled by the presented application was presented in the December 9, 2007 response; for clarity, much of this description is repeated below, while some details are omitted for brevity. The operations are discussed in the context of the following FIG. 1.

The schematic drawing shows an exemplary infrastructure comprising well-known components for facilitating access to and delivery of Web pages. Web page content (*i.e.,* Web content) is served by servers that are accessed via the Internet, also commonly referred to as the World Wide Web (WWW). Accordingly, these servers are typically referred to as "Web" servers. More accurately, they are HTTP (Hypertext Transport Protocol) servers, as they serve content of various types using the HTTP protocol. FIG. 1 shows a pair of exemplary Web servers, including a New York Times

(NYT) Web server and an Advertisement (ADV) Web server. It will be appreciated that literally millions of similar Web servers are connected to the Internet across the world, thus forming the World Wide Web.



PARENT
REFS
HTML
IMAGES
NYT WEB SERVER
HTML
IMAGES
ADV WEB SERVER
NYT WEB PAGE
HTML-BASED CONTENT
HTTP CONTENT REQ
REQ URL
INTERNET
WIRELESS I/F
ISP
MODEM
(W)LAN
AP
MOBILE SERVICE PROVIDER NETWORK
BS
WIRELESS/MOBILE DEVICE

FIG. 1

To access WWW web servers, users use client devices that are communicatively coupled to the Internet through applicable network infrastructure. In the desktop environment, desktop clients, such as personal computers and workstations, are typically coupled to a Local Area Network (LAN) via an Ethernet link to a LAN host device. (It is noted that some desktop clients may wirelessly connect to a Wireless LAN (WLAN), in a manner similar to that discussed below for wireless clients.) The LAN, in turn is usually connected to the Internet via network infrastructure provided by an Internet Service Provider (ISP). Connection between the LAN and the ISP is typically provided by some type of Modem (*e.g.,* Cable or xDSL Modem) or dedicated hardware (for larger customers, such as businesses). (It is also noted that many individual users still connect to their ISP through a telephone modem.)

Wireless and mobile devices, including those devices covered by the claims herein, typically connect to the Internet in one of the manners illustrated in FIG. 1, or otherwise described in the December 9, 2007 response. (Further details are omitted here for brevity.) By way of example but not limitation, wireless access to the Internet may typically be provided via a mobile service provider, or via other types of wireless connections, such as via WiFi or WIMAX connection, for example.

Now that the infrastructure of FIG. 1 has been described, we proceed with discussion of retrieving and processing the Web page content such that the Web page can be accessed via a wireless/mobile device. In the illustrated example, the process is initiated by a user desiring to access the New York Times (*i.e.,* and electronic version of the New York Times published to the Internet on a given day). This is facilitated by a browser in accordance with teaching of the present application running on the wireless/mobile device. The New York Times may be accessed via the Internet by downloading corresponding Web pages from the NYT Web server. More specifically, the New York Times home page may be accessed by entering the URL (Universal

Resource Locator) www.nytimes.com via the browser's user interface.

As discussed above and in further detail in the present specification, Web pages comprise HTML-based content which may be stored in one or more documents commonly referred to as HTML documents. In addition, Web pages may include dynamically-generated content. Each Web page has a corresponding main or "parent" HMTL document that includes HTML code defining the Web page content layout, at least at some level. The parent HTML document may reference other HTML documents, as well as other content (such as image content) that further define the layout of content contained in the referenced documents. This may proceed in a hierarchical or nested fashion.

To access the Web page, the browser initiates an HTTP connection with the Web server hosting the Web page, and begins downloading the parent HTML document. Depending on how the Web server and/or Web page is configured, additional content (*i.e.,* beyond that included in the parent HTML document) referenced by the parent HTML document, may be retrieved by the Web page host server and then downloaded to the requesting client device, or a portion of this content may be downloaded by the client device via a separate connection. Generally, content that is hosted by a Web server or Web site is assembled by the Web server and downloaded to the client device. On the other hand, externally-referenced content (that is, content that is not stored on the Web server or Web site), is often left to the client device (*i.e.,* the browser) to retrieve.

An example New York Times home page (dated November 7, 2007, 2:22PM ET), as rendered by the Mozilla Firefox browser running on a desktop or laptop computer, is shown at the upper right-hand portion of FIG. 1. The same Web page is shown rendered on a Sony Clié using a SoftView™ browser at the lower right-hand portion of FIG. 1. Notably, the same HTML-based content defining the page layout, functionality, and design of the Web page content is downloaded by each of the Mozilla

Firefox and SoftView™ browsers. Moreover, the same HTML-based content would be retrieved by other desktop browsers, such as Microsoft Internet Explorer, Apple Safari, and Opera browsers, to render the New York Times home page.

As discussed above, the Parent HTML document typically includes HTML code to define the overall layout of the Web page and its content. For example, the HTML code will define whether the Web page includes frames, and, if so, where those frames are located on the rendered page. Various content displayed on the Web page may be stored in the Parent HTML document and/or one or more other HTML documents referenced by the Parent HTML document. If the content is to be rendered in a frame referenced by the Parent HTML document but whose content is not defined within the Parent HTML document, the actual reference to the HTML document storing the content may be in the document defined by the frame reference. For example, for illustrated purposes, the content in the column with the heading "Bhutto Call for Protest Sets Up Confrontation" is depicted to be stored in an HTML document that is hosted by the NYT Web server, but is separate from the Parent HTML document.

Likewise, image content may be stored separate from the Parent HTML document. This is typically done since images, which often contain a large amount of data due to the nature of image data, make require significant download time, especially over a slow connection. By putting image content in (a) separate document(s), the basic page layout and text content can be rendered much faster. Typically, HTML code defining the page layout location of an image on the page may be used to place an image "placeholder" or other indicia on the screen prior to rendering of the image.

As discussed above, various portions of the Web page content may be stored on Web servers that are external to the Web page host server. This is often the case with advertisement content. Rather than have the advertisement content stored locally on each Web server, the advertiser will use an advertisement host site to store and serve the advertisement content. For example, in FIG. 1, image data for rendering the "All New Chevy Malibu" advertisement is depicted as being stored in an image document on the Advertisement Web server.

Typically, externally referenced advertisement content is downloaded by the browser directly from the advertisement content host site, rather than from the Web page host site. The network location of the advertisement content host server is identified by parsing the retrieved HTML-based content, and an HTTP GET request is used to download the associated advertisement content from its host server.

Some Web pages may include "embedded" content hosted by an external site. For example, the New York Times Web page includes embedded content provided by Fidelity. Oftentimes, such embedded content may be dynamic in nature (that is, may change over time or differ depending on identification of the target user). Generally, embedded content may be retrieved by the browser from an external host site (*e.g.,* advertisement Web server depicted in FIG. 1[4]), or such content may be first retrieved by the Web page host site and served to the browser.

It is common terminology to refer to a browser "retrieving" or "downloading" a Web page. For example, upon entry of a new URL in the browser Web address box, the browser will download the Web page referenced by the URL. It is well understood that this doesn't imply that all of the content associated with the Web page must be retrieved or downloaded. Some of the content is typically used for search engine purposes, such as Metatag header information, or is otherwise not used for rendering purposes. In other cases, content may be referenced that is not supported by the requesting browser. For example, "Flash" content typically requires a Flash plug-in viewer (or built-in Flash support provided by some browsers); if the plug-in viewer is not loaded by the browser (or such support isn't built in), the Flash content cannot be

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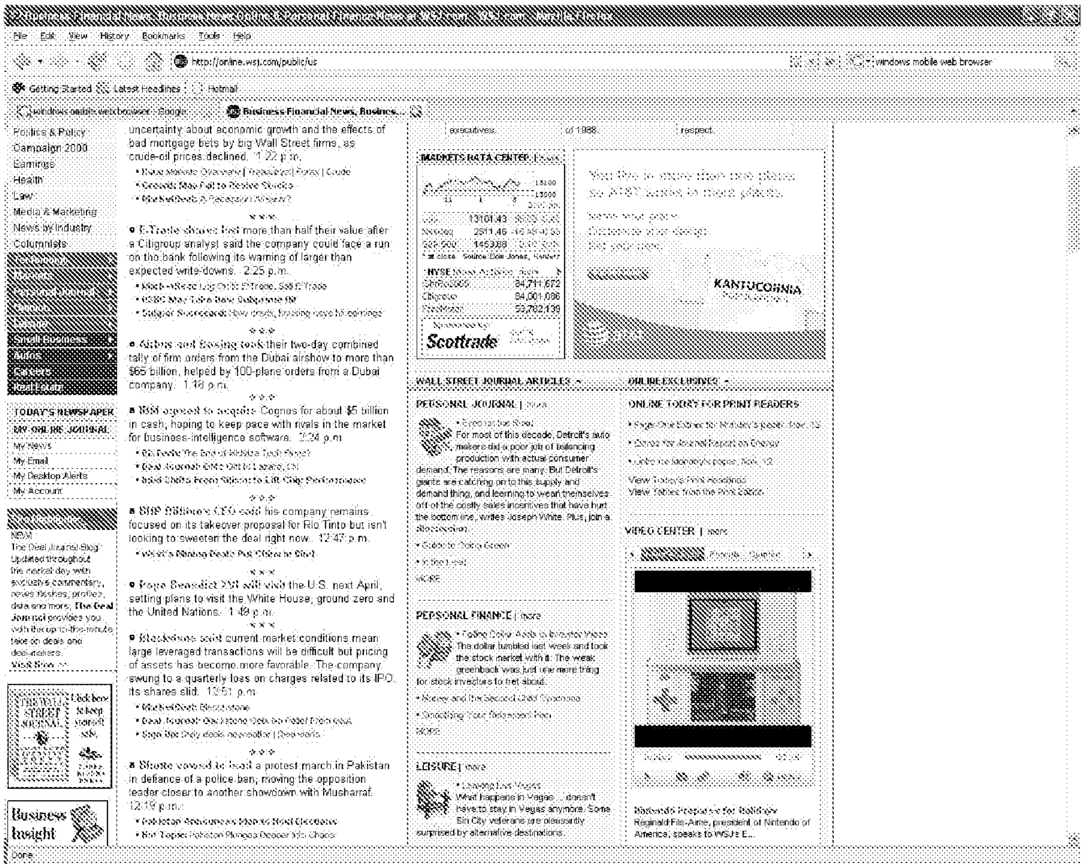
[4] It is noted that it would be likely the Fidelity content would be hosted by its own server that would be separate from the advertisement server; however, for simplicity, the advertisement is used for illustrative purposes.

displayed. This is also true for TIFF images on the USPTO Web site. Unless the proper TIFF plug-in viewer is loaded, the TIFF images will not be displayed.

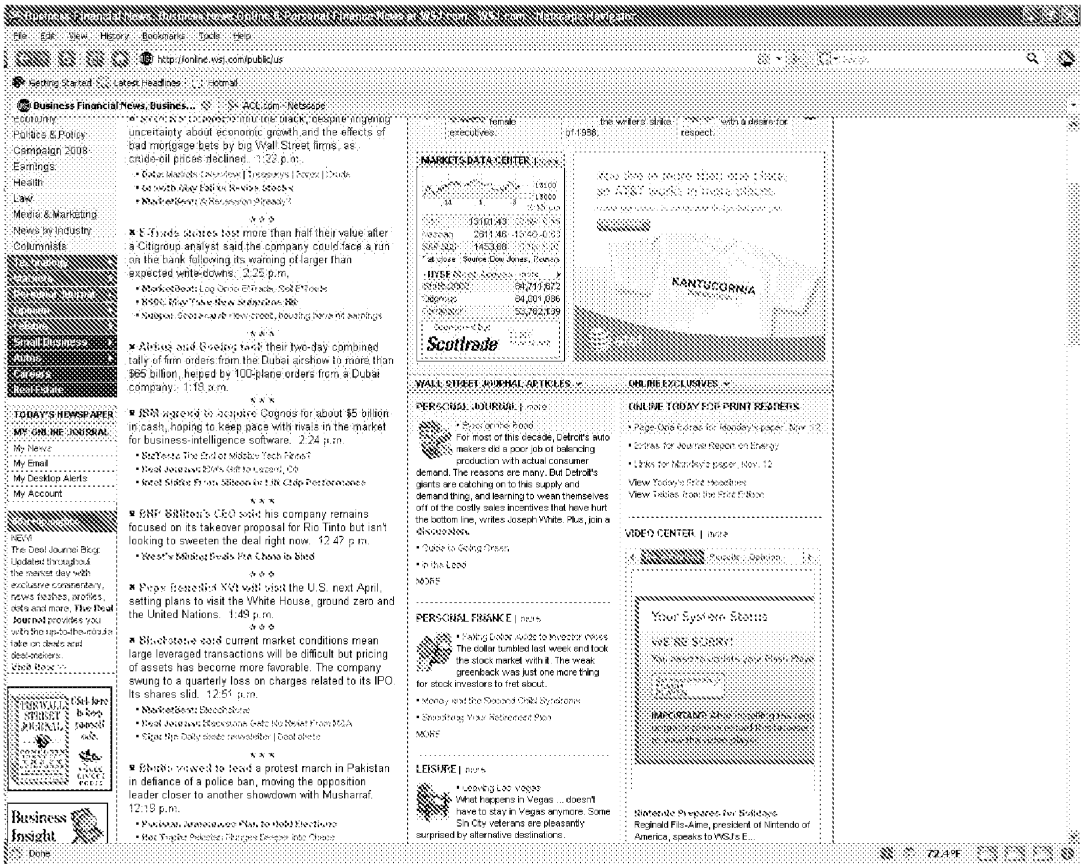
A similar situation exists with Active-X controls. In order to use the Active-X controls, the browser needs to provide support for Active-X controls. Since Active-X controls were developed by Microsoft, all recent versions of Microsoft Internet Explorer provided support for Active-X controls. Meanwhile, browsers from other vendors, such as Apple Safari, Mozilla Firefox, and Opera, do not support Active-X controls.

When a browser encounters content that is not supported "natively" by the browser, the browser will typically check to see if an appropriate plug-in is available. Depending on the browser and/or particular Web site, if an appropriate browser cannot be found, the browser or Web site may apprise the user of the situation and enable the user to download the plug-in. In other instances, the content is simply ignored. Thus, in some cases, the Web page may reference content that is never retrieved when the Web page is retrieved by the browser.

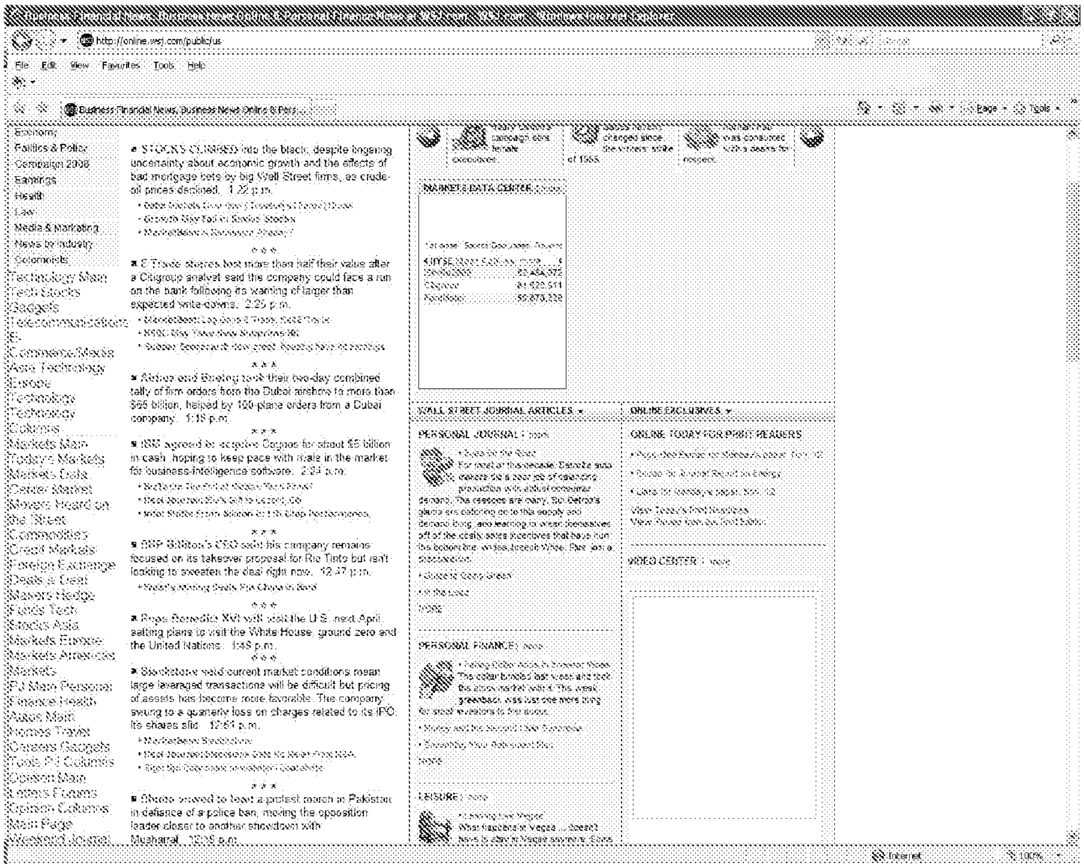
The three screen shots below respectively show the same Web page rendered on a Netscape Navigator 9 browser, a Mozilla Firefox 2.0 browser, and an Internet Explorer 7 (IE 7) browser. In this particular instance, certain features of the IE7 browser are disabled for security reasons. It is also missing some plug-ins. Each of these browsers is running on the Microsoft Windows XP operating system.



Mozilla Firefox 2.0 Browser



Netscape Navigator 9 Browser



Microsoft Internet Explorer 7 Browser

It will be observed that the Web page is rendered substantially the same by the Netscape Navigator 9 and FireFox 2 browsers, while portions of the Web page are rendered in a different manner by the IE 7 browser (notably the left-hand column). The similarity between Netscape and Firefox is expected since they both use the same Mozilla core rendering code, while IE 7 uses Microsoft's rendering code. It is further noted that some Web pages are coded to account for different browser features. For example, some Web pages will have provisions for Active-X controls for pages to be viewed by Internet Explorer browsers, while possibly including provisions for alternate mechanisms when using other browsers.

This example Wall Street Journal Web page includes various embedded ***non-***

HTML content requiring support of one or more plug-ins[5] or otherwise built in support for rendering ***non-HTML*** content of a particular content type. In particular, the VIDEO CENTER object in the lower right-hand corner requires an Adobe (formerly Macromedia[6]) Flash viewer for rendering Flash content, which uses vector and raster graphics, a native scripting language called ActionScript and bidirectional streaming of video and audio.[7]

It is noted that there is a message in the VIDEO CENTER box in the Web page rendered by the Netscape Navigator 9 browser indicating that the browser needs to update its Flash player. In the case of the Firefox 2 browser, either the appropriate Flash player was found or an appropriate level of support for Flash content is built into the browser. In this case, the Flash .SWF file including data to render a video image of a Nintendo DS console is retrieved from a corresponding host server and rendered by the browser (if it has built-in support) or Flash player, as applicable. In the case of the Netscape Navigator 9 browser, the appropriate Flash player plug-in is not available; accordingly, the video image of the Nintendo DS console is not retrieved.

In the case of the particular IE 7 browser configuration used to obtain the IE7 screen shot, the Flash player is either missing or blocked. As a result, the aforementioned VIDEO CENTER image is missing (just an empty box is rendered, as defined by corresponding HTML). Moreover, the IE 7 browser did not render a message indicating the Flash player needed to be upgraded. In addition, the source for

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[5] As defined by Wikipedia, A **plugin** (**plug-in**, **addin**, **add-in**, **addon** or **add-on**) is a computer program that interacts with a host application (a web browser or an email client, for example) to provide a certain, usually very specific, function "on demand". Applications support plugins for many reasons. Some of the main reasons include: enabling third-party developers to create capabilities to extend an application, to support features yet unforeseen, reducing the size of an application, and separating source code from an application because of incompatible software licenses.

[6] Macromedia is now a division of Adobe Systems

[7] For more details on the Adobe Flash Player, see, *e.g.*, http://en.wikipedia.org/wiki/Adobe_Flash_Player

the AT&T advertisement in the upper right-hand portion is blocked via a security setting, resulting in this portion of the page being rendered using the same background color as the frame it (would be) embedded in.

A point for discussing the foregoing is to make it clear that,

1. Even when rendering the same Web page source content (*i.e.,* the HTML code definition of the Web page), conventional Web browsers may not render the (non-scaled) Web page identically. Scaling Web pages may also result in alternation of the page layout. However, under aspects of embodiments of the invention (such as claimed in claim 71) the overall layout, functionality and appearance (design) of the scaled Web pages defined by the HTML code for the Web page are preserved.
2. Plug-ins may be required to render ***non-HTML content*** that is embedded within some web pages or used in a separate window launched from a web page. Notably, the plug-in content is not a Web page, but rather a specific type of content requiring a corresponding plug-in application to render the content.

The new claim language introduces the term "functionality." Preserving functionality generally pertains to preserving the interoperability of various HTML-based Web page content, such as hyperlinks and UI controls such as input forms defined via corresponding HTML-based code. It is noted that the HTML code defining a Web page's overall layout, functionality and design does not define how a user interaction with the Web content is to be supported, but rather defines the existence of a corresponding function within the Web content to support the interaction. For example, a hyperlink definition within a Web page merely defines a link (hyperlink reference of *href*) to corresponding content, it does not define how the hyperlink associated control is to appear on the screen nor how the hyperlink is to be activated. That is up to the browser's implementation, which varies by browser. For example, some browsers underline text content associated with a hyperlink, while others change the appearance of a pointer when over a control (*e.g.,* text content) associated with a hyperlink (or otherwise change the appearance of such content). Moreover, how the hyperlink is activated is not defined by the corresponding HTML-based definition, but again is left to the browser implementation. Accordingly, preserving content functionality means that functionality defined by corresponding HTML code (*e.g.,* activation of a hyperlink in the present example) is supported, without limiting the particular user interface for how that activation is facilitated.

In the implementation of a zoomable browser, it may be desirable to change user interface behavior depending on a current use and/or view context. For example, the hyperlink controls of a conventional Web page designed to be viewed with a desktop browser are typically activated via the same user interface input (*e.g.,* clicking with a mouse), since all of the hyperlinks controls (on at least well-designed Web pages) are (presumably) designed to be viewable on the desktop browser (at least viewable to most users). In contrast, when the same page is rendered so as to fit on a handheld device's display, corresponding hyperlink controls may not be readable. As a result, it may be advantageous to implement a context-based user interface that may result in a different action for the same user input depending on a current user and/or zoom context. For example, under the zoom to column, image, and paragraph user interface features disclosed in the present application, touching proximate to content associated with a hyperlink control may or may not activate the hyperlink control, depending on a current zoom level. By way of illustration, when touching content proximate to a hyperlink control that is also contained within a column when in a zoomed-out view, such as a full page view, the browser may interpret the input as an input to zoom to the column rather than an input to link to a hyperlinked reference associated with the content, particularly when the content is no readable in the current view.

Preserving the design of the Web page's HTML-based content corresponds to rendering the Web page at different zoom levels and panned view in accordance with its original design, which includes such things as type fonts, separator bars, tables, *etc.* Again, the Web page's design is a matter of interpretation by the particular browser, as, for example, the same content (as defined by its corresponding HTML definition) may be rendered using different colors by different browsers. Similarly, browsers may substitute fonts for fonts (as defined by corresponding HTML code) that are not supported by the browser or operating system. With respect to the scope of the terminology "preserving the [overall layout, functionality, and] design" of the content, this refers to preserving the design as interpreted by the browser[8] while at different zoom levels and panned views, as opposed to rendering the content identically to how it is rendered by a particular desktop browser that may interpret the page design differently.

With further respect to dependent claims 126, 159, 241, 260, 333, and 353, design aspects of a Web page as defined by cascaded style sheet (CSS) data included in the Web page definition are also preserved.

A similar context exists with respect to "preserving the overall layout [, functionality, and design]" of the content. Again, the page layout (to be preserved) is determined as interpreted by the browser, rather than as a comparison to how it is rendered by a particular desktop browser. As described above and in other remarks, browsers often do not render Web pages derived from the same HTML-based definition identically. Accordingly, one of ordinary skill in the browser art would not expect Web pages rendered using a browser in accordance with the teachings disclosed in the present application (*e.g.,* the SoftView™ browser) to render pages as *exact* scaled replicas of the same page rendered by another browser, such as Internet Explorer or Safari, for example. Also as discussed previously, due to rendering limitations such as

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[8] More particularly, differences in page interpretation will generally be a function of the browser's rendering engine (*a.k.a.* layout engine).

fixed size fonts, renderings of the same page when viewed at different zoom levels may result in small variations, as opposed to an exact scaled version of the same content (as if viewed by a magnifying glass). While there are implementations that may produce this exact result, such results are not required by the scope of the terminology "preserving the overall layout … of the content."

Each of claims 174, 180, 265, 271, and 359 include claim elements that likewise recite "preserves the overall layout, functionality, and design" of the [HTML-based Web] content, while each of claims 99, 143, 211, and 337 recite "while preserving the overall layout, functionality, and design" of the [HTML-based Web] content. Accordingly, the claim scope of the related elements in each of these claims is to be interpreted in a similar manner that that discussed above with respect to the use of similar terminology in claim 71.

Each of claims 76, 185, and 276 recite, "wherein the original page layout, functionality, and design of the Web page content are preserved at each of the different resolutions," while each of claims 128, 244, and 303 recite, "wherein the original page layout, functionality, and design of the Web page content are preserved regardless of a zoom level of the Web page." Accordingly, the claim scope of the related elements in each of these claims is to be interpreted in a similar manner that that discussed above with respect to the use of similar terminology in claim 71.

<u>Discussion of new claim terminology, "enables [enabling] a user to view, zoom, and pan the HTML-based Web page content of billions of Web pages in a manner that preserves the original layout, functionality, and design of the Web page content . . ."</u>

Each of claims 244, 303, 359, 383-389, and 393 have been amended to now recite, in part, "enables" or "enabling" "a user to view, zoom, and pan the HTML-based Web page content of billions of Web pages in a manner that preserves the original layout, functionality, and design of the Web page content . . ." The scope of the terminology "in a manner that preserves the original layout, functionality, and design of the Web page content" should be in accordance with that discussed above for similar terminology in claim 71. In addition, in each of these claims the terminology "substantially any Web page" has been replace by "billions of Web pages" to be more definite.

At the time of the filing of the non-provisional parent application (US 09/878,097 – issued as US 7,210,099) (mid-2001) to which the present application claims priority, there were on the order of a several billion web pages associated with the "World Wide Web" and accessible via the Internet, with the specific number being somewhat indeterminable. As stated in paragraph [0093] of the present application, ". . . users are enabled to view the entire content of billions of existing Web pages using hand-held devices in a simple and reasonable way." This statement was based on the observation that, when tested, a browser incorporating the principles of the invention disclosed in the present application enabled the test user to browse, zoom, and pan nearly every Web page that was tested, while preserving the original page layout, functionality, and design of the Web page.[9] Based on the inherent principles and teachings disclosed, this result was expected, as the rendering engine employed by the browser (the Mozilla rendering engine) was based on the same rendering engine used in one of the two most dominant browsers at the time (i.e., the rendering engine used by the Netscape Navigator browser). (It is respectfully noted that the use of the Mozilla rendering engine in an embodiment in the present disclosure is merely exemplary, and not limiting.) Since Netscape Navigator was a dominant browser at the time, many if not most Web pages were designed to support browsing with Netscape Navigator

[9] Of approximately 500 of the most browsed (at the time) Web pages that were tested, only a handful did not work. Of particular note was a Sony Web site that was entirely flash-based (and thus not HTML-based). It is also noted that some Web pages were/are designed to be browsed by a specific browser, such as Internet Explorer; such pages may not render and/or function properly under other browsers.

(either by intent and/or based on good HTML coding practices for manually designed pages, or through use of one of many Web page design tools that generated HTML that could be properly interpreted by Netscape Navigator).

One of skill in the art will recognize that the principles and teachings disclosed in the present application may be applied in a browser implementation employing one of many different rendering engines, such as but not limited to today's version of the Mozilla rendering engine (code-named "Gecko") used by the Firefox and Netscape Navigator browsers, the rendering engine employed by Microsoft Internet Explorer (code-named "Trident" (*aka* MSHTML)), or the Webkit rendering engine use by Apple's Safari browser. Since each of these rendering engines are capable of rendering the vast majority of today's Web pages[10], a browser implementing such a rendering engine in combination with the principles and teachings disclosed in the present application would likewise be capable of rendering the vast majority of billions[11] of today's Web pages while preserving the page layout, functionality, and design of the Web pages under various zoom levels and panned views.

Conclusion

In view of the amendments and the remarks above, Applicant respectfully submits that this application is in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the

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[10] One of skill in the browser art would recognize that rendering engines do not render Web pages completely by themselves, but rather employ various support functions provided by the host operating system for particular rendering operations. Among these support functions is support for rendering text in various languages. The particular languages that are supported will vary depending on the operating system and/or extensions to the operating system (or otherwise add-on functionality provided by the browser) for rendering text of a particular language. If support for rendering text in a given language via either the operating system or a particular extension is not available, the text content in such a language will not be able to be rendered on pages that include such text content.

[11] Depending on the source, it is estimated there are currently 16-48 billion Web pages available via the Internet.

claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: May 20, 2007 /S/ R. Alan Burnett

R. Alan Burnett
Reg. No. 46,149

4108 131st Ave SE
Bellevue, WA 98006

AUGUST 8, 2008
NOTICE OF ALLOWABILITY

Notice of Allowability	Application No. 11/045,757	Applicant(s) ROHRABAUGH ET AL.
	Examiner Quoc A. Tran	Art Unit 2176

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Applicant's amendments/remarks filed 05/20/2008.
2. ☒ The allowed claim(s) is/are 71-92, 94-242,244-335,337-389 and 391-393- renumbering as 1-319 (see claims indexing for claims renumbering details).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All b) ☐ Some* c) ☐ None of the:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
   3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

   * Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application. **THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
   (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
   1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
   (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

   Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date See Continuation Sheet
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____ .
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____.

/Doug Hutton/
Supervisory Patent Examiner
Technology Center 2100

Continuation of Attachment(s) 3. Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date: 1/22/08;10/28/08;10/05/08;9/20/07;9/20/07;9/18/07;9/17/07;5/6/07 and 1/28/08.

DETAILED ACTION

In response to Applicant's Response after NonFinal Office Action filed 05/20/2008, originally filed 01/28/2005, which claimed priority of 09/828,511 filed 04/07/2001 from provisional 60/211,019 dated ***06/12/2000*** (SoftSource). It is noted amendments to the claims are accepted and entered. Also, the "***Terminal Disclaimer"*** for copending patent application number 09/878,097 was filed on 06/08/2008 and was approved on 06/30/2008.

Claims ***71-92; 94-242; 244-335; 337-389 and 391-393*** are allowed (see reason for allowance for details).

Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Response to Arguments

Applicant's arguments filed 05/20/2008 have been fully considered and they are persuasive.

Allowable Subject Matter

Claims 71-92; 94-242; 244-335; 337-389 and 391-393 are allowed.

Interpreting the claims in light of the specification, Examiner finds the claimed invention is patentably distinct from the prior art of record, ***Chithambaram*** et al. US006674445B1 -Provisional No.60/159,069 filed 10/12/1999, in view of ***Roy*** et al. US006642925B2 -Continuation of No.08/757,706 filed 10/30/1996, further in view of ***Blumberg*** US006886034B2 -Continuation of No.09/267,951 filed 03/11/1999, which set forth in the previous rejection mailed on 10/23/2007.

Under the broadest reasonable interpretation of the claimed limitation consistence with the Applicant's Specification, the prior art of record fail to teach all of the Applicant's claimed limitations. The claimed invention advantageously provides a finer level of detail when displaying HTML Web pages, designed for desktop computers, on a “small-screen” device, such as a cell phone and/or a PDA.

In particular, the claimed invention takes **HTML**-based Web content **in its original format** (which defines the page layout, **functionality** and design of the web page) and ***translates*** the HTML-based Web content into “**scalable content**” that supports a scalable, **resolution-independent** representation of the HTML-based Web content. In other words, the claimed invention ***converts*** an **HTML** web page into a “**vector graphics**” web page and displays the web page on a PDA. When viewing the "vector graphics" web page on the PDA, the user may ***zoom in and out*** of the displayed web page, in order to increase/decrease the size of the web page components that are displayed on the PDA. Addtionally, the claimed invention preserves the <u>**functionality**</u> of the <u>**original HTML web page**</u> <u>***after***</u> it has been ***translated*** into a <u>**"vector graphics" web page**</u> and displayed on the PDA. See Applicant's Remarks on Pages 91-94 of the Response dated 05/20/2008. See also independent claims 71, 99, 128, 143, 174, 180, 211, 244, 265 , 271, 303, 337 and 359.

The Examiner asserts that the claims overcome the prior art of record when the limitations are read in combination with the respective claimed limitations in their entirety.

The dependent claims, further limiting the independent claims, are also allowed.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc A. Tran whose telephone number is 571-272-8664. The examiner can normally be reached on Mon through Fri 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on (571)272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/*Quoc A, Tran*/
Patent Examiner

/*Doug Hutton*/
Doug Hutton
Supervisory Primary Examiner
Technology Center 2100

APRIL 1, 2010
OFFICE ACTION

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/738,486	04/21/2007	Gary B. Rohrabaugh		7593

7590 04/01/2010

GARY ROHRABAUGH
3112 MAPLE RIDGE COURT
BELLINGHAM, WA 98229

EXAMINER	
TRAN, QUOC A	

ART UNIT	PAPER NUMBER
2176	

MAIL DATE	DELIVERY MODE
04/01/2010	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

Office Action Summary	Application No.	Applicant(s)	
	11/738,486	ROHRABAUGH ET AL.	
	Examiner	**Art Unit**	
	Quoc A. Tran	2176	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-88* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-88* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 November 2009* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date *12/21/09; 11/28/09; 04/18/09 and 08/05/07*.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This is a Non Final Office Action in responses to Preliminary Amendments filed 11/28/2009. The current patent application originally filed 04/21/2007.

It is noted the current application is a continuation of 09/878,097 now is US Patent 7,210,099 filed 06/08/2001 issued 04/24/2007, which is a continuation in part of ***09/828,511***, which Claims Priority from Provisional Application 60/211,019 filed ***06/12/2000***, which claims Priority from Provisional Application 60/217,345 filed 07/11/2000.

- Claims 1-88 are pending.
- Claims 1; 27; 51 and 79 are independent claim.

In addition, the Examiner acknowledges Applicant's amendment to the specification and the drawings filed 11/28/2009.

Information Disclosure Statement

The signed and dated copies of applicant's IDS, which were filed on 12/21/2009; 11/28/2009; 04/18/2009 and 08/05/2009, are attached to this Office Action.

It is noted, many references cited in the Information Disclosure Statement filed 11/28/2009; 04/18/2009 and 08/05/2007 fail to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because one the references does not list the RELEVANT PAGES [***RULE 1.98 (B) (5)*** (e.g., Pages 1-10)] of the publication as required. The examiner has not considered has lined through, that portion of the Information

Disclosure Statement as to the merits (see the attachments strike-out line items for details).

Applicant is advised that the date, title and author of any re-submission of any item of information contained in these Information Disclosure Statements or the submission of any missing elements will be the date, title and author of submission for purposes of determining compliance with the requirements based on the time of filing the statement, and title and author including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609.05(a).

Specification

The disclosure is objected to because of the following informalities: as to the preliminary amendment paper filed 11/29/2009, which is stated,

"In the Specification

Please replace paragraph [0001] with the following amended paragraph:

[0001] This application is a Continuation of [[US]] U.S. Non-provisional Application No. 09/878,097, filed June 8, 2001, entitled "RESOLUTION INDEPENDENT VECTOR DISPLAY OF INTERNET CONTENT," which is a Continuation-in-Part of U.S. Non-provisional Application No. ***09/825,511***…"

It is noted, the U.S. Non-provisional Application No. 09/82***5***,511 appears to be a typographical error of 09/82***8***,511 [see the preliminary amendment paper filed 11/29/2009, @ page 2 Para [0001]].

In addition, it is noted the Bib Data sheet is errored as well [see the Bib Data Sheet for details].

Appropriate correction is required.

Claims Rejections – 35 U.S.C. 112, Second Paragraph

The following is a quotation of the second paragraph of 35 U.S.C. 112:

> ***The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.***

Claims 1; 11; 13; 15-16; 25; 27; 29; 35; 37; 39; 40; 49; 56; 61; 63; 65; 66; 75; 84; 86 and 87 rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention, because claims 1; 11; 13; 15-16; 25; 27; 29; 35; 37; 39; 40; 49; 56; 61; 63; 65; 66; 75; 84; 86 and 87 recited the limitation "***substantially***"; which renders the claim indefinite, since one of ordinary skill in the art would not be reasonably appraised the metes and bounds of the claims. Appropriate correction is required.

In the interest of compact prosecution, the application is further examined against the prior art, as stated below, upon the assumption that the applicants may overcome the above stated rejections under 35 U.S.C. 112.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either ***anticipated by, or would have been obvious over***, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and In *re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-88 are rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over **Claims 1-50** of U.S. Patent No. **7,210,099** (hereinafter, "the '099 patent" issued 04/24/2007) and **claims 1-319** of US Patent **7,461,353** (hereinafter, "the '353 patent" issued 12/02/2008). Although the conflicting claims ***are not identical,*** but ***they are not patentably distinct from each other*** because they are both exhibiting similar method of resolution independent vector displaying on Internet content of wireless hand-help devices.

Claims 1-88 of current application and the '099 Patent and '353 are compared as follows,

Current application	US Patent 7,210,090 & US Patent 7,461,353
Claims 1-88:	**Claims 1-50 of patent '090 & Claims 1-319 of patent '353:**
A mobile device, comprising: a processor, a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which Web content may be accessed; a touch-sensitive display; a memory, operatively coupled to the processor; and storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile phone to perform operations including, (claim 1)	***A device*** comprising: a processor, a communications device coupled to the processor; a display; and a memory, coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the device to perform operations including, (claim 7) wherein the user input comprises tapping the column with a stylus (claim 27); the instructions are embodied as a micro-browser configured to run on ***a mobile device*** (claim 48) also see (claims 1-319 of patent '353).
enabling a user to request to access a Web page having an ***original format defining an original page layout*** and attributes; retrieving HTML-based Web content associated with the Web page	to enable the device to be linked to a network via which Web content may be accessed; (claim 7) said Web content associated with a Web page having an

defining an original page layout of content on the Web page; translating the HTML-based Web content to produce ***scalable vector-based*** page layout information; and employing the scalable vector-based page layout information and/or data derived therefrom to, render at least a portion of the Web page on the touch-sensitive display using a first scale factor; (claim 1)	***original page layout and attributes*** including at least one hyperlink, receiving, at the client device, vector-formatted Web content comprising ***a scalable vector*** representation of at least a portion of the Web page that supports a scalable resolution-independent display of the Web content that substantially retains the original page layout and attributes of the Web page when it is rendered on the client device (claim 1)
and re-render the Web page in response to associated user inputs ***to enable a user to iteratively zoom in and out*** a display of the Web page claim 1)	rendering the vector-formatted Web content on the display using a first scaling factor to generate a first display of the Web content on the device; and enabling a user to iteratively ***zoom in and out on user-selectable portions*** of the Web content on the display via associated user interface inputs made by a user; enabling a user to select a hyperlink on the displayed Web content via an associated user interface input; receiving vector-formatted Web content; comprising a scalable vector representation of a at least a portion of Web page having an original page layout and attributes including at least one hyperlink, said vector-formatted Web content providing a scalable resolution-independent display of the at least a portion of the Web page that substantially retains the original page layout and attributes of the Web page when it is rendered; and in response thereto, requesting Web content corresponding to the selected hyperlink; receiving vector-formatted Web content corresponding to the requested Web content; and rendering at least a portion of the vector-formatted Web content on the client device enabling a user to select a hyperlink on the displayed Web content via an associated user interface input; and

	in response thereto, requesting Web content corresponding to the selected hyperlink; (claim 7); also (see claims 1-319 of patent '353).
Claims 2-88	Claims 1-50 of Patent '099 Claims 1-319 of Patent '353

Allowable Subject Matter

Claim(s) 1-88 would be allowable, if filing Terminal Disclaimer to overcome the obviousness-type double patenting rejection and rewritten to overcome and 35 USC 112, and rewritten to overcome the objections to the specification set forth in this Office action. Also see the "Allowable Subject Matter", which was recited in the Notice of Allowance of the parent application No. 11/045,757 dated 08/08/2008 @ pages 3-4, which is now US Patent 7,461,353 issued 12/02/2008 for details).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Quoc A. Tran whose telephone number is 571-272-8664. The examiner can normally be reached on Mon through Fri 8AM - 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doug Hutton can be reached on (571)272-4137. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Quoc A. Tran/
Examiner, Art Unit 2176

/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176

APRIL 21, 2010
AMENDMENT AND RESPONSE TO OFFICE ACTION

Attorney Docket No. 005207.P001XC3 *Patent*

Certificate of Electronic Filing

I hereby certify that this correspondence is being Electronically Filed via EFS

on April 21, 2010

Date of Electronic Filing

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett April 21, 2010

Signature Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
Rohrabaugh et al.	) Examiner: Tran, Quoc A.
	)
Serial No. 11/738,486	) Art Unit: 2176
	)
Filed: April 21, 2007	)
	)
For: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES	)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

AMENDMENT AND RESPONSE TO OFFICE ACTION

Sir:

In response to the non-final Office Action mailed April 1, 2010, the Applicants request the Examiner to enter the amendment and reconsider all pending claims in view of the amendment and the following remarks.

Amendments begin on page 2.

Remarks begin on page 27.

AMENDMENT

In the Specification

Please replace paragraph [0001] with the following amended paragraph:

[0001] This application is a Continuation of U.S. Non-provisional Application No. 09/878,097, filed June 8, 2001, (issued as U.S. 7,210,099) entitled “RESOLUTION INDEPENDENT VECTOR DISPLAY OF INTERNET CONTENT,” which is a Continuation-in-Part of U.S. Non-provisional Application No. ~~09/825,511~~ 09/828,511, filed April 7, 2001, (Abandoned) entitled “RESOLUTION INDEPENDENT VECTOR DISPLAY OF INTERNET CONTENT,” the benefit of the filing ~~date~~ dates of which is claimed under 35 U.S.C. § 120. ~~This application~~ U.S. Non-provisional Application No. 09/878,097 further claims the benefit of the filing dates of U.S. Provisional Application No. 60/211,019, filed June 12, 2000, entitled “METHOD AND SYSTEM FOR RESOLUTION INDEPENDENT DISPLAY OF HTML AND XML CONTENT” and U.S. Provisional Application No. 60/217,345, filed July 11, 2000, entitled “METHOD AND SYSTEM FOR SELECTION, RETRIEVAL, AND CONVERSION OF COMPUTER CONTENT TO VECTOR FORMAT FOR RESOLUTION INDEPENDENT DISPLAY,” under 35 U.S.C. § 119(e). The disclosure of each of the foregoing applications is incorporated by reference in its entirety herein for all purposes.

In the Claims

This listing of claims replaces all prior versions and listing of claims in the application. Amendments or cancellations of any claims are done without prejudice, waiver and/or disclaimer. Applicants reserve the right to claim the subject matter of any amendment and/or cancellation in a continuing application.

1. (Currently Amended) A mobile device, comprising:

a processor,

a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which Web content may be accessed;

a touch-sensitive display;

a memory, operatively coupled to the processor; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile phone to perform operations including,

enabling a user to request ~~to~~ access to a Web page comprising HTML-based Web content ~~having an original format~~ defining an original page layout and attributes of content on the Web page;

retrieving HTML-based Web content associated with the Web page ~~defining an original page layout of content on the Web page~~;

translating the HTML-based Web content to produce scalable vector-based page layout information; and

employing the scalable vector-based page layout information and/or data derived therefrom to,

render at least a portion of the Web page on the touch-sensitive display using a first scale factor; and re-render the Web page in response to associated user inputs to enable a user to iteratively zoom in and out a display of the Web page.

2. (Original) The mobile device of claim 1, wherein the device comprises a mobile phone.

3. (Currently Amended) The mobile device of claim 1, wherein the device comprises one of a ~~Personal Digital Assistant (PDA) or pocket PC~~ hand-held device or a palm-held device.

4. (Original) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input made via the touch-sensitive display.

5. (Currently Amended) The mobile device of claim [[4]] 1, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

6. (Original) The mobile device of claim 1, wherein the Web content includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the touch-sensitive display; and, in response thereto,

retrieving and translating HMTL-based Web content associated with the hyperlink to produce additional scalable vector-based page layout information; and

employing the additional scalable vector-based page layout information and/or data derived therefrom to render the Web content associated with the hyperlink on the touch-sensitive display.

7. (Currently Amended) The mobile device of claim [[1]] 89, ~~wherein execution of the instructions performs further operations comprising:~~

~~parsing HTML-based code to determine the original page layout of display content within the Web page,~~ wherein the ~~original~~ page layout information defines a layout location for a plurality of objects, including text objects, graphic layout objects, and/or ~~graphic~~ image objects included ~~in~~ on the Web page, and wherein producing vector-based page layout information comprises:

defining a primary datum corresponding to ~~the~~ a ~~original~~ page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object on the page layout;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to its corresponding vector.

8. (Currently Amended) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the Web content to be displayed at different resolutions by scaling the scalable vector-based ~~content~~ page layout information to ~~re-render~~ resize a view of the Web page on the display in response to associated user inputs.

9. (Original) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising returning the display of the Web content to a previous view in response to a corresponding user input made via the touch-sensitive display.

10. (Original) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user input made via the touch-sensitive display.

11. (Currently Amended) The mobile device of claim 10, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned ~~substantially~~ in real-time.

12. (Original) The mobile device of claim 1, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable vector-based page layout information and/or data derived therefrom is scaled to render a display having a different aspect ratio.

13. (Currently Amended) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to view a column of the Web content at a higher resolution than a current resolution by tapping on the column via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed ~~substantially~~ to fit across the touch-sensitive display.

14. (Canceled)

15. (Currently Amended) The mobile device of claim 1, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution by tapping on the image via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that the image is displayed ~~substantially~~ to fit across ~~at least one of~~ a width ~~and height~~ of a display area of the touch-sensitive display.

16. (Currently Amended) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to view a paragraph of the Web content at a higher resolution than a current resolution by tapping on the paragraph via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed ~~substantially~~ to fit across ~~at least one of~~ a width ~~and height~~ of a display area of the touch-sensitive display.

17. (Canceled)

18. (Canceled)

19. (Currently Amended) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising:

generating a display list ~~of vectors~~ derived, at least in part, via use of the vector-based page layout information; and

employing the display list to re-render the display of the Web page.

20. (Currently Amended) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to ~~determine the original page layout of the content on the Web page;~~ logically ~~grouping~~ group ~~selected~~ content into objects, the objects including a plurality of display objects;

defining a primary datum corresponding to ~~the original~~ a page layout; and,

for each display object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and creating a reference that links the object to its corresponding vector.

21. (Currently Amended) The mobile device of claim [[20]] 1, wherein execution of the instructions performs further operations comprising:

parsing the HTML-based content to logically group content into objects;

generating page layout information including a bounding box for each object, the bounding box ~~representing a portion of a rendered display page occupied by the object's associated group of content~~ defining width and height dimensions for the object; and

storing information that links each object with its corresponding page layout information;

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined.

22. (Currently Amended) The mobile device of claim [[18]] 20, wherein execution of the instructions performs further operations comprising:

mapping the object vectors ~~and associated bounding boxes~~ to a virtual display area in memory.

23. (Cancelled)

24. (Original) The mobile device of claim 1, wherein the scalable vector-based content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

25. (Currently Amended) The mobile device of claim [[1]] 89, wherein the original format of the Web page defines a ~~height and~~ width for the Web page, as interpreted by

the rendering engine, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to ~~display~~ fit ~~at least one of~~ the width ~~and height~~ of the Web page ~~substantially~~ across a display area of the touch-sensitive display; and

employing the scale factor that is determined as the first scale factor.

26. (Original) The mobile device of claim 1, wherein at least a portion of the instructions comprise Java-based instructions configured to be executed on a Java virtual machine.

27. (Currently Amended) A mobile phone, comprising:

a processor,

wireless communications means operatively coupled to the processor, to facilitate communication with a mobile service provider network via which Web content may be accessed;

a touch-sensitive display;

a memory, operatively coupled to the processor; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile phone to perform operations including,

rendering a browser interface via which a user is enabled to request ~~to~~ access to a Web page having an original format defining an original page layout and attributes of content on the Web page;

retrieving Web content associated with the Web page;

translating at least a portion of the Web content from its original format into scalable vector-based content that supports a scalable resolution-independent display of the content that ~~substantially~~ retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable vector-based content to render at least a portion of the Web page on the display using a first scale factor.

28. (Original) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input made via the touch-sensitive display.

29. (Currently Amended) The mobile phone of claim 28, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

30. (Original) The mobile phone of claim 27, wherein the Web content includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the touch-sensitive display; and, in response thereto,

retrieving and translating the Web content associated with the hyperlink to produce additional scalable vector-based content; and

employing the additional scalable vector-based content to render the Web content associated with the hyperlink on the touch-sensitive display.

31. (Currently Amended) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising:

parsing <u>and processing</u> markup language code <u>associated with the Web page</u> to determine the original page layout of display content within the Web page, wherein the original page layout defines a layout location for a plurality of objects, including text objects, graphic layout objects, and/or graphic image objects included in the Web page;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to the layout location for the object;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to its corresponding vector.

32. (Original) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising enabling the Web content to be displayed at different resolutions by scaling the scalable vector-based content to re-render the display in response to associated user inputs.

33. (Original) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising returning the display of the Web content to a previous view in response to a corresponding user input made via the touch-sensitive display.

34. (Original) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user input made via the touch-sensitive display.

35. (Currently Amended) The mobile phone of claim 34, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned ~~substantially~~ in real-time.

36. (Original) The mobile phone of claim 27, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable vector-based

content is scaled when rendered so as to produce a display having a different aspect ratio.

37. (Currently Amended) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising enabling a user to view a column of the Web content at a higher resolution than a current resolution by tapping on the column via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed ~~substantially~~ to fit across the touch-sensitive display.

38. (Canceled)

39. (Currently Amended) The mobile phone of claim 27, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution by tapping on the image via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that the image is displayed ~~substantially~~ to fit across at least one of a width and height of a display area of the touch-sensitive display.

40. (Currently Amended) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising enabling a user to view a paragraph of the Web content at a higher resolution than a current resolution by tapping on the paragraph via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed ~~substantially~~ across at least one of a width and height of a display area of the touch-sensitive display.

41. (Canceled)

42. (Canceled)

43. (Currently Amended) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising:

generating a display list ~~of vectors~~ associated with the scalable vector-based content; and

employing the display list to re-render the display at different scale factors to enable rapid zooming of the Web page.

44. (Currently Amended) The mobile phone of claim 27, wherein execution of the instructions performs further operations comprising:

parsing <u>and processing</u> markup language code corresponding to the received Web content to determine <u>page layout information corresponding to</u> ~~the original~~ <u>a</u> page layout of the content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the ~~original~~ page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to its corresponding vector.

45. (Currently Amended) The mobile phone of claim [[44]] <u>27,</u> wherein execution of the instructions performs further operations comprising:

<u>parsing markup language code corresponding to the received Web content to logically group selected content into objects;</u>

generating page layout information including a bounding box for each object, the bounding box ~~representing a portion of a rendered display page occupied by the object's associated group of content~~ defining width and height dimensions for the object; and

storing information that links each object with its corresponding page layout information;

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined.

46. (Currently Amended) The mobile phone of claim 44, wherein execution of the instructions performs further operations comprising:

mapping the object vectors ~~and associated bounding boxes~~ to a virtual display area in memory.

47. (Currently Amended) The mobile phone of claim 46, wherein execution of the instructions performs further operations comprising:

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered ~~display~~ view of the Web content desired by a user;

determining a virtual display limit bounding box for the virtual display area associated with the first scale factor and offset;

identifying ~~object~~ objects ~~bounding boxes~~ having at least a portion of their content falling within the virtual display limit bounding box; and,

for each of such ~~object~~ objects ~~bounding boxes~~,

retrieving content associated with that object ~~bounding box~~; and

applying an appropriate scale factor and offset to the content to render the ~~display~~ view of the Web content.

48. (Original) The mobile phone of claim 27, wherein the scalable vector-based content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

49. (Currently Amended) The mobile phone of claim 27, wherein the original format of the Web page defines a ~~height and~~ width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to ~~display~~ fit ~~at least one of~~ the width ~~and height~~ of the Web page ~~substantially~~ across a display area of the touch-sensitive display; and

employing the scale factor that is determined as the first scale factor.

50. (Original) The mobile phone of claim 27, wherein at least a portion of the instructions comprise Java-based instructions configured to be executed on a Java virtual machine.

51. (Currently Amended) A mobile device, comprising:

a processor,

wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed;

a touch-sensitive display;

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request ~~to~~ access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving and processing the HTML-based Web content to produce scalable content; and

employing the scalable content and/or data derived therefrom to,

render the Web page on the touch-sensitive display; and

re-render the Web page in response to associated user inputs to enable the user to iteratively zoom in and out a display of the Web page.

52. (Original) The mobile device of claim 51, wherein the device comprises a mobile phone.

53. (Original) The mobile device of claim 51, wherein the device comprises one of a Personal Digital Assistant (PDA) or pocket PC.

54. (Original) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input made via the touch-sensitive display.

55. (Original) The mobile device of claim 54, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

56. (Currently Amended) The mobile device of claim 51, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

57. (Original) The mobile device of claim 51, wherein the Web page includes at least one hyperlink, and wherein execution of the instructions performs further operations comprising:

enabling the user to select the hyperlink via the touch-sensitive display; and, in response thereto, retrieving and processing HMTL-based Web content associated with the hyperlink to produce additional scalable content; and

employing the additional scalable content and/or data derived therefrom to render the Web content associated with the hyperlink on the touch-sensitive display.

58. (Original) The mobile device of claim 51, wherein at least a portion of the scalable content comprises scalable vector-based content.

59. (Original) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising returning the display of the Web page to a previous view in response to a corresponding user input made via the touch-sensitive display.

60. (Original) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user input made via the touch-sensitive display.

61. (Currently Amended) The mobile device of claim 60, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned ~~substantially~~ in real-time.

62. (Original) The mobile device of claim 51, wherein the page layout of the Web page is defined to have an original aspect ratio, and wherein the scalable content and/or data derived therefrom is scaled to render a display having a different aspect ratio.

63. (Currently Amended) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising enabling a user to view a column of the Web content at a higher resolution than a current resolution by tapping on the column via the touch-sensitive display, wherein in response thereto, the display is re-

rendered such that content corresponding to the selected column is displayed ~~substantially~~ across the touch-sensitive display.

64. (Canceled)

65. (Currently Amended) The mobile device of claim 51, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution by tapping on the image via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that the image is displayed ~~substantially across at least one of~~ <u>to fit</u> a width ~~and height~~ of a display area of the touch-sensitive display.

66. (Currently Amended) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising enabling a user to view a paragraph of the Web content at a higher resolution than a current resolution by tapping on the paragraph via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that content corresponding to the selected paragraph is displayed ~~substantially~~ across at least one of a width and height of a display area of the touch-sensitive display.

67. (Original) The mobile device of claim 66, wherein the content of the paragraph is reformatted to fit characteristics of the display area when the display is re-rendered.

68. (Original) The mobile device of claim 51, wherein the Web page includes text, layout attributes, and images, and wherein execution of the instructions performs further operations comprising:

receiving content corresponding to the text and layout attributes via a first connection; and

receiving content corresponding to at least one image via a second connection.

69. (Currently Amended) The mobile device of claim 51, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list via use of the scalable content and rendering the display list on a virtual display area in the dynamic memory; and

scaling the display list to re-render the display of the Web page.

70. (Currently Amended) The mobile device of claim 51, wherein execution of the instructions performs further operations comprising:

parsing HTML-based code corresponding to the received Web content to ~~determine the original page layout of the~~ identify content on the Web page;

logically grouping selected content into objects;

defining a primary datum corresponding to the original page layout; and,

for each object,

defining an object datum corresponding to a layout location datum for the object's associated display content;

generating a vector from the primary datum to the object datum for the object; and

creating a reference that links the object to its corresponding vector.

71. (Original) The mobile device of claim 70, wherein execution of the instructions performs further operations comprising:

generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content.

72. (Currently Amended) The mobile device of claim 68, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

mapping the object vectors and associated bounding boxes to a virtual display area in the dynamic memory.

73. (Currently Amended) The mobile device of claim 72, wherein execution of the instructions performs further operations comprising:

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display limit bounding box for the virtual display associated with the first scale factor and offset;

identifying object bounding boxes having at least a portion falling within the virtual display limit bounding box; and,

for each of such object bounding boxes,

retrieving content associated with that object bounding box; and

applying an appropriate scale factor to the content to render the display.

74. (Original) The mobile device of claim 51, wherein the scalable content includes scalable text content, and wherein execution of the instructions performs further operations comprising scaling a scalable font to render the scalable text content.

75. (Currently Amended) The mobile device of claim 51, wherein the original format of the Web page defines a ~~height and~~ width for the Web page, and wherein execution of the instructions performs further operations comprising:

determining an applicable scale factor to ~~display~~ fit ~~at least one of~~ the width ~~and height~~ of the Web page ~~substantially~~ across a display area of the touch-sensitive display; and

employing the scale factor to render the display area.

76. (Original) The mobile device of claim 51, wherein at least a portion of the instructions comprise Java-based instructions configured to be executed on a Java virtual machine.

77. (Original) The mobile device of claim 51, wherein a portion of the HTML-based Web content comprises XML-based content.

78. (Currently Amended) The mobile device of claim 51, wherein a portion of the HTML-based Web content comprises ~~cascaded~~ cascading style sheet data.

79. (Currently Amended) A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed;

touch-sensitive display means, to facilitate user input and display rendered content;

programmed circuit means; and

storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by at least one of the processing means and programmed circuit means, the mobile device is enabled to perform operations, including,

rendering a browser interface via which a user is enabled to request ~~to~~ access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving and processing the HTML-based Web content to produce scalable content; and

employing the scalable content and/or data derived therefrom to,

render the Web page on the touch-sensitive display; and

re-render the Web page in response to associated user inputs made via the touch-sensitive display means to enable the user to iteratively zoom in and out a display of the Web page.

80. (Original) The mobile device of claim 79, wherein the processing means includes a general-purpose processor.

81. (Original) The mobile device of claim 79, wherein at least a portion of the programmed circuit means is embodied as a special-purpose processor.

82. (Original) The mobile device of claim 79, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a user interface input made via the touch-sensitive display.

83. (Original) The mobile device of claim 82, wherein the user interface input enables the user to define a window of a current view of the Web page on which to zoom in on.

84. (Currently Amended) The mobile device of claim 79, wherein the display of the Web page is re-rendered ~~substantially~~ in real-time to effect zooming operations.

85. (Original) The mobile device of claim 79, wherein execution of the instructions performs further operations comprising enabling a user to pan a display of the Web content in response to a corresponding user input made via the touch-sensitive display.

86. (Currently Amended) The mobile device of claim 85, wherein execution of the instructions performs further operations comprising enabling the display of the Web content to be panned ~~substantially~~ in real-time.

87. (Currently Amended) The mobile device of claim 79, wherein the Web content includes at least one image, and wherein execution of the instructions performs further operations comprising enabling a user to view an image at a higher resolution than a current resolution by tapping on the image via the touch-sensitive display, wherein in response thereto, the display is re-rendered such that the image is displayed ~~substantially~~ to fit across ~~at least one of~~ a width ~~and height~~ of a display area of the touch-sensitive display.

88. (Currently Amended) The mobile device of claim 79, further comprising dynamic memory having at least a portion employed for rendering purposes, wherein execution of the instructions performs further operations comprising:

building a display list of scalable content via use of the scalable content and rendering the display list on a virtual display area in the dynamic memory; and

scaling the scalable content in the display list to re-render the display of the Web page.

-- 89. (New) The mobile device of claim 1, wherein translating the HTML-based Web content to produce scalable vector-based page layout information comprises:

processing the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout as interpreted by the rendering engine; and

employing the page layout information to produce scalable vector-based page layout information;

90. (New) The mobile device of claim 1, wherein zooming operations are effected by applying a mathematical transformation to a plurality of points in a two-dimensional coordinate system comprising X and Y axes, including points comprising datum points having corresponding vectors included in the scalable vector-based page layout information defining page layout locations of corresponding text and image objects mapped to the two-dimensional coordinate system, wherein the mathematical transformation comprises,

$$X' = X * SF + \Delta X;$$

$$Y' = Y * SF + \Delta Y;$$

wherein X, Y is the location of a point prior to transformation, X', Y' is the location of the point after transformation, SF is the scale factor, ΔX is a translation along the X axis, and ΔY is a translation along the Y axis.

91. (New) The mobile device of claim 90, wherein the mathematical transformation is applied to points in a first coordinate system comprising a virtual coordinate system associated with a virtual display area onto which page layout information is mapped to a second coordinate system comprising a device coordinate system corresponding to a pixel resolution of the display of the mobile device, wherein points are mapped from the first coordinate system to the second coordinate system using the mathematical transformation.

92. (New) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising maintaining at least one instance of the page layout information in a manner that is independent of the zoom levels used to view the web page on the display.

93. (New) The mobile device of claim 7, wherein execution of the instructions performs further operations comprising effecting a zoom operation combined with a pan operation by,

for each of the plurality of display objects to be included in a panned view of the Web page to be rendered on the display,

scaling page layout information associated with the display object using a scale factor corresponding to a zoom level associated with the zoom operation to determine a scaled datum;

determining an offset corresponding to the pan operation and combining the scaled datum with the offset to produce a scaled and offset datum that defines a location where the display object is to be rendered on the panned view of the Web page;

scaling content associated with the display object using the scale factor; and

rendering the scaled content at the location defined by the scaled and offset datum to render the display object on the panned view of the Web page.

94. (New) The mobile device of claim 93, wherein rendering scaled content associated with a text object comprises:

retrieving presentation attributes for the text object, the presentation attributes including a font typeface, size and color;

employing a scalable font associated with the font typeface to render text associated with the text object in a color associated with the color attribute, wherein the text is rendered relative to a location associated with the scaled and offset datum for the text object, and wherein the scale applied to the scalable font is a function of the scale factor and the font size.

95. (New) The mobile device of claim 1, wherein the HTML-based Web content includes cascading style sheet content defining layout and presentation attributes for the Web page.

96. (New) The mobile device of claim 27, wherein the original format of the Web page comprises HTML-based Web content and the vector-based scalable content comprises scalable vector-based page layout information, and wherein execution of the instructions performs further operations comprising:

processing the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout as interpreted by the rendering engine;

employing the page layout information to generate the scalable vector-based page layout information. --

REMARKS

This amendment and remarks are made in response to the non-final Office Action dated April 1, 2010. In the Office Action 1, 11, 13, 15-16, 25, 27, 29, 35, 37, 39, 40, 49, 56, 61, 63, 65, 66, 75, 85, 86, and 87 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1-88 were provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-319 of US Patent 7,461,353 and claims 1-50 of US Patent 7,210,099.

In the amendment herein, claims 1, 3, 5, 7, 8, 11, 13, 15, 16, 19, 20, 21, 22, 25, 27, 29, 31, 35, 37, 39, 40, 43-47, 49, 51, 56, 61, 63, 65, 66, 69, 70, 72, 73, 75, 78, 79, 84, and 86-88 are amended to more clearly recite the claimed invention of each claim. Claims 14, 17, 18, 23, 38, 41, 42, and 64 are canceled. New claims 89-96 have been added. Accordingly, claims 1-13, 15, 16, 19-22, 24-37, 39, 40, 43-63, and 65-96 are now pending.

Information Disclosure Statement

Applicants acknowledge that many of the references cited in the information statements filed on 4/18/2009 and 08/05/2007 did not contain references to page numbers. To address this, reference to page numbers for these references were added in the IDS filed 11/28/2009. However, there were four items contained in the 11/28/2009 IDS that did not include page numbers. These were copies of the Official USPTO Actions for applications related to the present application (09/878,097, 11/045,649, 11/045,757 and 11/738,932) and were submitted in the IDS of 11/28/1009 in accordance with the decision in *McKesson Information Solutions, Inc. v. Bridge Medical, Inc.,* 487 F.3d 897 (Fed. Cir. 2007). A supplemental IDS is submitted herewith identifying the entirety of the references are deemed relevant (further noting that there are no explicit page numbers for a printed or scanned version of the Official USPTO

Actions for each application, since they each include copies of multiple Official Actions issued over the course of prosecution for each application). At the same time, Applicants do not believe that the Official USPTO Actions of related application need be cited in the list of references on an issued patent, as the Official USPTO Actions are not prior art references. However, the only mechanism Applicants are aware of to meet the disclosure of Official USPTO Actions in related applications as set forth in *McKesson* is to submit the Official USPTO Actions in an IDS. Applicants further note that copies of the Official USPTO Actions for 09/878,097, 11/045,649, 11/045,757 and 11/738,932 were submitted electronically on 11/28/2009 and are not being resubmitted electronically herewith.

Correction of Application Serial Number in Specification

Applicants thank the Examiner for identifying the inadvertent error in identification of U.S. Non-provisional Application No. 09/82**5**,511 in paragraph [0001] of the specification. The application number has been corrected to 09/82**8**,511.

Claim Rejections – 35 U.S.C. §112, Second Paragraph

Claims 1, 11, 13, 15-16, 25, 27, 29, 35, 37, 39, 40, 49, 56, 61, 63, 65, 66, 75, 85, 86, and 87 were rejected under 35 U.S.C. §112, second paragraph, as being indefinite for recitation of the limitation "substantially." (Applicants note that claim 1 does not include the term "substantially"; meanwhile, claim 5, prior to the present amendment, did include the term "substantially.") Each of claims 5, 11, 13, 15-16, 25, 27, 29, 35, 37, 39, 40, 49, 56, 61, 63, 65, 66, 75, 85, 86, and 87 have been amended herein to remove use of "substantially."

Obviousness-Type Double Patenting

Applicants are submitting terminal disclaimers herewith in consideration of pending obviousness-type double patenting rejections over US Patent No. 7,210,099, and U.S. Patent No. 7,461,353, along with the applicable fees under 37 C.F.R. 1.20(d). Applicants do not necessarily agree with the obviousness-type double patenting rejections, but have elected to submit the terminal disclaimer to immediately further prosecution.

Scope of the terminology "in real-time"

The term "substantially" in "substantially in real-time" has been removed from each of claims 5, 11, 29, 35, 56, 61, 84, and 86. In general, "in real-time" pertains to zooming and/or panning operations (as applicable) in each of these claims. The scope of the terminology "in real-time" is intended to pertain to the concept of real-time as perceived by humans when interacting with software, as opposed to the use of real-time to describe machine operations (*e.g.,* a real-time operating system), as discussed below.

One of skill in the art would recognize the meaning of the terminology "real time" varies depending on the particular use context. For example, for an embedded real-time operating system or implementation, real-time might mean a timeframe in the millisecond or even microsecond range. In this context, the time context is machine time and real-time means instantaneous. In another use context, such as replying to e-mail, real-time is significantly longer. For example, many people refer to responding to e-mail in "real time" – this means the people respond to new e-mails as they come in, as compared with waiting until the end of the day or some other time to respond to e-mails in more of a batch manner. In a real time flight tracking context, the data that is provided may actually reflect a tracking position that is several seconds, or even minutes, old.

One of skill in the art would recognize that in a software user-interface context, which is applicable to the present claims, the use of real-time typically means the user is enabled to continue an operation in a non-disrupted manner, meaning the user doesn't have to wait a period of time of significance for the operation to be performed. In this context, real-time is perceived by the user's sense of time.

As defined by SearchSMB.com Definitions[1]

real time

DEFINITION- Also see real-time clock and real-time operating system.

Real time is a level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present visualizations of the weather as it constantly changes). *Real-time* is an adjective pertaining to computers or processes that operate in real time. Real time describes a human rather than a machine sense of time.

In the days when mainframe batch computers were predominant, an expression for a mainframe that interacted immediately with users working from connected terminals was *online in real time*.

The inclusion of "substantially' in the use of a "substantially in real-time" context (as recited in the claims prior to the instant amendments) was to differentiate the claim from meaning it occurs instantaneously, which would be an erroneous interpretation under the proper use context. Rather, the operation is performed in a non-disrupted manner, as experienced by the user. For the purpose of a defined time period, "in real time" as used herein means the operation is performed in a few seconds or less.

New Claims 89-96

New claims 89-96 have been added herein. Support for disclosure of the subject matter of the new claims is provided at least as follows. In addition, there may be further support elsewhere in the specification and drawings.

With respect to new claims 89 and 96, the use of a rendering engine for determining page layout information is generally discussed in paragraphs [0076] - [0082] with reference to the flowchart of FIG. 5.

With respect to new claim 90, the disclosure of the use of mathematical transformations to effect scaling and offset of scalable content is generally discussed in paragraphs [0092] - [0097] with reference to the flowchart of FIG. 6 and the XY page

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[1] http://searchsmb.techtarget.com/sDefinition/0,,sid44_gci214344,00.html

layout examples of FIGS. 4A-4G. More particularly, disclosure to support the use of transformation equations,

$X' = X * SF + \Delta X;$

$Y' = Y * SF + \Delta Y;$

is provided in paragraphs [0094] and [0095] and illustrated in FIG. 4G.

With respect to new claim 91, disclosure supporting use of the transformation equations of claim 90 to facilitate scaling and offset operations by mapping points on a page layout in a virtual coordinate system to a device coordinate system is discussed in paragraphs [0092] - [0097] with reference to the flowchart of FIG. 6 and the XY page layout examples of FIGS. 4A-4G. For example, in one embodiment the page layout information including object datums (i.e., XY points) determined by the operations in the flowchart of FIG.5 (and as illustrated in the XY page layout example of FIGs. 4A-D) are mapped as vectors to a virtual display area. The virtual display area comprises a virtual (XY) coordinate system that is resolution independent, and the datum points are mapped to the virtual coordinate system as point vectors (i.e., from XY pixel locations in the original page layout (as interpreted by the rendering engine) to XY coordinate points in the virtual coordinate system). The transformation equations, $X' = X * SF + \Delta X$ and $Y' = Y * SF + \Delta Y$ are then employed to mathematically transform (i.e., map) XY points (i.e., point vectors) from the virtual coordinate system to a device (X'Y') coordinate system corresponding to the pixel resolution of the device's display.

With respect to new claims 92-94, subject matter for each claim is generally discussed in paragraphs [0092] - [0097] with reference to the flowchart of FIG. 6 and the XY page layout examples of FIGS. 4A-4G.

With respect to new claim 95, the use of cascading style sheets (CSS) for defining object page layout and attribute information in Web pages (and processing the same to determine object page layout and attribute information) is generally discussed with reference to the flowcharts of FIGs. 2A-2C and in paragraph [0056].

Conclusion

In consideration of the terminal disclaimers, claim amendments and remarks submitted herewith, Applicants respectfully assert that all pending claims are in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: *April 21, 2010* /S/ R. Alan Burnett
R. Alan Burnett
Reg. No. 46,149

4108 131st Ave SE
Bellevue, WA 98006

SEPTEMBER 9, 2010
COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO./ CONTROL NO.	FILING DATE	FIRST NAMED INVENTOR / PATENT IN REEXAMINATION	ATTORNEY DOCKET NO.
11738486	4/21/07	ROHRABAUGH ET AL.	005207.P001XC3

LAW OFFICE OF R. ALAN BURNETT
4108 131ST AVE. SE
BELLEVUE, WA 98006

EXAMINER	
DOUG HUTTON	
ART UNIT	**PAPER**
2176	20100923

DATE MAILED:

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner for Patents

Regarding the Information Disclosure Statements dated 05/23/2010 and 09/09/2010, at least one of the listed references in each IDS does not fully comply with the requirements of 37 CFR 1.98(b) because at least one of the listed references in each IDS, identified as "non-patent literature documents" in each IDS, fails to identify, and/or incorrectly identifies, at least one of the following, as required in 37 CFR 1.98(b)(5):

1. publisher;
2. author (if any);
3. title;
4. relevant pages of the publication;
5. publication date; and
6. place of publication.

Each IDS has been placed in the application file, but at least one of the listed references in the non-patent literature portion of each IDS has not been considered.

Regarding the Office Action listed as a "non-patent literature document" in each IDS, the examiner notes that the text contained in that document has been considered and found to be non-evidentiary opinion regarding claims which are not under consideration in the present application.

The examiner notes that, for the present application, a Notice of Allowance was mailed on 06/09/2010 and Applicant paid the Issue Fee on 09/09/2010.

/DOUG HUTTON/
Supervisory Patent Examiner, Art Unit 2176

PTO-90C (Rev.04-03)

PART B - FEE(S) TRANSMITTAL

Complete and send this form, together with applicable fee(s), to: Mail **Mail Stop ISSUE FEE**
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59860 7590 06/09/2010

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)

(Signature)

(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
11/738,486	04/21/2007	Gary B. Rohrabaugh	005207.P001XC3	7593

TITLE OF INVENTION: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	YES	$755	$300	$0	$1055	09/09/2010

EXAMINER	ART UNIT	CLASS-SUBCLASS
TRAN, QUOC A	2176	715-200000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).
   - ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.
   - ☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. **Use of a Customer Number is required.**

2. For printing on the patent front page, list
   (1) the names of up to 3 registered patent attorneys or agents OR, alternatively,
   (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed.
   1 Law Office of R. Alan Burnett
   2 ____
   3 ____

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE: SoftView LLC

(B) RESIDENCE: (CITY and STATE OR COUNTRY): Bellingham, WA

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☒ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:
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- ☒ Publication Fee (No small entity discount permitted)
- ☐ Advance Order - # of Copies ____

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- ☐ A check is enclosed. ■ Payment made via EFS
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- ☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number ____ (enclose an extra copy of this form).

5. **Change in Entity Status** (from status indicated above)
- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27.
- ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature R. Alan Burnett Date Sept 9, 2010

Typed or printed name R. Alan Burnett Registration No. 46,149

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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Attorney Docket No. 005207.P001XC3 *Patent*

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Date of Electronic Filing

R. Alan Burnett

Name of Person Filing Correspondence

/S/ R. Alan Burnett September 9, 2010

Signature Date

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	)
	)
Rohrabaugh et al.	) Examiner: Tran, Quoc A.
	)
Serial No. 11/738,486	) Art Unit: 2176
	)
Filed: April 21, 2007	)
	)
For: SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES	)

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

COMMENTS ON STATEMENT OF REASONS FOR ALLOWANCE

Sir:

In response to the Notice of Allowance and Examiner's statement of reasons of allowance mailed on June 9, 2010, it is respectfully requested that the following comments be entered in the record of the above-referenced patent application.

COMMENTS

In the section entitled "Allowable Subject Matter" on page 28 of the Notice of Allowability, the Examiner states (emphasis in original),

> The following is a statement of reasons for indication of allowable subject matter: Under the broadest reasonable interpretation of the claimed limitation consistent with the Applicant's Specification, the claimed invention advantageously provides a method and device for creating resolution-independent vector display of Internet content to allow it to be scaled (zoomed) larger and smaller for better viewing or to fit any resolution or screen size, which are designed for a client device (e.g., desktop computers, a "small-screen" device, such as a cell phone, mobile device and/or a PDA).
>
> In particular, the claimed invention takes HTML-based Web content page layout of the web page and *translates* the HTML-based Web content into "scalable content" that supports a scalable, resolution-independent representation of the HTML-based Web content that for enabling Web pages in the ***original HTML-based content form to be accessed via mobile devices***, viewed at various zoom levels by zooming in and out views of the Web pages and interacted with via the mobile devices in a manner the ***preserves the original page layout, functionality*** (including preservation of hyperlink functionality), ***and design*** of the Web page content (as defined by its HTML-based content) (See also the currently amended independent claims 1, 27, 51, and 79 as recited above.)

The Examiner's statements of reasons for allowance are hereby acknowledged by Applicant. Applicant agrees that the claimed subject matter is patentable; however, the Examiner's reasons for allowance should not be attributed to Applicant as an indication of the basis for Applicant's belief that the claims are patentable.

Patentability of each claim is defined by the elements of that claim

It is well-established that the scope of a claim is defined by the claim elements in that particular claim, and the patentability of each claim is considered individually. Accordingly, elements that are not recited in a given claim are not to be read into the claim when interpreting its claim scope. Rather, the scope of each claim is to be interpreted based on its plain meaning[1] in view of the written description of the application. In particular, MPEP 2111.01 Plain Meaning [*R-5*] states, in part,

II. IT IS IMPROPER TO IMPORT CLAIM LIMITATIONS FROM THE SPECIFICATION

"Though understanding the claim language may be aided by explanations contained in the written description, it is important not to import into a claim limitations that are not part of the claim. For example, a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." *Superguide Corp. v. DirecTV Enterprises, Inc.*, 358 F.3d 870, 875, 69 USPQ2d 1865, 1868 (Fed. Cir. 2004). See also *Liebel-Flarsheim Co. v. Medrad Inc.*, 358 F.3d 898, 906, 69 USPQ2d 1801, 1807 (Fed. Cir. 2004)(discussing recent cases wherein the court expressly rejected the contention that if a patent describes only a single embodiment, the claims of the patent must be construed as being limited to that embodiment);< *E-Pass Techs., Inc. v. 3Com Corp.*, 343 F.3d 1364, 1369, 67 USPQ2d 1947, 1950 (Fed. Cir. 2003) ("Interpretation of descriptive statements in a patent's written description is a difficult task, as an inherent tension exists as to whether a statement is a clear lexicographic definition or a description of a preferred embodiment. The problem is to interpret claims 'in view of the specification' without unnecessarily importing limitations from the specification into the claims."); *Altiris Inc. v. Symantec Corp.*, 318 F.3d 1363, 1371, 65 USPQ2d 1865, 1869-70 (Fed. Cir. 2003) (Although the specification discussed only a single embodiment, the court held that it was improper to read a specific order of steps into method claims where, as a matter of logic or grammar, the language of the method claims did not impose a specific order on the performance of the method steps, and the specification did not directly or implicitly require a particular order).

The applicant respectfully asserts the basis for allowance for each claim in the present application is based on the elements recited in that claim alone and is not based on any elements or subject matter that is not recited in the claim. For example, independent claim 27 recites, in part (emphasis added),

> …
>
> retrieving HTML-based content associated with the Web page;
>
> translating at least a portion of the HTML-based content from its original format to produce *translated content including scalable vector-based content that supports a* ***scalable resolution-independent representation of the HTML-***

[1] Plain meaning is to be employed unless that plain meaning is inconsistent with the use of the terminology in the specification, noting that an inventor can be his own lexicographer. See MPEP 2111.01 and MPEP 2173.05(a)

based content *that preserves an original page layout, functionality and design of the at least a portion of the HTML-based content when scaled and rendered*; and

…

It is respectfully noted that the element pertaining to "support[ing] a ***scalable resolution-independent representation of the HTML-based content*** that preserves *an original page layout, functionality and design of the at least a portion of the HTML-based content when scaled and rendered"* is only present in independent claim 27 (and by way of dependency in claims 28-37, 38-40, 43-50 and 96, each of which is directly or indirectly dependent on claim 27), and is not present in any of the other allowed claims. Accordingly, since this or a similar element related to the terminology "scalable resolution-independent representation of the HTML-based content" is not recited in any of the other allowed claims, this element or such a similar element shall not be read into the scope of any claims other than 27-37, 38-40, 43-50, and 96.

As a second example, some of the claims recite the term "vector-based" as applied to a corresponding element (e.g., "vector-based" page layout information in claim 1), while other claims recite elements that are "scalable." Accordingly, if the recited claim language includes the term "scalable" without including the term "vector-based," then the scope of the claim does not require the corresponding element to be vector-based, although it doesn't preclude such elements from being vector based. For example, independent claim 51 recites, in part,

…

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout, functionality, and design of content on the Web page;

retrieving and processing the HTML-based Web content to produce ***scalable content***; and

employing the ***scalable content*** and/or data derived therefrom to, …

while dependent claim 58 recites,

The mobile device of claim 51, wherein at least a portion of the ***scalable content comprises scalable vector-based content***.

Similarly, independent claim 79 recites the same language (with respect to “scalable content”) as claim 51 presented above . Although there is no corresponding dependent claim (based on claim 79) that is analogous to claim 58, it will be understood that all or a portion of the scalable content referred to in claim 79 *may* comprise scalable vector-based content; however, this recited terminology does not require any of the scalable content to comprise vector-based content.

The applicant acknowledges that a portion of paragraph [0031] of the specification states, “Apparatus and methods are described for creating resolution independent vector display of Internet content to allow it to be scaled (zoomed) larger and smaller for better viewing or to fit any resolution or screen size.” Applicant notes that the terminology “resolution independent vector” corresponds to an aspect of one or more particular embodiments disclosed in the application, and as is made clear above, “a particular embodiment appearing in the written description may not be read into a claim when the claim language is broader than the embodiment." At the same time and as discussed above, there are claims among the allowed claims that include language relating to the terminology “resolution independent” and “vector,” and the scope of the related elements in these specific claims is to be interpreted in accordingly.

Applicant additionally notes that while the word “display” follows the word “vector” in the foregoing text (*i.e.*, “resolution independent ***vector display***”), the display referred to therein is not a physical “vector display,” which was a type of display that existed several decades or more ago (*e.g.*, CRT oscilloscope displays, radar displays), but rather in at least one embodiment resolution independent vectors are employed, in part, to lay out display content in connection with generating scaled views of web content used in connection with generating a display of web page content at different zoom levels that is displayed on a device's screen (also referred to in the present application as a display or display screen).

Preservation of Original Page Layout, Functionality and Design

New claim language has been added by way of an Examiner's amendment (per agreement with the Applicant), and includes the language "preserving the original page layout, functionality, and design" of the HTML-based Web content. To more fully understand the scope of this language, a discussion of operations pertaining to an exemplary use case of a mobile device enabled by the presented application is now presented. A similar discussion was first presented in the December 9, 2007 response of Application Serial No. 11/045,757, which is a divisional of the parent (Application Serial No. 09/878,097) of the present application; for clarity, much of this description is repeated below, while some details are omitted for brevity. The operations are discussed in the context of the following FIG. 1.

The schematic drawing shows an exemplary infrastructure comprising well-known components for facilitating access to and delivery of Web pages. Web page content (*i.e.,* Web content) is served by servers that are accessed via the Internet, also commonly referred to as the World Wide Web (WWW). Accordingly, these servers are typically referred to as "Web" servers. More accurately, they are HTTP (Hypertext Transport Protocol) servers, as they serve content of various types using the HTTP protocol. FIG. 1 shows a pair of exemplary Web servers, including a New York Times (NYT) Web server and an Advertisement (ADV) Web server. It will be appreciated that literally millions of similar Web servers are connected to the Internet across the world, thus forming the World Wide Web.

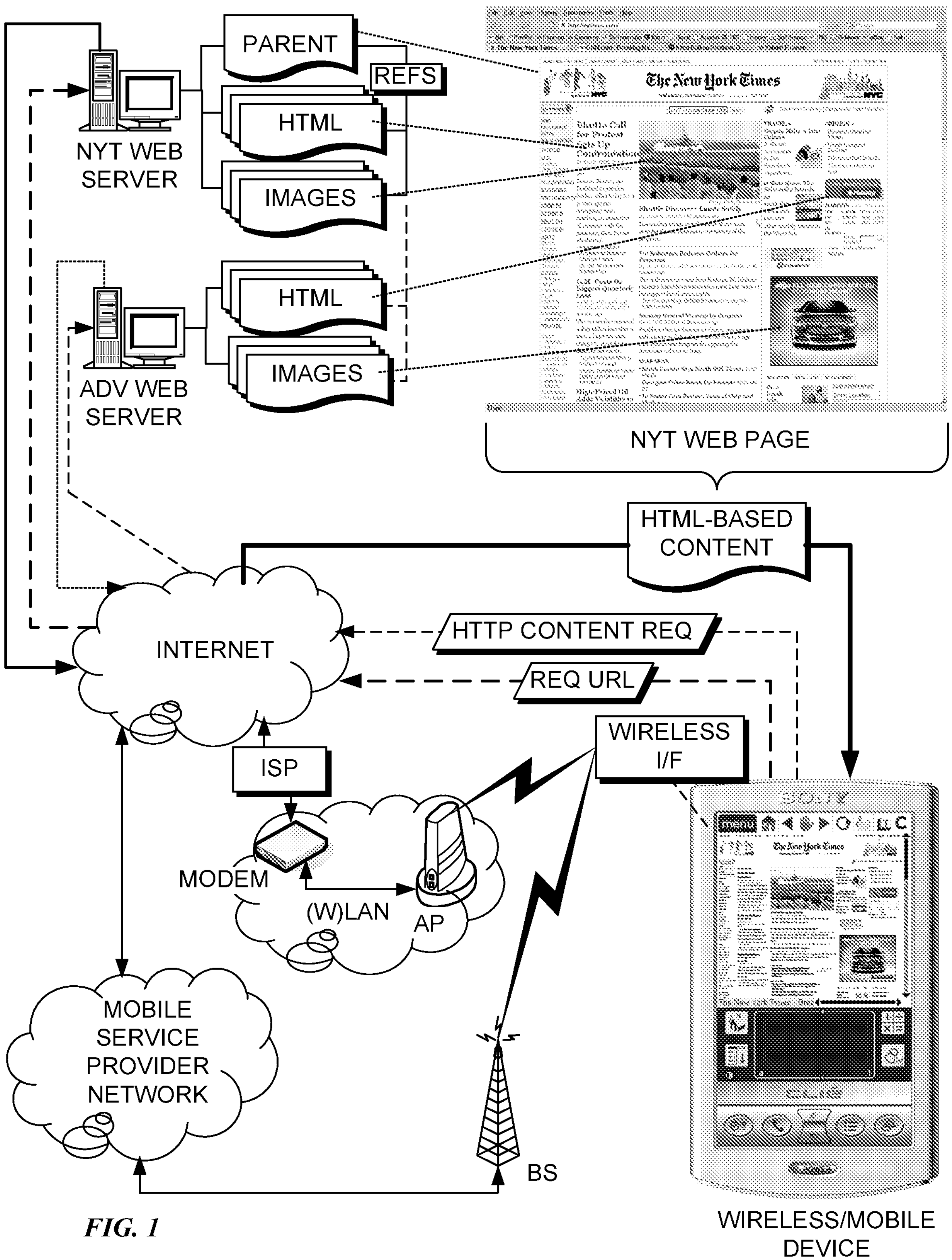

PARENT
REFS
HTML
IMAGES
NYT WEB SERVER
HTML
IMAGES
ADV WEB SERVER
NYT WEB PAGE
HTML-BASED CONTENT
HTTP CONTENT REQ
REQ URL
INTERNET
WIRELESS I/F
ISP
MODEM
(W)LAN
AP
MOBILE SERVICE PROVIDER NETWORK
BS
WIRELESS/MOBILE DEVICE

FIG. 1

To access WWW web servers, users use client devices that are communicatively coupled to the Internet through applicable network infrastructure. In the desktop environment, desktop clients, such as personal computers and workstations, are typically coupled to a Local Area Network (LAN) via an Ethernet link to a LAN host device. (It is noted that some desktop clients may wirelessly connect to a Wireless LAN (WLAN), in a manner similar to that discussed below for wireless clients.) The LAN, in turn is usually connected to the Internet via network infrastructure provided by an Internet Service Provider (ISP). Connection between the LAN and the ISP is typically provided by some type of Modem (*e.g.,* Cable or xDSL Modem) or dedicated hardware (for larger customers, such as businesses). (It is also noted that many individual users still connect to their ISP through a telephone modem.)

Wireless and mobile devices, including those devices covered by the claims herein, typically connect to the Internet in one of the manners illustrated in FIG. 1, or otherwise described in the December 9, 2007 response for Application Serial No. 11/045,757. (Further details are omitted here for brevity.) By way of example but not limitation, wireless access to the Internet may typically be provided via a mobile service provider, or via other types of wireless connections, such as via a WiFi or WIMAX connection, for example.

Now that the infrastructure of FIG. 1 has been described, we proceed with discussion of retrieving and processing the Web page content such that the Web page can be accessed via a wireless/mobile device. In the illustrated example, the process is initiated by a user desiring to access the New York Times (*i.e.,* and electronic version of the New York Times published to the Internet on a given day). This is facilitated by a browser in accordance with teaching of the present application running on the wireless/mobile device. The New York Times may be accessed via the Internet by downloading corresponding Web pages from the NYT Web server. More specifically, the New York Times home page may be accessed by entering the URL (Universal Resource Locator) www.nytimes.com via the browser's user interface.

As discussed above and in further detail in the present specification, Web pages comprise HTML-based content which may be stored in one or more documents commonly referred to as HTML documents. In addition, Web pages may include dynamically-generated content. Each Web page has a corresponding main or "parent" HMTL document that includes HTML code defining the Web page content layout, at least at some level. The parent HTML document may reference other HTML documents, as well as other content (such as image content) that further define the layout of content contained in the referenced documents. This may proceed in a hierarchical or nested fashion.

To access the Web page, the browser initiates an HTTP connection with the Web server hosting the Web page, and begins downloading the parent HTML document. Depending on how the Web server and/or Web page is configured, additional content (*i.e.,* beyond that included in the parent HTML document) referenced by the parent HTML document, may be retrieved by the Web page host server and then downloaded to the requesting client device, or a portion of this content may be downloaded by the client device via a separate connection. Generally, content that is hosted by a Web server or Web site is assembled by the Web server and downloaded to the client device. On the other hand, externally-referenced content (that is, content that is not stored on the Web server or Web site), is often left to the client device (*i.e.,* the browser) to retrieve.

An example New York Times home page (dated November 7, 2007, 2:22PM ET), as rendered by the Mozilla Firefox browser running on a desktop or laptop computer, is shown at the upper right-hand portion of FIG. 1. The same Web page is shown rendered on a Sony Clié using a SoftView™ browser at the lower right-hand portion of

FIG. 1.[2] Notably, the same HTML-based content defining the page layout, functionality, and design of the Web page content is downloaded by each of the Mozilla Firefox and SoftView™ implementation. Moreover, the same HTML-based content would be retrieved by other desktop browsers, such as Microsoft Internet Explorer, Apple Safari, and Opera browsers, to render the New York Times home page.

As discussed above, the Parent HTML document typically includes HTML code to define the overall layout of the Web page and its content. For example, the HTML code will define whether the Web page includes frames, and, if so, where those frames are located on the rendered page. The Parent HTML document may also contain Cascaded Style Sheet (CSS) data defining various design aspects of the page, or contain one or more references to other documents containing such CSS data. Various content displayed on the Web page may be stored in the Parent HTML document and/or one or more other HTML documents referenced by the Parent HTML document. If the content is to be rendered in a frame referenced by the Parent HTML document but whose content is not defined within the Parent HTML document, the actual reference to the HTML document storing the content may be in the document defined by the frame reference. For example, for illustration purposes, the content in the column with the heading "U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site" is depicted to be stored in an HTML document that is hosted by the NYT Web server, but is separate from the Parent HTML document.

Likewise, image content may be stored separate from the Parent HTML document. This is typically done since images, which often contain a large amount of data due to the nature of image data, may require significant download time, especially

[2] It is noted that the use of the Sony Clie and corresponding SoftView browser screenshots are for illustrative purposes to demonstrate how web page views on a mobile device in accordance with the claims herein might appear. The screenshots were produced using a SoftView proxy server and browser client running on a Palm OS Emulator 3.0a8S1.0, 2000-2001 using a Sony Clie PEG-700 Skin.

over a slow connection. By putting image content in (a) separate document(s), the basic page layout and text content can be rendered much faster. Typically, HTML code defining the page layout location of an image on the page may be used to place an image "placeholder" or other indicia on the screen prior to rendering of the image.

As discussed above, various portions of the Web page content may be stored on Web servers that are external to the Web page host server. This is often the case with advertisement content. Rather than have the advertisement content stored locally on each Web server, the advertiser will use an advertisement host site to store and serve the advertisement content. For example, in Fig. 1, image data for rendering the "DON'T MISS HISTORY IN THE MAKING" advertisement is depicted as being stored in an image document on the Advertisement Web server.

Under a typical conventional approach, externally referenced advertisement content is downloaded by the browser directly from the advertisement content host site, rather than from the Web page host site. The network location of the advertisement content host server is identified by parsing the retrieved HTML-based content, and an HTTP GET request is used to download the associated advertisement content from its host server.

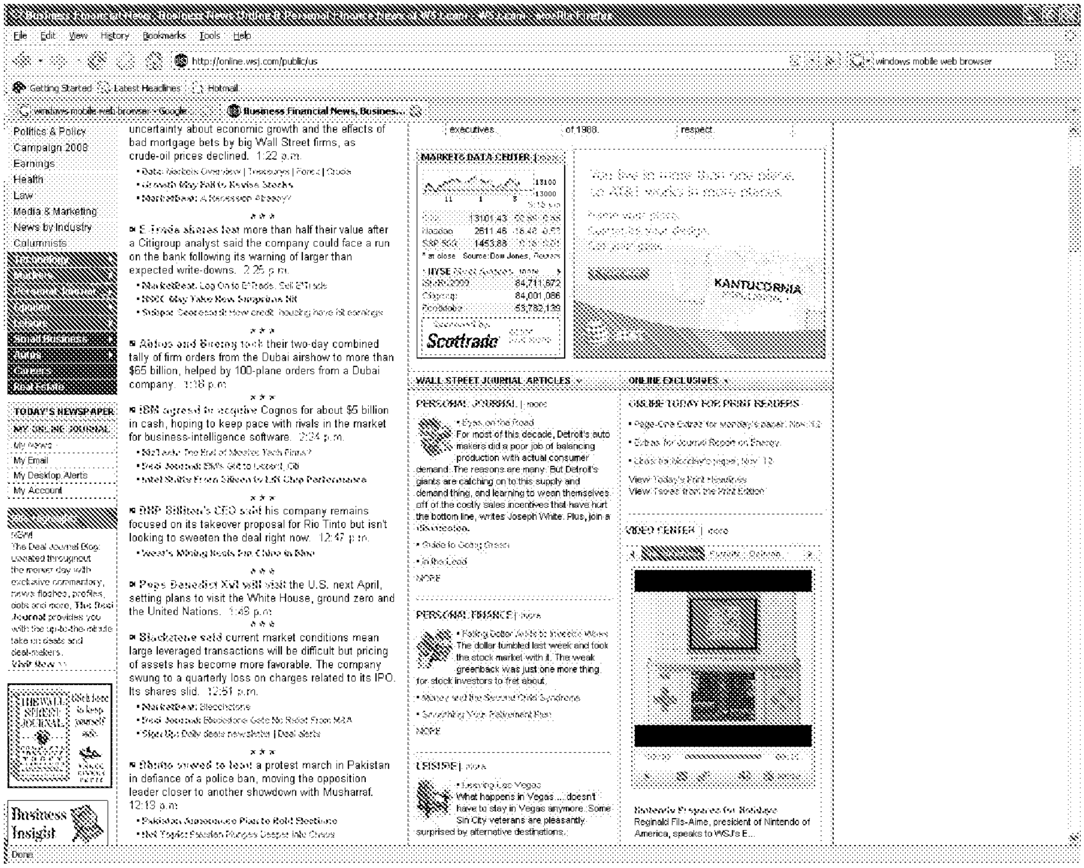
Some Web pages may include "embedded" content hosted by an external site. Oftentimes, such embedded content may be dynamic in nature (that is, may change over time or differ depending on identification of the target user). Generally, embedded content may be retrieved by the browser from an external host site (*e.g.,* advertisement Web server depicted in Fig. 1), or such content may be first retrieved by the Web page host site and served to the browser.

It is common terminology to refer to a browser "retrieving" or "downloading" a Web page. For example, upon entry of a new URL in the browser Web address box of a desktop browser, the browser will download the Web page referenced by the URL. It is well understood that this doesn't imply that all of the content associated with the Web page must be retrieved or downloaded. Some of the content is typically used for search engine or other purposes, such as some Metatag header information, or is otherwise not used for rendering purposes. Other Metatag information may be employed for rendering purposes, such as defining browser compatibility information. In other cases, content may be referenced that is not supported by the requesting browser. For example, "Flash" content typically requires a Flash plug-in viewer (or built-in Flash support provided by some browsers); if the plug-in viewer is not loaded by the browser (or such support isn't built in), the Flash content cannot be displayed. This is also true for TIFF images on the USPTO Web site. Unless an appropriate TIFF plug-in viewer is loaded, the TIFF images will not be displayed.

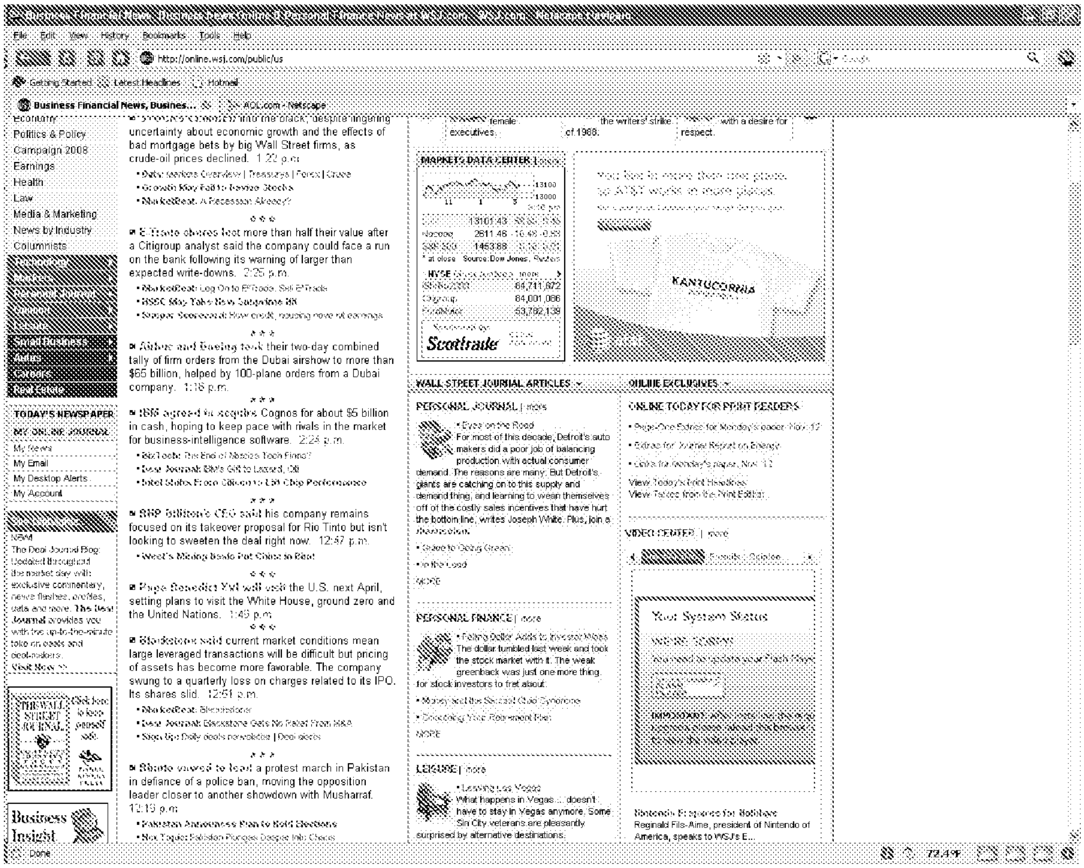
A similar situation exists with Active-X controls. In order to use the Active-X controls, the browser needs to provide support for Active-X controls. Since Active-X controls were developed by Microsoft, all recent versions of Microsoft Internet Explorer provide support for Active-X controls. Meanwhile, browsers from other vendors, such as Apple Safari, Mozilla Firefox, and Opera, do not support Active-X controls.

When a browser encounters content that is not supported "natively" by the browser, the browser will typically check to see if an appropriate plug-in is available. Depending on the browser and/or particular Web site, if an appropriate plug-in cannot be found, the browser or Web site may apprise the user of the situation and enable the user to download the plug-in. In other instances, the content is simply ignored. Thus, in some cases, the Web page may reference content that is never retrieved when the Web page is retrieved by the browser.

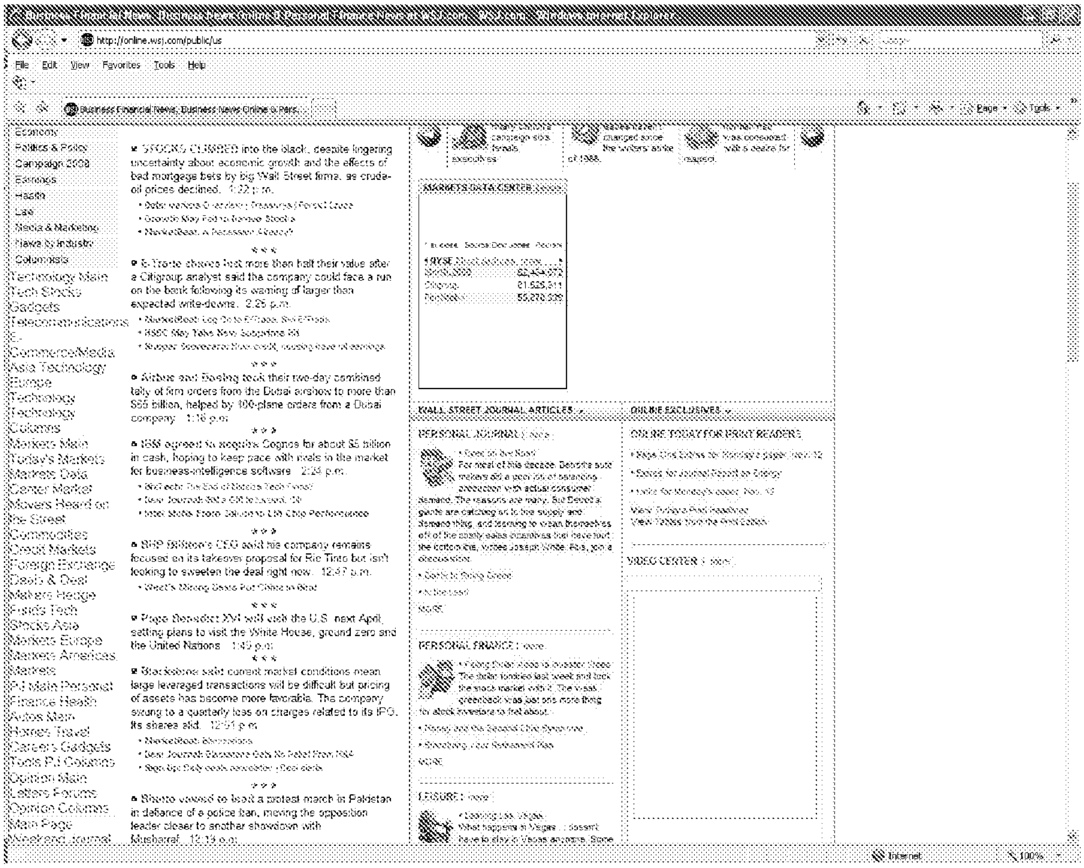
The three screen shots below respectively show the same Web page (WSJ.com home page) rendered on a Netscape Navigator 9 browser, a Mozilla Firefox 2.0 browser, and an Internet Explorer 7 (IE 7) browser. In this particular instance, certain features of the IE7 browser are disabled for security reasons. It is also missing some plug-ins. Each of these browsers is running on the Microsoft Windows XP operating system.



Mozilla Firefox 2.0 Browser



Netscape Navigator 9 Browser



Microsoft Internet Explorer 7 Browser

It will be observed that the Web page is rendered substantially the same by the Netscape Navigator 9 and FireFox 2 browsers, while portions of the Web page are rendered in a different manner by the IE 7 browser (notably the left-hand column). The similarity between Netscape and Firefox is expected since they both use the same Mozilla core rendering code, while IE 7 uses Microsoft's rendering code. It is further noted that some Web pages are coded to account for different browser features. For example, some Web pages will have provisions for Active-X controls for pages to be viewed by Internet Explorer browsers, while possibly including provisions for alternate mechanisms when using other browsers.

This example Wall Street Journal Web page includes various embedded ***non-HTML content*** requiring support of one or more plug-ins[3] or otherwise built in support for rendering ***non-HTML*** content of a particular content type. In particular, the VIDEO CENTER object in the lower right-hand corner requires an Adobe (formerly Macromedia[4]) Flash viewer for rendering Flash content, which uses vector and raster graphics, a native scripting language called ActionScript and bidirectional streaming of video and audio.[5]

It is noted that there is a message in the VIDEO CENTER box in the Web page rendered by the Netscape Navigator 9 browser indicating that the browser needs to update its Flash player. In the case of the Firefox 2 browser, either the appropriate Flash player was found or an appropriate level of support for Flash content is built into the browser. In this case, the Flash .SWF file including data to render a video image of a Nintendo DS console is retrieved from a corresponding host server and rendered by the browser (if it has built-in support) or Flash player, as applicable. In the case of the Netscape Navigator 9 browser, the appropriate Flash player plug-in is not available; accordingly, the video image of the Nintendo DS console is not retrieved.

In the case of the particular IE 7 browser configuration used to obtain the IE7 screen shot, the Flash player is either missing or blocked. As a result, the aforementioned VIDEO CENTER image is missing (just an empty box is rendered, as defined by corresponding HTML). Moreover, the IE 7 browser did not render a

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[3] As defined by Wikipedia, A **plugin** (**plug-in**, **addin**, **add-in**, **addon** or **add-on**) is a computer program that interacts with a host application (a web browser or an email client, for example) to provide a certain, usually very specific, function "on demand". Applications support plugins for many reasons. Some of the main reasons include: enabling third-party developers to create capabilities to extend an application, to support features yet unforeseen, reducing the size of an application, and separating source code from an application because of incompatible software licenses.

[4] Macromedia is now a division of Adobe Systems

[5] For more details on the Adobe Flash Player, see, *e.g.*, http://en.wikipedia.org/wiki/Adobe_Flash_Player

message indicating the Flash player needed to be upgraded. In addition, the source for the AT&T advertisement in the upper right-hand portion is blocked via a security setting, resulting in this portion of the page being rendered using the same background color as the frame it (would be) embedded in.

A point for discussing the foregoing is to make it clear that,

1. Even when rendering the same Web page source content (*i.e.,* the HTML code definition of the Web page), conventional Web browsers may not render the (full scale) Web page identically. Under aspects of embodiments of the invention the overall layout and appearance (design) of the Web page representations defined by the HTML code for the Web page (as interpreted by the rendering/layout engine) are preserved at various zoom levels and panned views. That is, the preservation is relative to how the page layout and design of the Web page content is interpreted by the rendering/layout engine employed for a particular implementation, and is not relative to how the Web page might appear on a particular desktop browser, although they might appear the same or substantially similar if using the same rendering/layout engine.
2. Plug-ins may be required to render ***non-HTML content*** that is embedded within some web pages or used in a separate window launched from a web page. Notably, the plug-in content is not a Web page, but rather a specific type of content requiring a corresponding plug-in application to render the content.

Preservation of Original Page Layout and Design

As discussed above, new claim language has been added by way of an Examiner's amendment, and includes the language "preserving the original page layout, functionality, and design" of the HTML-based Web content. With respect to preserving the original page layout, the page layout (to be preserved) is determined as interpreted by rendering/layout engine components, rather than as a comparison to how the page might be rendered by a particular desktop browser. As described above and in other remarks, browsers often do not render Web pages derived from the same HTML-based definition identically. Accordingly, one of ordinary skill in the browser art would not expect Web pages rendered using an implementation in accordance with the teachings disclosed in the present application to render pages as *exact* scaled replicas of the same page rendered by a conventional desktop browser, such as Internet Explorer or Safari, for example. Due to rendering limitations such as fixed size fonts, renderings of the same page when viewed at different zoom levels may result in small variations, as opposed to an exact scaled version of the same content (*i.e.*, as if viewed by a magnifying glass). While conceivably an implementation might produce this exact (*i.e.*, perfect magnification) result, such results are not required by the scope of the terminology "preserving the original page layout … of the content."

A similar context exists with respect to "preserving the [original page layout, functionality, and] design" of the content. Preserving the design of a Web page's HTML-based content corresponds to support for rendering of a Web page at different zoom levels and panned views in accordance with its design as defined by corresponding HTML-based content, which includes such things as type fonts, separator bars, tables, columns, *etc.* Again, the Web page's design is a matter of interpretation by the particular browser (typically via its rendering/layout engine), as, for example, the same content (as defined by its corresponding HTML definition) may be rendered using different colors by different browsers. Similarly, browsers may substitute fonts for original fonts (as defined by corresponding HTML code) that are not supported by the browser or operating system used by a given host device. With respect to the scope of the terminology "preserving the [overall layout, function and] design" of the content, this refers to preserving the design as interpreted by the rendering engine while at different zoom levels and panned views, as opposed to rendering the content identically to how it is rendered by a particular desktop browser that may interpret the page design differently. As discussed above, some design aspects relating the Cascading Style Sheets may not be implemented or may be implemented incorrectly by some browsers and/or rendering/layout engines. The preservation of the design is relative to the interpretation of the design aspects of the Web page.

Examples of SoftView™ Browser Screen Shots

The following pages illustrate various screen shots of the aforementioned nytimes.com Web page as translated by the SoftView™ proxy server and rendered on a SoftView™ browser client running on a Sony Clie emulator[6]. Under the claims herein, operations performed by a proxy server in accordance with these examples would be performed by a mobile device via use of browser software in conjunction with an operating system and potentially other facilities on the mobile device, as would be understood by one skilled in the art. Figs. 2a-2d further include screen shots of the Web page as rendered on a Firefox 3.0.5 desktop browser for comparison purposes.

As can be readily observed, the SoftView™ implementation produces a Web page with substantially similar display content to that rendered by the Firefox browser. However, there are some differences, which are to be expected. For example, since the nytimes.com site uses rotating advertisements, different advertisements will appear at different times, depending on exactly when the screen shots are captured. In addition, since some types of content, such as flash content, were not supported by the SoftView™ implementation employed to take the screen shots, this content is not displayed on the rendered page. For example, the nytimes.com web page includes code referencing a flash-based video (*i.e.*, the Play Video content under the VIDEO

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[6] Palm OS Emulator 3.0a8S1.0, 2000-2001 using a Sony Clie PEG-700 Skin. The emulator was used for the purpose of creating the screen shots – similar page renderings are produced using an actual Sony Clie PDA.

header). The corresponding area is rendered blank, such as shown in SoftView™ browser screen shot of Fig. 2b. Also, portions of the page layout may be adjusted in position depending on whether the content is supported or was available or successfully retrieved. Adjustments of this type are typically defined by layout rules implemented by the rendering/layout engine. For example, in the SoftView™ implementation an advertisement occupying the position of the "DON"T MISS HISTORY IN THE MAKING" in the desktop browser screenshots was either unable to be retrieved (potentially due to a timeout error or some other undetermined reason) or was of an incompatible type (*e.g.*, a flash advertisement that was one of multiple rotating advertisements used for this area on the nytimes.com home page[7]), and thus content below the missing advertisement is shifted upward in accordance with interpretation of the page by the version of the Mozilla rendering engine employed by the SoftView™ proxy server.

As discussed above, different browsers may render the same HTML-based Web page content slightly differently. Also, since aspects of Web page design and implementation have become more standardized, new types of content and design elements have been added or are otherwise now supported by some rendering/layout engines, and more are likely to be added in the future. As a result, earlier browsers using rendering/layout engines that were developed prior to the definitions of the new types of content and/or design elements or otherwise did not include support for such content or design elements will not display the content or design element(s) or may attempt to display them in an erroneous manner. Typically, when a browser rendering engine encounters content or a CSS element it doesn't recognize, it simply ignores is. In other cases, the HTML-based content may include support for functionality that is applicable to a desktop environment, but not applicable to a mobile device. For

[7] It has been observed that the nytimes.com home page uses both external img (image)-based advertisements and flash-based advertisement in this portion of the page.

example, there are several web sites that include mouse “hover-over” menus under which a menu will pop-up or otherwise appear when a user places a mouse or pointer cursor over a corresponding portion of the screen. Since there is no mouse or equivalent on a typically mobile device, the browser’s rendering/layout engine may be configured to ignore support of such functionality.

The claim language “preservation of the original page layout, functionality and design” is to be considered in the context of the browser implementation itself. That is, the preservation is relative to the interpretation of the page by the browser implementation itself, as opposed to preservation of the original layout, functionality and design based on some rigid consideration of a “perfect” interpretation of the page. As discussed above, a perfect interpretation does not realistically exist, as the HTML and related design specifications are too imprecise to begin with, and due to legacy considerations may remain so in the future.

Returning to the screen shots, Figs. 2a-d represent comparisons between the nytimes.com home page using Firefox 3.0.5 and the SoftView™ proxy server – browser client implementation. It is noted that the SoftView™ implementation (employed for the screenshots herein) uses a version of the Mozilla rendering engine from approximately 2002. As a result, there may be certain types of page design aspects that are not included in the rendered page, since corresponding aspects of the Cascading Style Sheets (CSS) specifications were not supported by this earlier version of the Mozilla rendering engine.[8] These include support for rendering some of the thin light gray column separator elements, which are defined in the common layout CSS document for the nytimes.com Web site.

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[8] See http://en.wikipedia.org/wiki/Cascading_Style_Sheets for an excellent discussion of the Cascading Style Sheets, their history, and in particular the section concerning difficulty with adoption.

The New York Times
U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site
In Nashville, A Ballot to Go 'All English'
DON'T MISS HISTORY IN THE MAKING.
November 4 was just the beginning.
Subscribe now to The New York Times and get 50% off.
Click here.

SONY
menu
The New York Times - Bres
POWER

Fig. 2a

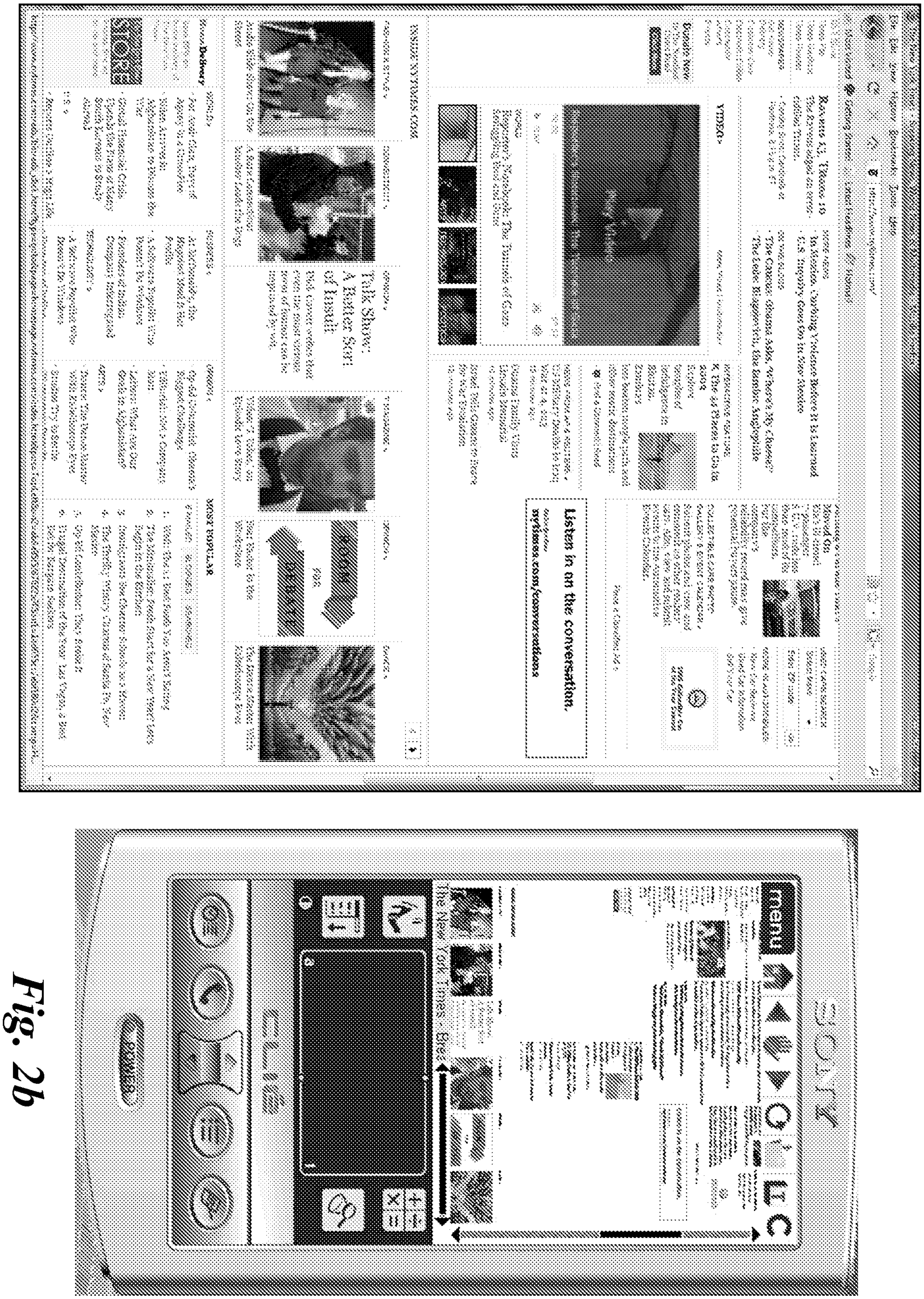


Fig. 2b

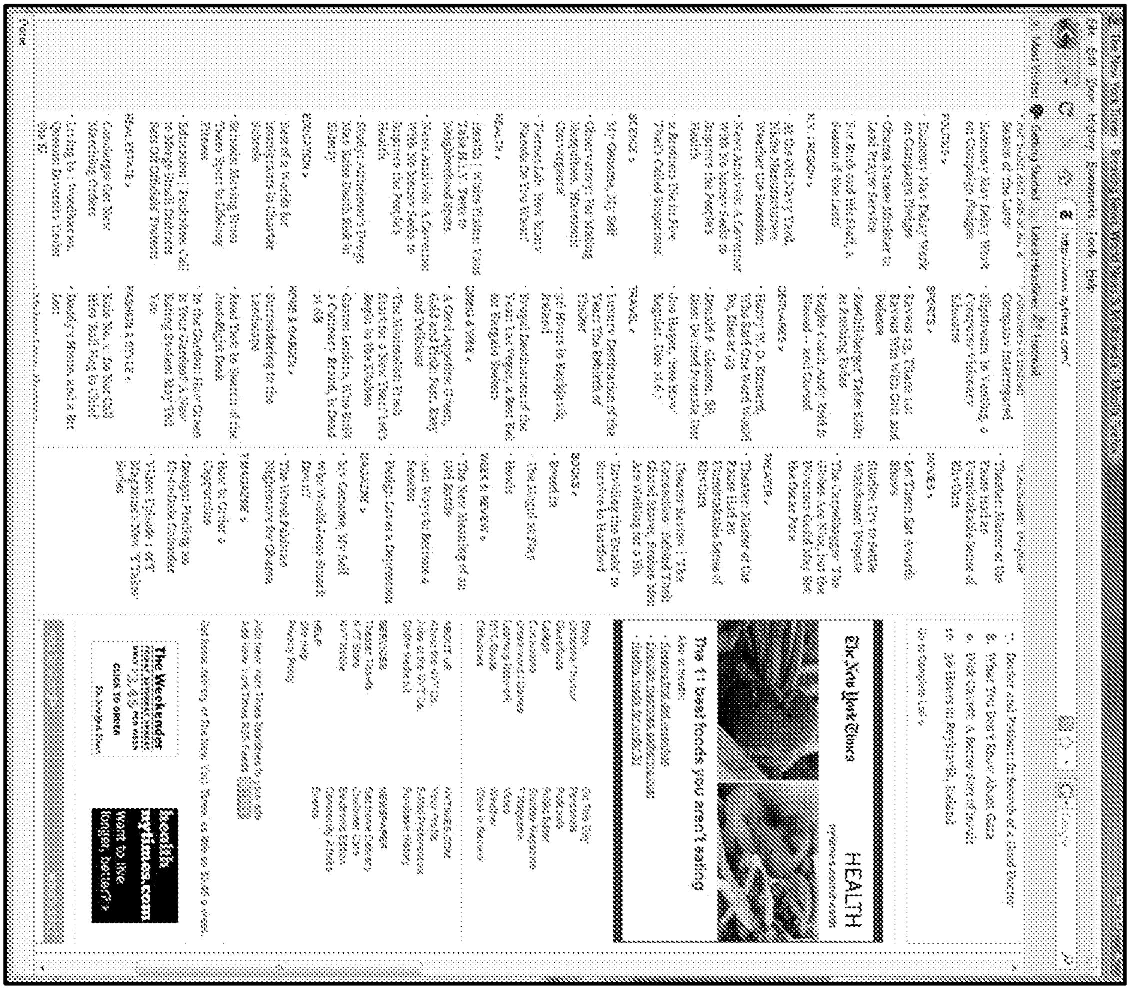


Fig. 2c

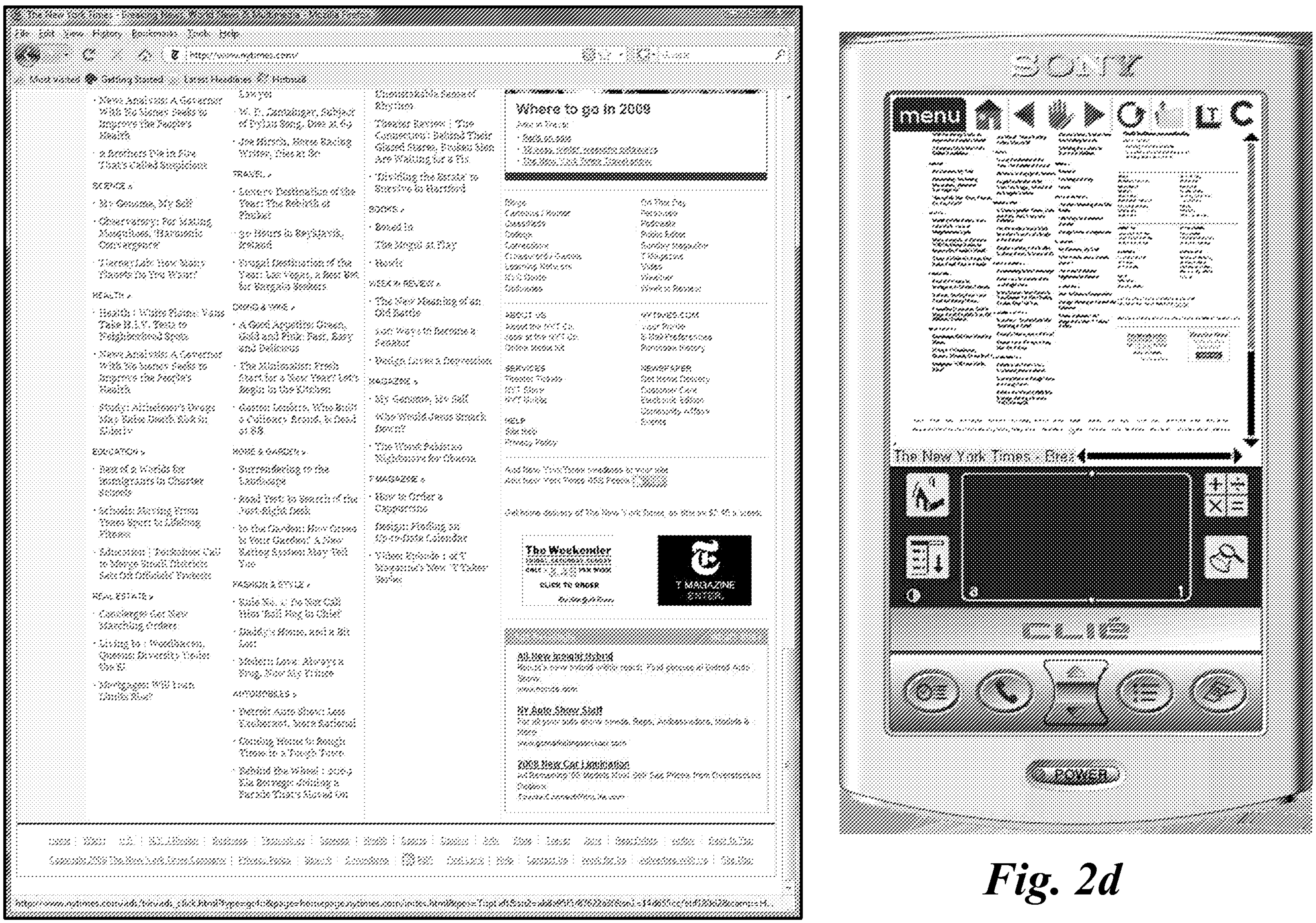

Where to go in 2008
The Weekender
T MAGAZINE
ENTER.
SONY
menu
The New York Times - Brea
CLIÉ
POWER

Fig. 2d

Figs. 3a-3f show various portions of the nytimes.com Web page in a full-width view (above) and corresponding zoom views (below) using the SoftView™ implementation. The above view shows a screen capture of the emulator, while the below views comprise screen captures of just the display. As can be readily observed, each zoomed-in view preserves the original page layout and design of the Web page, as interpreted by the SoftView™ implementation.


SONY
menu
The New York Times - Brea
menu
The New York Times - Bres
menu
The New York Times - Bres

Fig. 3a

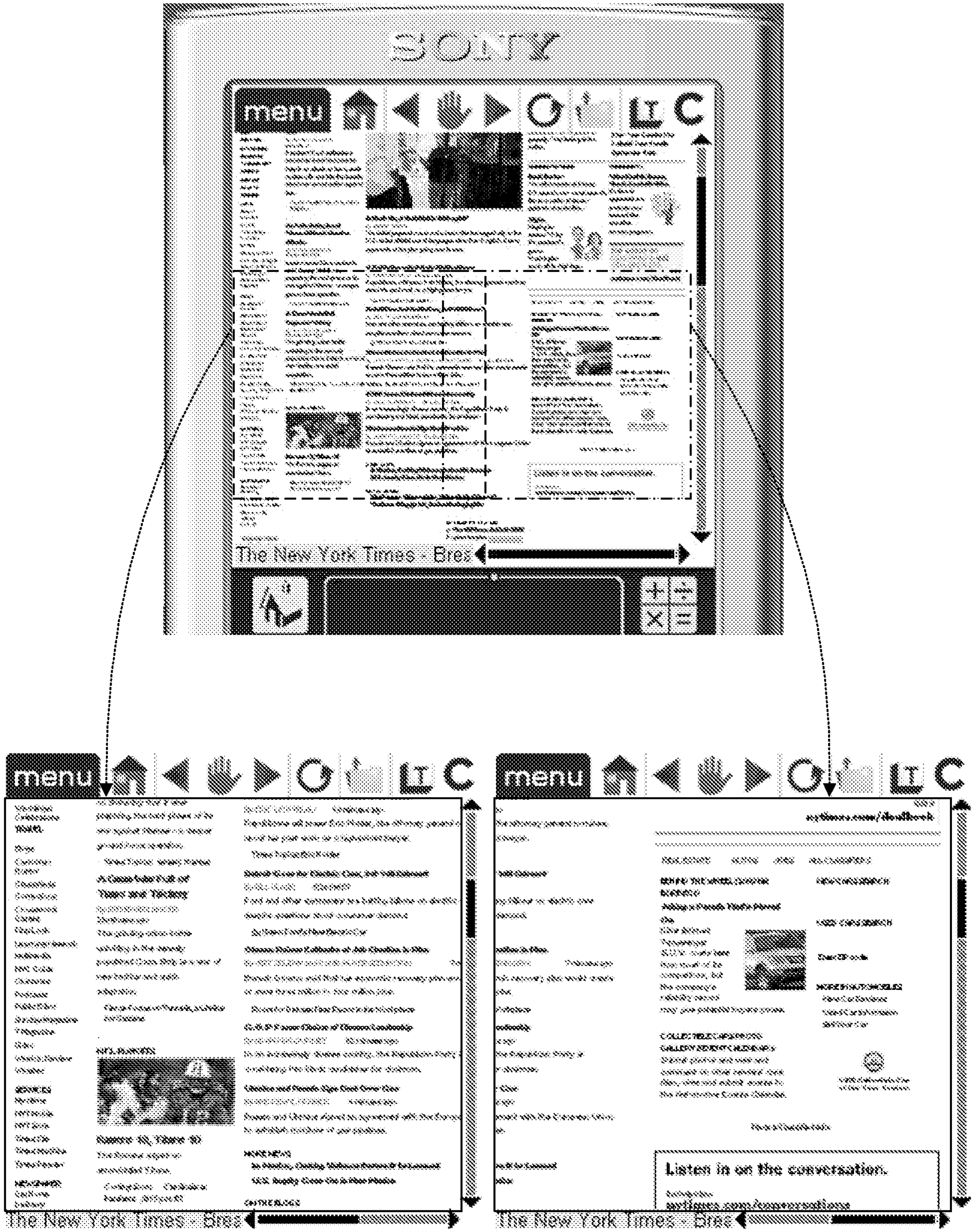

SONY
menu
The New York Times - Bres
menu
The New York Times - Bres
menu
The New York Times - Bres
Listen in on the conversation.

Fig. 3b

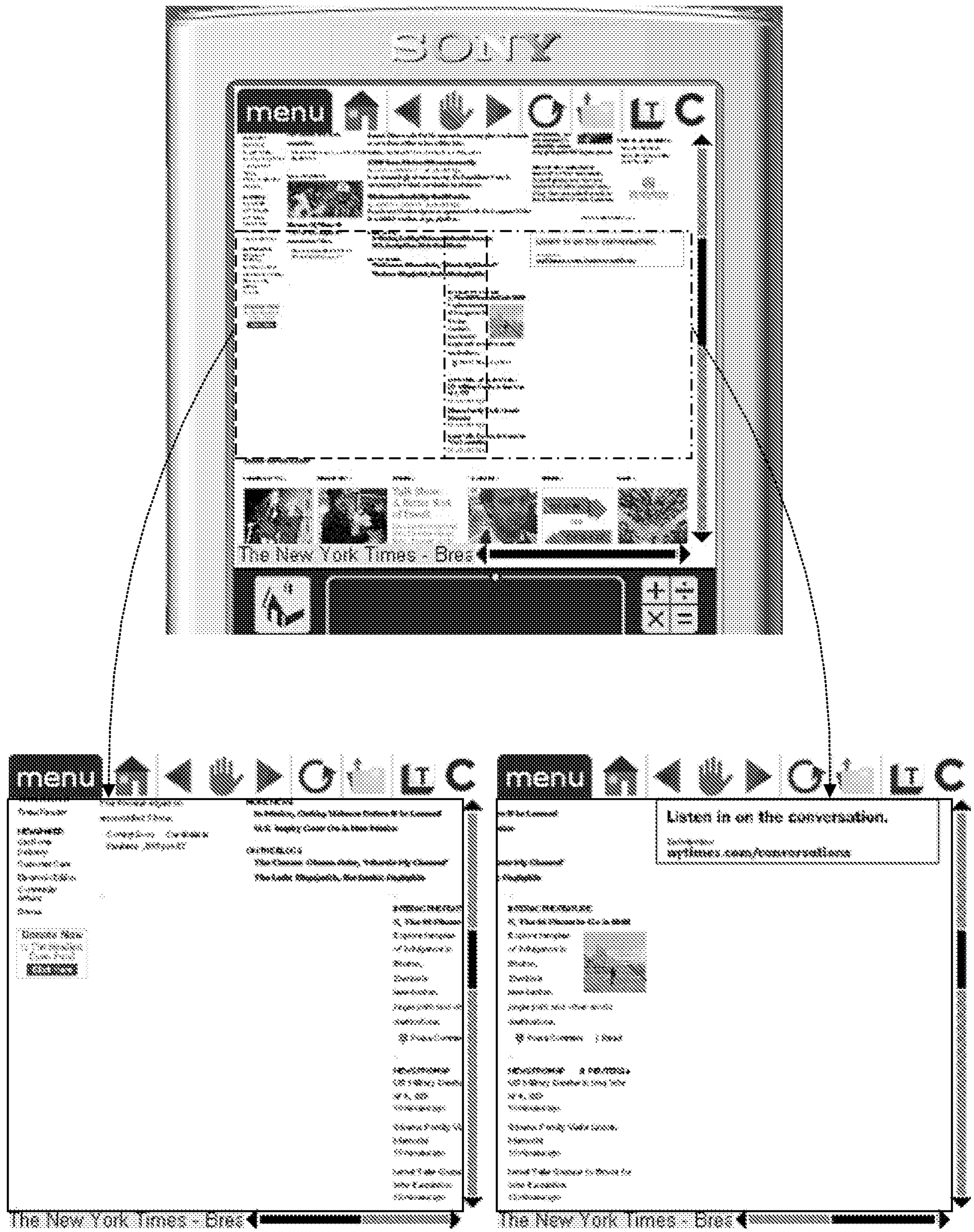

SONY
menu
The New York Times - Bres
Listen in on the conversation.
nytimes.com/conversations

Fig. 3c

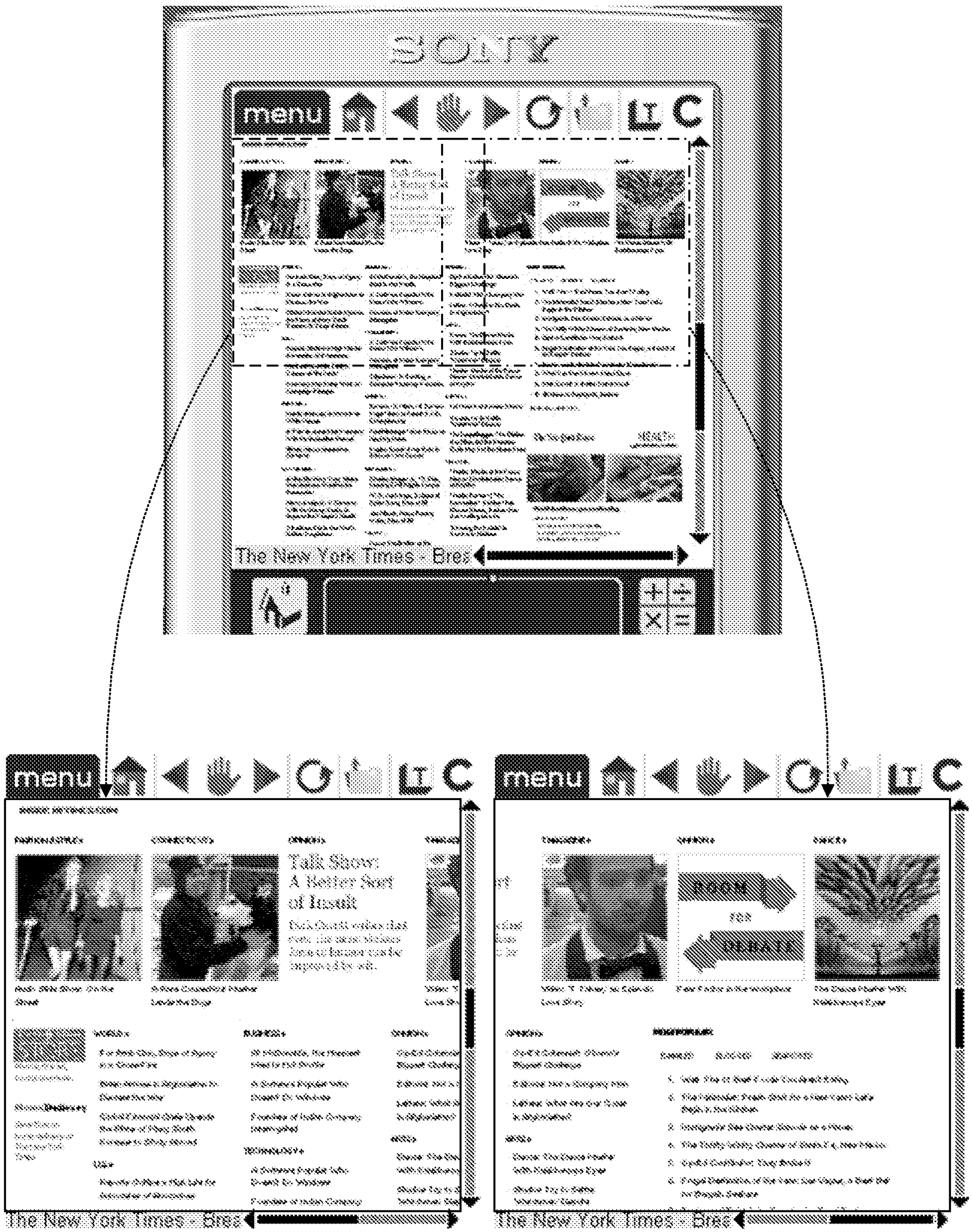

SONY
menu
The New York Times - Bre
Talk Show:
A Better Sort
of Insult
menu
The New York Times - Bres
ROOM
FOR
DEBATE
menu
The New York Times - Bres

Fig. 3d


SONY
menu
The New York Times - Brea
menu
The New York Times - Brea
menu
HEALTH
The New York Times - Brea

Fig. 3e

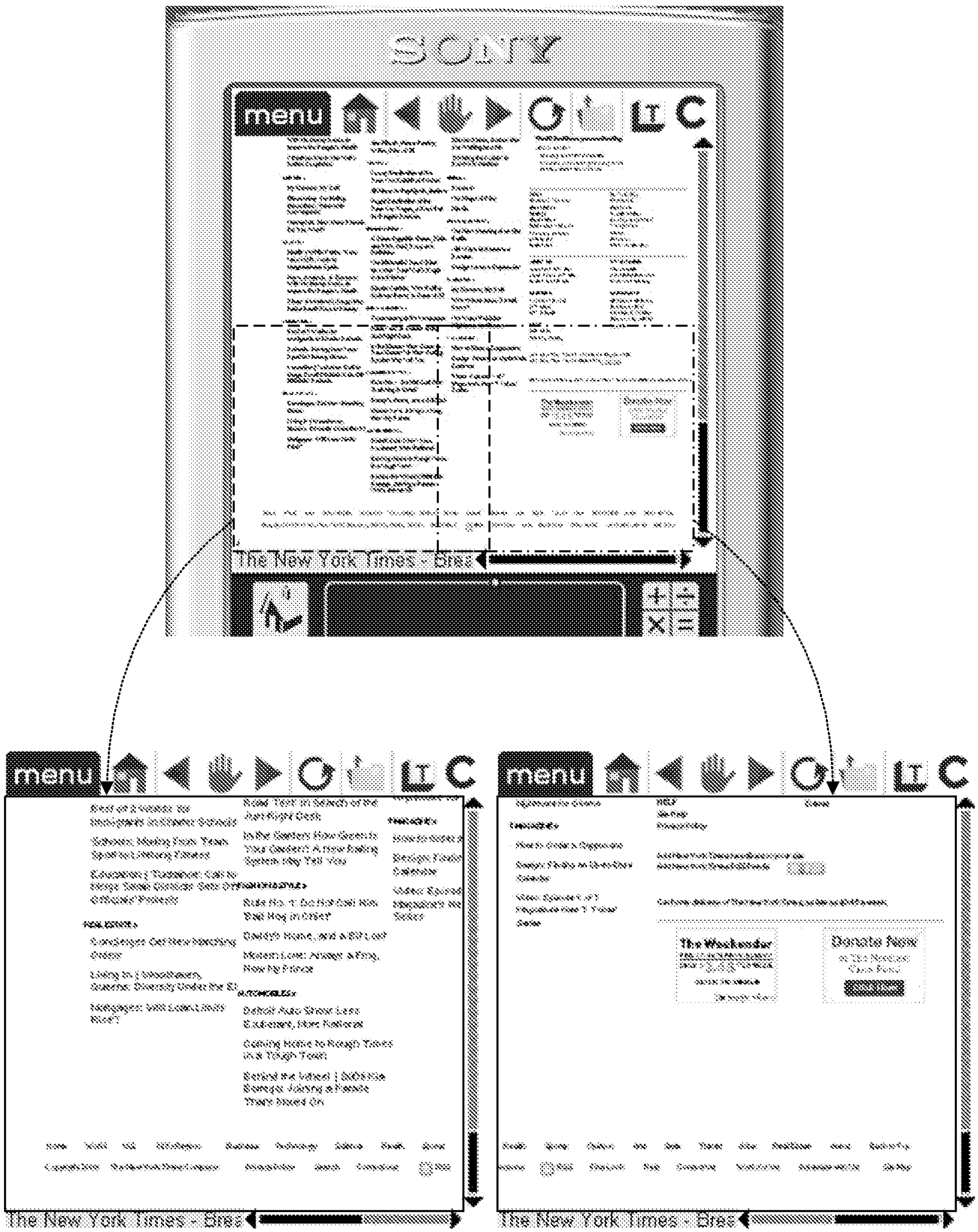

SONY
menu
The New York Times - Bres
menu
The New York Times - Bres
menu
The New York Times - Bres

Fig. 3f

Figs. 4 and 4a show various zoomed-in views of an INSIDE NYTIMES.COM content “ribbon.” Figs. 5-7 show selected zoomed-in views of the upper portion of the page, while Figs. 8 and 9 show various zoomed-in portions of the bottom portion of the page. It is noted that the “Ads by Google” portion is missing on the SoftView™ browser screen shots due to a server connection timeout error (which caused this content to not be retrieved).

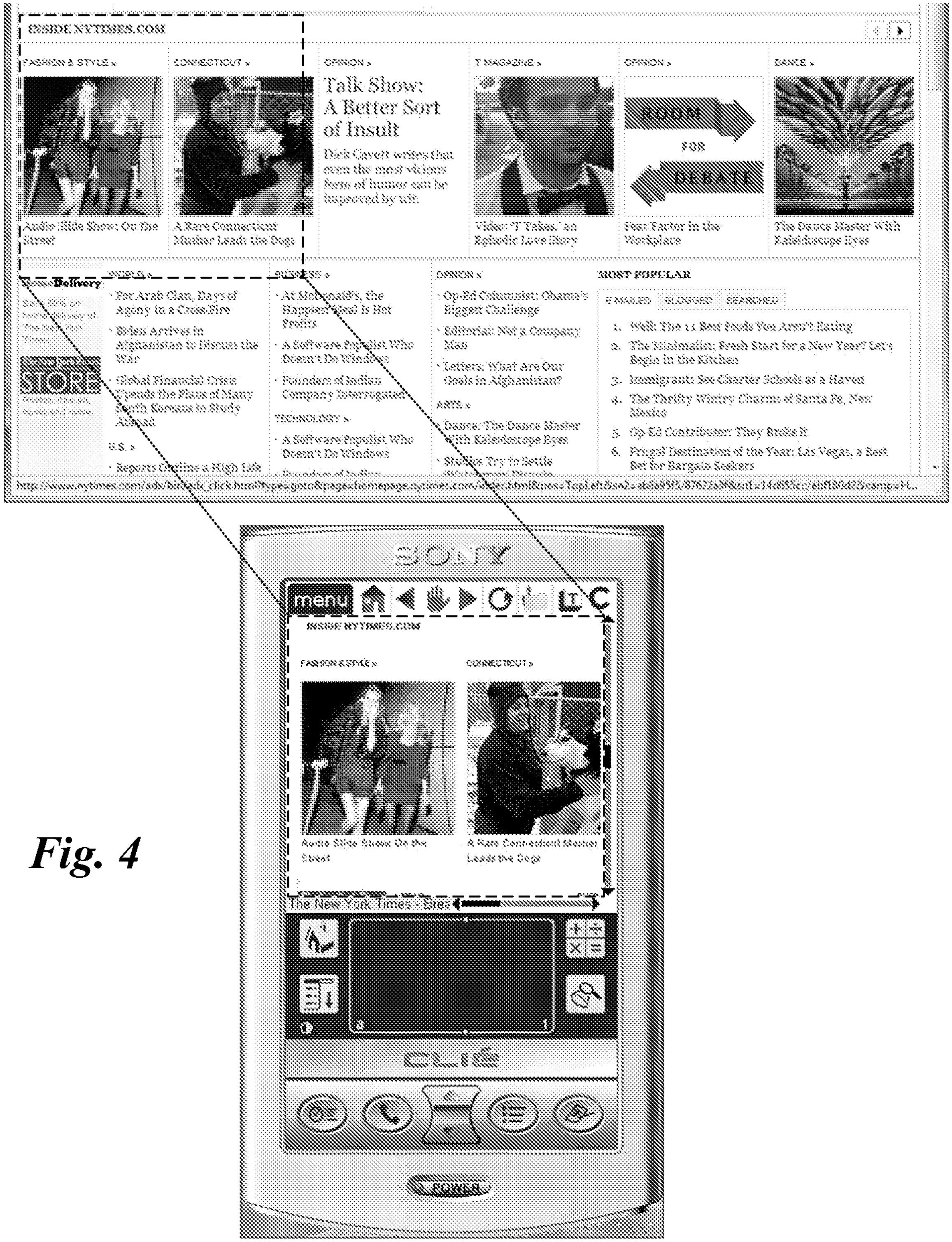


Fig. 4

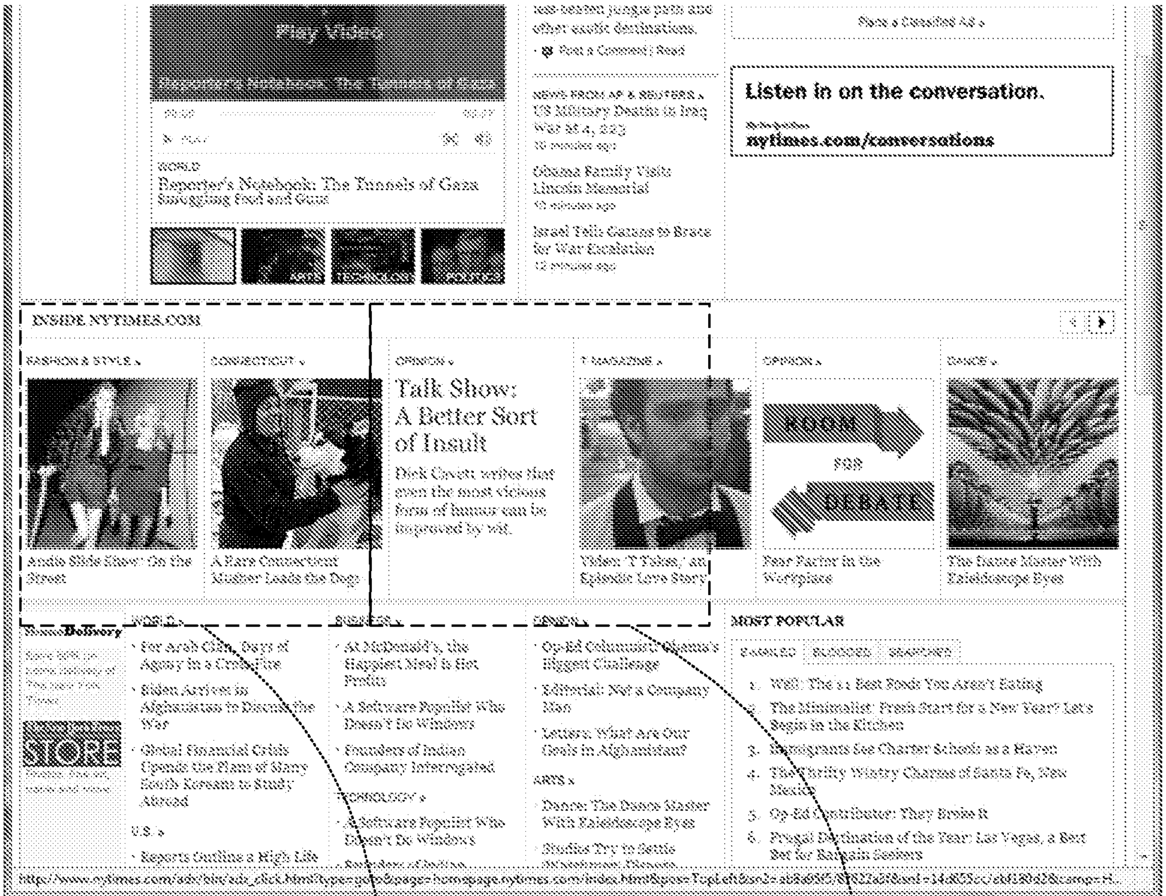

INSIDE NYTIMES.COM
FASHION & STYLE »
CONNECTICUT »
OPINION »
T MAGAZINE »
Talk Show: A Better Sort of Insult
Dick Cavett writes that even the most vicious form of humor can be improved by wit.
Audio Slide Show: On the Street
A Rare Connecticut Musher Leads the Dogs
Video: 'T Takes,' an Epic Love Story
Listen in on the conversation.
nytimes.com/conversations
MOST POPULAR
menu
The New York Times - Brea

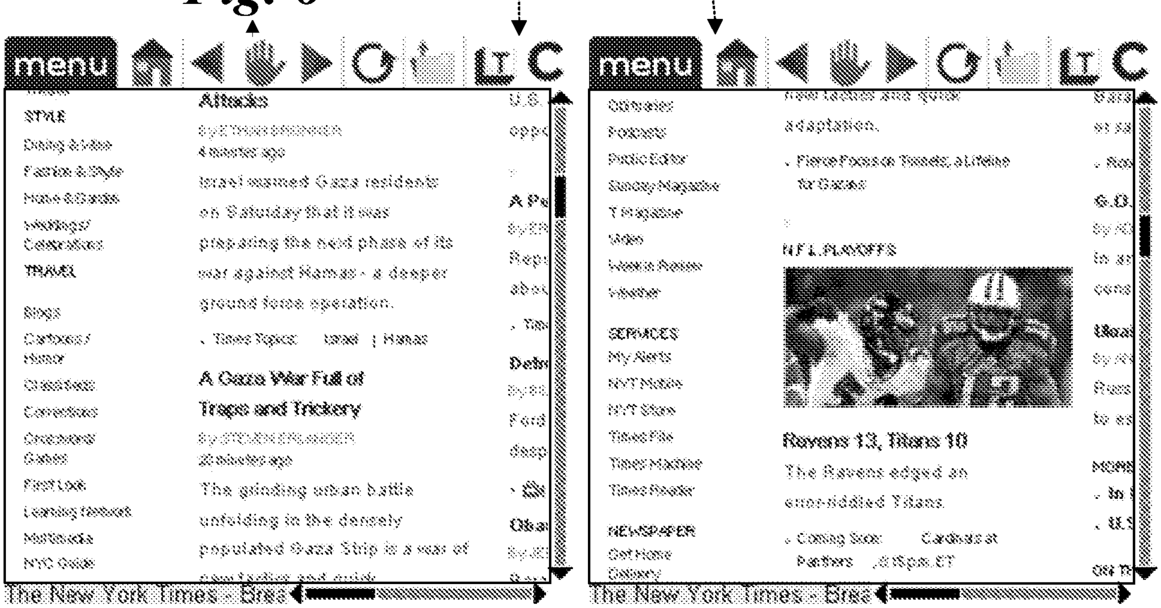
Fig. 4a

Fig. 5

Fig. 6

The New York Times
http://www.nytimes.com/
U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site
As Talks Falter, Israel Warns of More Extensive Attacks
In Nashville, A Ballet to Go 'All English'
A Public Servant's Private Stint Is at Issue
Detroit Goes for Electric Cars, but Will Drivers?
OPINION »
IN SUNDAY'S TIMES
YOUR MONEY »
DON'T MISS HISTORY IN THE MAKING
menu
menu
In Nashville, A Ballet to Go 'All English'
The ballot proposal would make Nashville the largest city in the
In Nashville, A Ballet to Go 'All English'
The ballot proposal would make Nashville the largest city in the U.S. to bar official use of languages other than English. Above, opponents of the plan going door to door.
A Public Servant's Private Stint Is at Issue
Republicans will press Eric Holder, the attorney general nominee, about his past work as a high-priced lawyer.
Times Topics: Eric Holder
Detroit Goes for Electric Cars, but Will Drivers?
The New York Times - Brea
The New York Times - Brea

Fig. 6



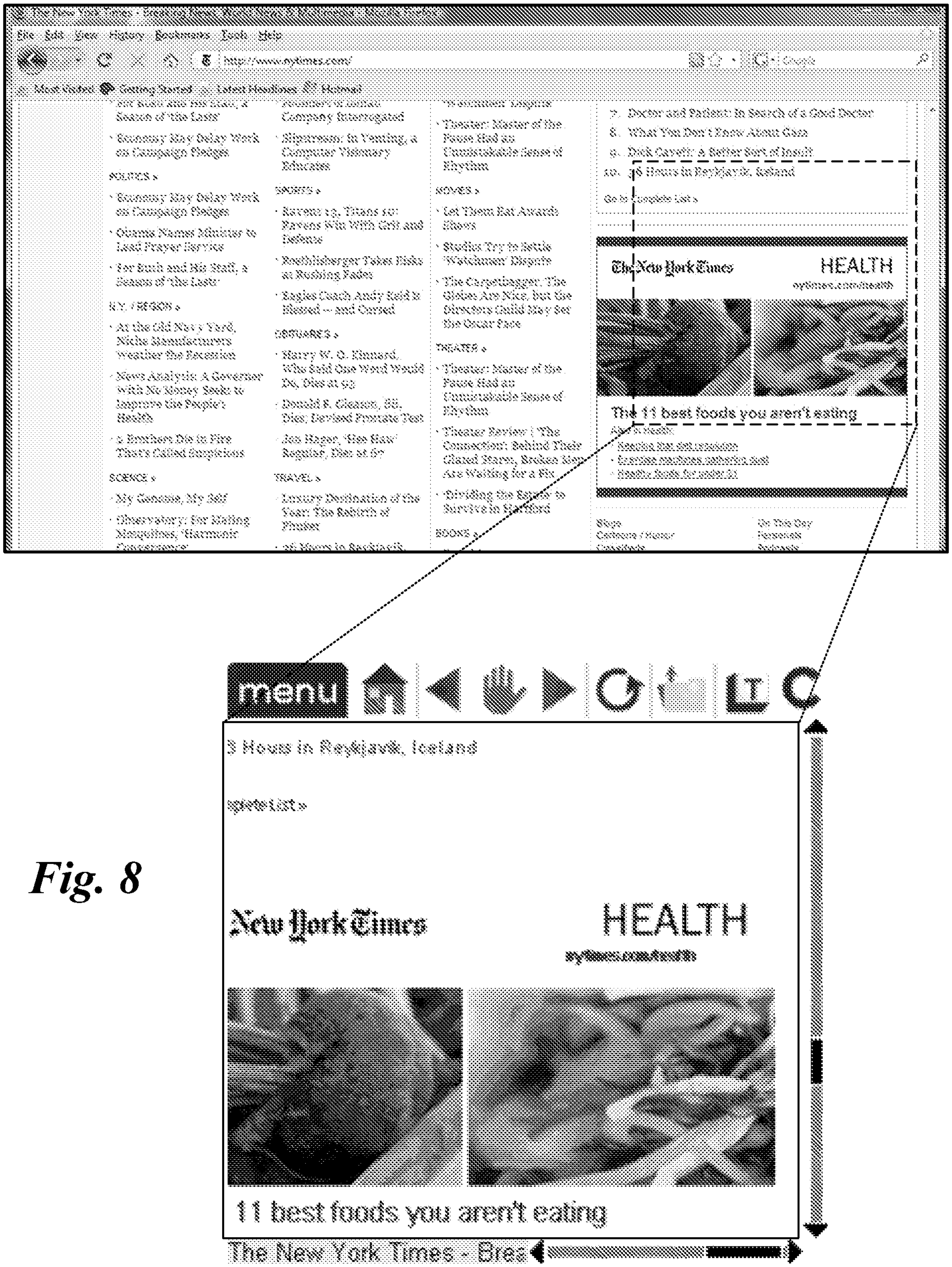

http://www.nytimes.com/
The New York Times
HEALTH
The 11 best foods you aren't eating
menu
3 Hours in Reykjavik, Iceland
New York Times
HEALTH
11 best foods you aren't eating
The New York Times - Bre

Fig. 8

Preservation of Functionality

The new claim language entered by Examiner's amendment introduces the term preservation of "functionality." Preserving functionality generally pertains to preserving the interoperability of various HTML-based Web page content, such as hyperlinks and UI controls such as input forms defined via corresponding HTML-based code. It is noted that the HTML code defining a Web page's overall layout, functionality and design does not define how a user interaction with the Web content is to be supported, but rather defines the existence of a corresponding function within the Web content to support the interaction. For example, a hyperlink definition within a Web page merely defines a link (hyperlink reference of *href*) to corresponding content, it does not define how the hyperlink associated control is to appear on the screen nor how the hyperlink is to be activated. That is up to the browser's implementation, which varies by browser. For example, some browsers underline text content associated with a hyperlink, while others change the appearance of a pointer when over a control (*e.g.,* text content) associated with a hyperlink (or otherwise change the appearance of such content). Moreover, how the hyperlink is activated is not defined by the corresponding HTML-based definition, but again is left to the browser implementation. Accordingly, preserving content functionality means that functionality defined by corresponding HTML code (*e.g.,* activation of a hyperlink in the present example) is supported, without limiting the particular user interface for how that activation is facilitated.

In the implementation of a zoomable browser, it may be desirable to change user interface behavior depending on a current use and/or view context. For example, the hyperlink controls of a conventional Web page designed to be viewed with a desktop browser are typically activated via the same user interface input (*e.g.,* clicking with a mouse), since all of the hyperlinks controls (on at least well-designed Web pages) are (presumably) designed to be viewable on the desktop browser (at least viewable to most users). In contrast, when the same page is rendered so as to fit on a handheld device's display, corresponding hyperlink controls may not be readable. As a result, it may be advantageous to implement a context-based user interface that may result in a different action for the same user input depending on a current user and/or zoom context. For example, under the zoom to column, image, and paragraph user interface features disclosed in the present application, touching proximate to content associated with a hyperlink control may or may not activate the hyperlink control, depending on a current zoom level. By way of illustration, when touching content proximate to a hyperlink control that is also contained within a column when in a zoomed-out view, such as a full page view, the browser may interpret the input as an input to zoom to the column rather than an input to link to a hyperlinked reference associated with the content, particularly when the content is not readable in the current view.

One of skill in the art will recognize that the principles and teachings disclosed in the present application may be applied in a browser implementation employing one of many different rendering engines, such as but not limited to today's version of the Mozilla rendering engine (code-named "Gecko") used by the Firefox and Netscape Navigator browsers, the rendering engine employed by Microsoft Internet Explorer (code-named "Trident" (*aka* MSHTML)), or the Webkit rendering engine use by Apple's Safari browser. Since each of these rendering engines are capable of rendering the vast majority of today's Web pages[9], a browser implementing such a rendering engine in combination with the principles and teachings disclosed in the present application

[9] One of skill in the browser art would recognize that rendering engines do not render Web pages completely by themselves, but rather employ various support functions provided by the host operating system for particular rendering operations. Among these support functions is support for rendering text in various languages. The particular languages that are supported will vary depending on the operating system and/or extensions to the operating system (or otherwise add-on functionality provided by the browser) for rendering text of a particular language. If support for rendering text in a given language via either the operating system or a particular extension is not available, the text content in such a language will not be able to be rendered on pages that include such text content.

would likewise be capable of rendering the vast majority of billions of today's Web pages while preserving the page layout, functionality, and design of the Web pages under various zoom levels and panned views.

Scalable Vector-based Page Layout Information

The terminology "scalable vector-based page layout information" is recited in some of the allowed claims, including independent claim 1. In order to clarify the scope of this claim terminology, the following discussion is provided.

Independent Claim 1 – Scalable Vector-based page layout information

Independent claim 1 recites, in part,

> …
>
> retrieving HTML-based Web content associated with the Web page;
>
> *translating the HTML-based Web content to produce scalable vector-based page layout information;*
>
> *employing the scalable vector-based page layout information and/or data derived therefrom to,*
>
> …

The terminology "vector-based page layout information" refers to page layout information (that is information used to layout the page content) that includes layout objects that are mapped to a vector-based coordinate space[10], as discussed in further detail below. The claim element of "*translating the HTML-based Web content to produce scalable vector-based page layout information*" does not restrict the element to a single process or operation, but may include multiple operations. For example, claim 89 recites further details of one non-limiting embodiment of translation operations.

[10] The usage here of "vector-based coordinate space" is not to be limiting. In general, a vector-based coordinate space may also be commonly referred to as a vector-based drawing environment, vector-based coordinate system, a vector-based drawing system, or a virtual coordinate space or system.

In one non-limiting embodiment the element of "*translating the HTML-based Web content to produce scalable vector-based page layout information"* includes employing a rendering engine to interpret the page layout and mapping selected page layout content from a pixel-based coordinate system employed by the rendering engine to a vector-based virtual coordinate space.

This process begins by employing a rendering engine to determine page layout information that includes information from which the location for each display object (i.e., HTML element or block having content that is to be displayed) can be determined. In general, the page layout information includes information from which at least one of a datum or bounding box for each display object can be determined. In one embodiment, the page layout is interpreted using the rendering engine based on a default page width in pixels, and the location of the page layout objects is interpreted by the rendering engine are defined by corresponding pixel locations on the page. Accordingly, at this point the page layout information, such as a datum, is defined by corresponding pixel locations in a two-dimensional (XY) pixel-based coordinate space used by the rendering engine. The page layout information is further processed to generate Simple Vector Format (SVF) drawing commands to map the page layout information from the pixel-based coordinate system to a vector-based virtual coordinate space used by the SVF vector-based drawing model. Under the SVF vector-based drawing model, each coordinate point comprises a vector (i.e., a point vector). As such, the vector for each coordinate point can be scaled by applying a scale factor to the point coordinates, resulting in a transformed point (and corresponding scaled vector).

These operations may more easily be understood by an example corresponding to a simple web page, such as shown below. The exemplary web page and includes four objects: a text object comprising the text "Seattle Skyline 300x300"; a JPEG image of the Seattle skyline having an original (full scale) size of 300x300 pixels; a text object comprising the text "Seattle Skyline 640x480"; and a JPEG image of the Seattle skyline having an original (full scale) size of 640x480 pixels. The web page also has an interpreted size of 912 pixels wide by 1026 pixels high in the example figures herein, as discussed in further detail below. The HTML for generating this web page is shown following the image. The web page was designed using Microsoft Expression Web 4 software. As such, the upper portion of the code (between the <style …> and </style> tags comprises Cascading Style Sheet style definitions. For more complex pages, the CSS style definitions may be contained in one or more separate CSS documents. Style definitions may also be defined inline (e.g., when the definition for a given element, such as a line of text, paragraph, etc.).

Seattle Skyline 300x300

Seattle Skyline 640x480

Original Web Page Layout and Design

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">

<head>
<meta content="en-us" http-equiv="Content-Language" />
<meta content="text/html; charset=utf-8" http-equiv="Content-Type" />
<title>Seattle Skyline</title>
<style type="text/css">
.auto-style1 {
	margin-left: 360px;
	margin-top: 0px;
}
.auto-style2 {
	margin-left: 72px;
	margin-top: 0px;
}
.auto-style3 {
	margin-top: 50px;
}
.auto-style4 {
	font-size: x-large;
	font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode", Geneva,
Verdana, sans-serif;
	margin-left: 144px;
	margin-top: 48px;
}
.auto-style5 {
	font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode", Geneva,
Verdana, sans-serif;
	font-size: x-large;
	margin-left: 360px;
	margin-top: 30px;
}
	.auto-style6 {
		border-style: solid;
		border-width: 1px;
	}

</style>
</head>

   <body style="margin-top: 10px">
	<div class="auto-style6">
		<div class="auto-style5" style="width: 284px">
		Seattle Skyline 300x300</div>
		<p class="auto-style3">
		<img alt="" class="auto-style1" height="300" src="seattle%20300x300.jpg" width="300" /></p>
		<p class="auto-style4" style="width: 284px">Seattle Skyline 640x480</p>
		<p>
		<img alt="" class="auto-style2" height="480" src="Seattle%20640x480.jpg" width="640" /></p>
	<div>
   </body>

</html>
```

Web Page HTML

The following figure shows the layout information for the page as interpreted by the Mozilla "Gecko" rendering engine. The rendering engine is part of FireFox browser (current version 3.6). An earlier version (from approximately 2000) of the Gecko rendering engine is employed for the SoftView browser screenshots herein.

It is common practice to lay out web page content using a page origin of 0,0[11] at the upper left hand corner of the page. Accordingly, web page rendering engines such as Gecko typically employ a pixel-based coordinate system having an origin at 0,0 with X values increasing to the right, and Y values increasing downward. The coordinates of the pixel-based coordinate system are integer values corresponding to the location of the pixels in a rendered page.

One of the operations performed during page layout is parsing of the HTML to identify the corresponding HTML elements. For "free-form" pages such as this example, the order of the elements affect the page layout (vertically in this case), as objects are laid out relative to other objects, as opposed to having a fixed position. Commercial pages (e.g., nytimes.com, CNN.com, WSJ.com, etc.) typically employ one or more cascading style sheets to define a more structured page layout; however, in order to not obscure the page layout concepts taught here a simple web page example is used.

Browser rendering engines typically determine page layout based on the size of the browser window content area (i.e., the portion of the browser application window in which the page content is rendered). In particular, the width of the content area is employed. Depending on the web page design, the width of the content may affect the page layout. In this particular, example, however, there are no objects that are located based on the content area width, as each of the four objects has a defined offset from

[11] Optionally, the page layout datum may be considered at 1, 1, representing the X, Y location of the pixel at the upper left hand corner of a content drawing area used to render page content in a browser.

the left edge of the page, as defined by corresponding HTML elements in the HTML code.

The height of the page is interpreted by aggregating the vertical dimension of the object layout in the page, as determined by the page layout interpreted by the particular rendering engine used by the browser. Different rendering engines may use different default spacing values and fonts (and/or the default fonts and sizes can be changed by a user), such that the same content may be laid out differently by the different rendering engines. In this particular example, the Gecko rendering engine determined the body block to be 1008 pixels in height. The Firefox browser window width was adjusted such that the body block was interpreted to be 896 pixels wide for reasons discussed below.

As shown in the page layout below, the Mozilla Gecko rendering engine produces page layout information using container blocks in a nested manner. HTML is coded in a hierarchical manner using HTML tags to define HTML elements (aka HTML blocks or objects). As the HTML page source is parsed, the HTML elements are identified and an element hierarchy called a tree is generated. The layout of objects within a given container block are relative to the location of the container block itself, which may further be relative to other container blocks in a layout hierarchy. In general, the html block (content between <html> and </html> tags) comprises the top level container block for the page. However, the top level container block for this example page is effectively the body block, since all content internal to the body block is laid out relative to the body block. Other typical container blocks are defined by <div> elements, paragraph <p>element, etc.

It is typical for browsers to apply their own interpreted amount of padding (small vertical and horizontal offsets) around the body block so the edges of a page are not coincident with the edges of the content drawing area. In the case of Firefox, the padding around the body block for this example page for the top, left, right, and bottom is respectfully 10, 8, 8, and 8 pixels. Notably, the 10 pixel top margin offset is explicitly specified by the HTML, while the 8 pixels offsets appear to be default offsets employed by Firefox. Since the content in this example is laid out relative to the body block, the upper left hand corner of the body block container box is defined as the 0, 0 datum for the examples herein rather than the upper left hand corner of the page.

Under Gecko, the horizontal and vertical position of a given object relative to its container in this example web page is labeled as a "margin." This is in accordance with the CSS box model[12], which may also include parameters defining an optional border and/or and padding around the content bounding box for a given object. Each content bounding box, in turn, is defined by a width and a height. To determine the position of each object relative to a body block datum (e.g., an X, Y pixel coordinate position of 0, 0 in this example), the object's location is determined first by determining the location of its immediate container block, and then applying the applicable offsets in the X and Y directions. The container blocks themselves may be nested and/or may be stacked on top of one another vertically; accordingly, their location is determined in a similar manner. The net result is the layout of each object on the page relative to a page datum can be determined by processing the layout information determined by the rendering engine for each object relative to its containing block and aggregating the total X and Y offsets. This is commonly termed as "walking the render tree."

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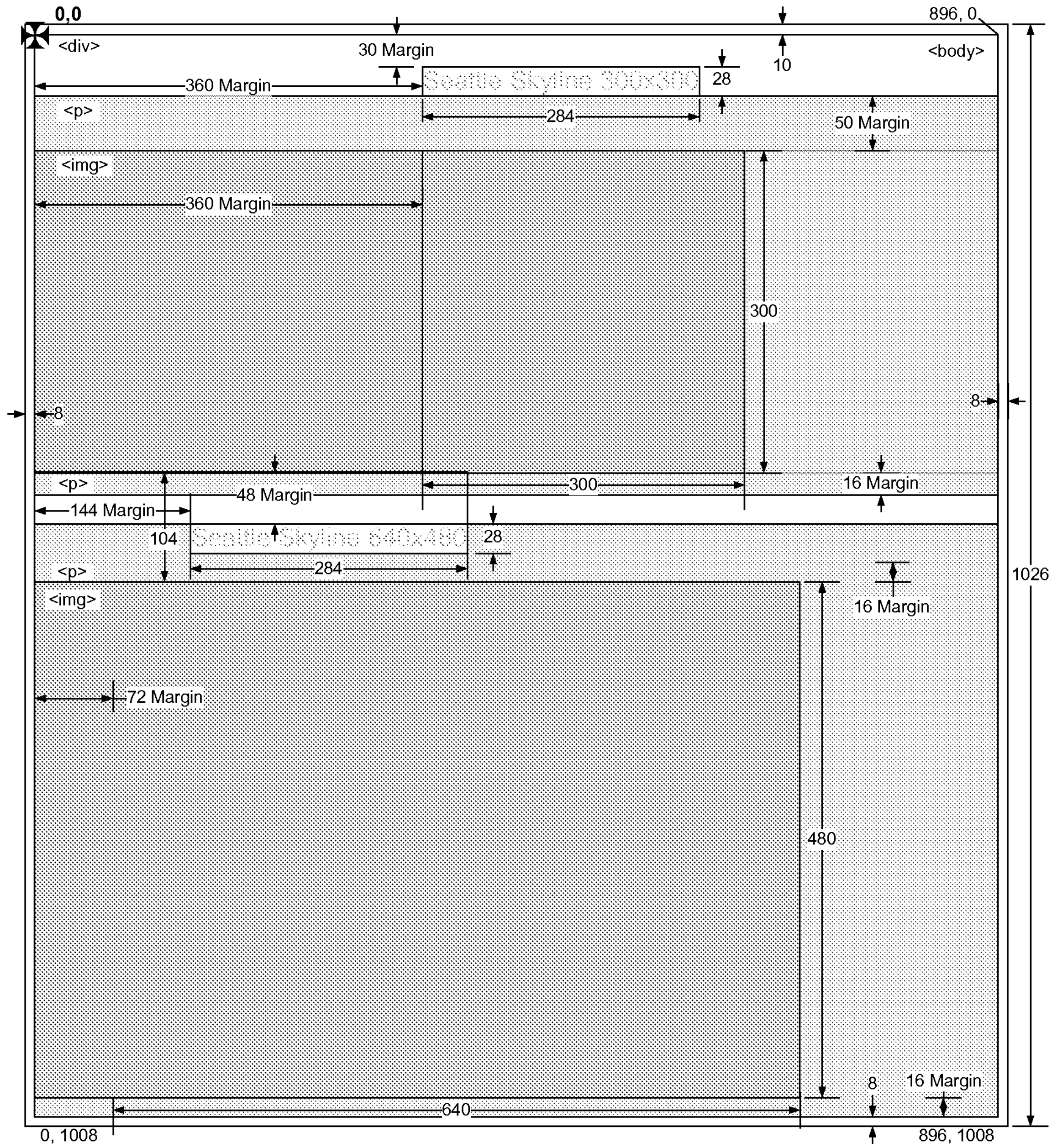
[12] See. e.g., http://www.w3.org/TR/CSS2/box.html



Page Layout (as interpreted by the Mozilla Gecko Rendering Engine)

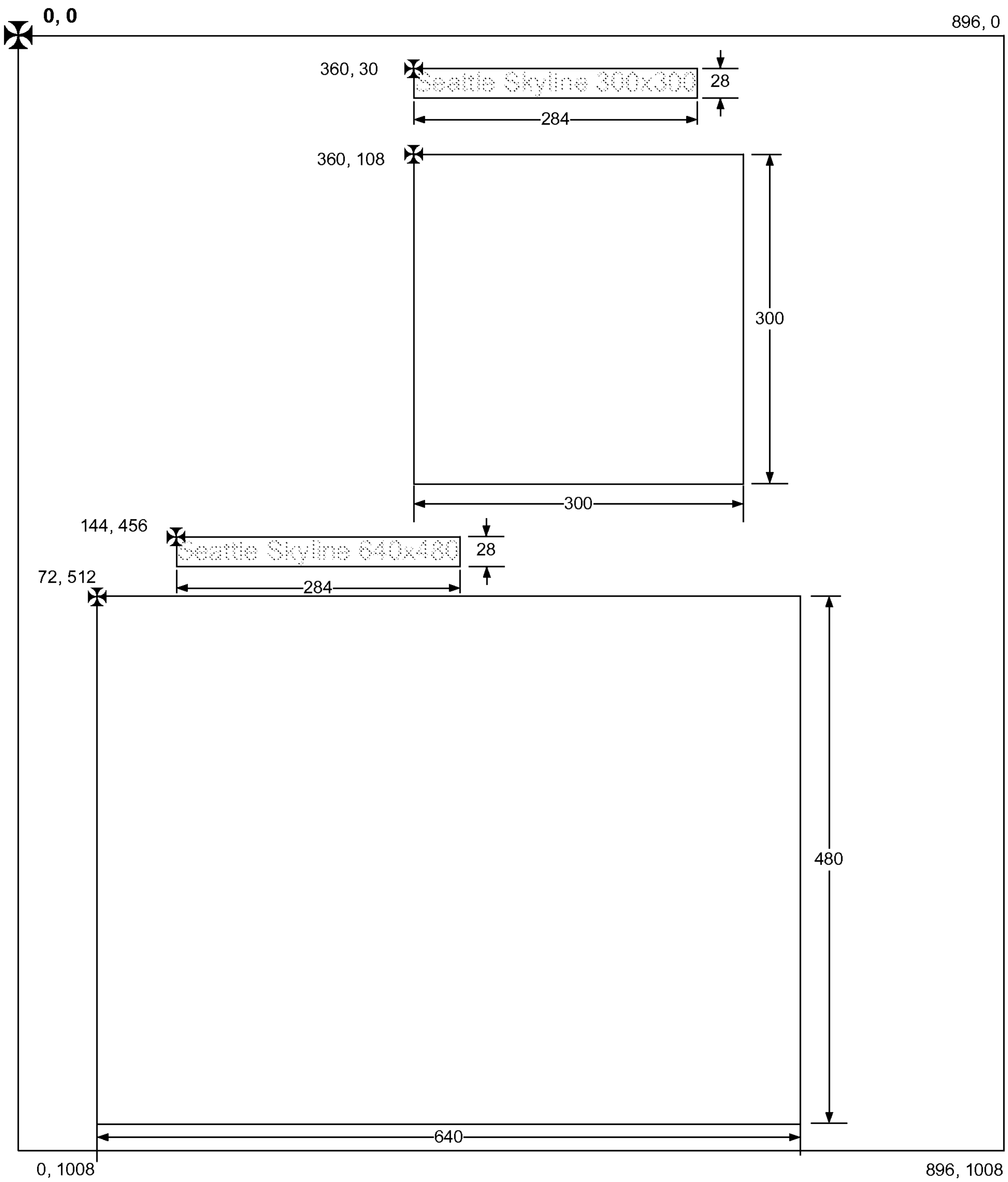
In the layout, a bounding box for the “Seattle Skyline 300x300” text object is located at an X, Y datum of 360, 30 (corresponding to the upper left-hand corner of the box) and has a width of 284 pixels and a height of 28 pixels. The font and location of this text object is defined by the following HTML,

```
.auto-style5 {
	font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode",
Geneva, Verdana, sans-serif;
	font-size: x-large;
	margin-left: 360px;
	margin-top: 30px;
}
```

Notably, a font size of “extra large” corresponding to this font family may be interpreted differently by different browsers. In the case of the Sony Clie examples shown herein, which employs a Palm operating system, a system font may typically be substituted for this font family. Since this web page was designed using Microsoft software, it is believed that the font definition in the HTML above is clearly understood by a Microsoft Internet Explorer browser, but may not be understood by other browsers. Moreover, the font size of “x-large” may be interpreted differently by different rendering engines.

The left and top margins are relative to the page “body” or “body block,” which is the top-level container block for this page’s content. In more complex web pages, there may be multiple container blocks, including nested container blocks. Under HTML, the margin offset information defines a margin offset for the object relative to each object’s container block.

The layout locations for the other objects are determined in a similar manner, with the results depicted in the figure below. The object datums are depicted as X, Y pixel coordinates corresponding to the upper left-hand corner of the bounding box for each object. The selection of the upper left-hand corner is exemplary and not limiting, as the lower left-hand corner may also be used. Moreover, a combination of upper and lower left-hand corners may be employed for object datums, as long as the use for particular object types is consistent. For example, since it is common to layout text content based on a baseline location, using a lower-left hand corner for the datum for a text object bounding box may be employed by some implementations.



Object location derived from Mozilla Gecko Page Layout

At this stage, selected page layout information is “mapped” to the virtual coordinate space employed by SVF using corresponding SVF drawing commands.

SVF employs a "painters" model under which content is "rendered" to a virtual drawing area (*aka*, virtual drawing space or canvas) using SVF drawing commands, and content may be rendered on top of previously rendered content, much like adding paint to a canvas. SVF also employs the concept of a graphics state including current pen position under which certain types of content are rendered based on current parameters for the graphics state at a location defined by the current pen position. The position of the content is defined by one or more points included in a given drawing command and/or an existing current pen position. When using SVF double (floating point) coordinates[13], each point is defined by corresponding X and Y floating point coordinates in the SVF virtual drawing space, and a given SVF drawing command may include floating point parameters defining a location of one or more coordinate points relating to content to be rendered via processing the drawing command. As such, SVF drawing commands are deemed to have a vector format, and thus an SVF drawing command (as defined by the applicable graphics state when rendered[14]) and its embedded or referenced content comprise vector-formatted content, as used in the present application. Alternatively, SFV drawing commands and their embedded or referenced content may be referred to as vector-based content.

By default, SVF uses a conventional two-dimensional graphics coordinate system under which X values increase to the right, and Y values increase going upward. As is evident from the prior images, the Y axis is flipped from that used by the Gecko rendering engine. SVF also has a provision for flipping the Y axis (so that the coordinate system is the same as that used by Gecko). In one embodiment, the

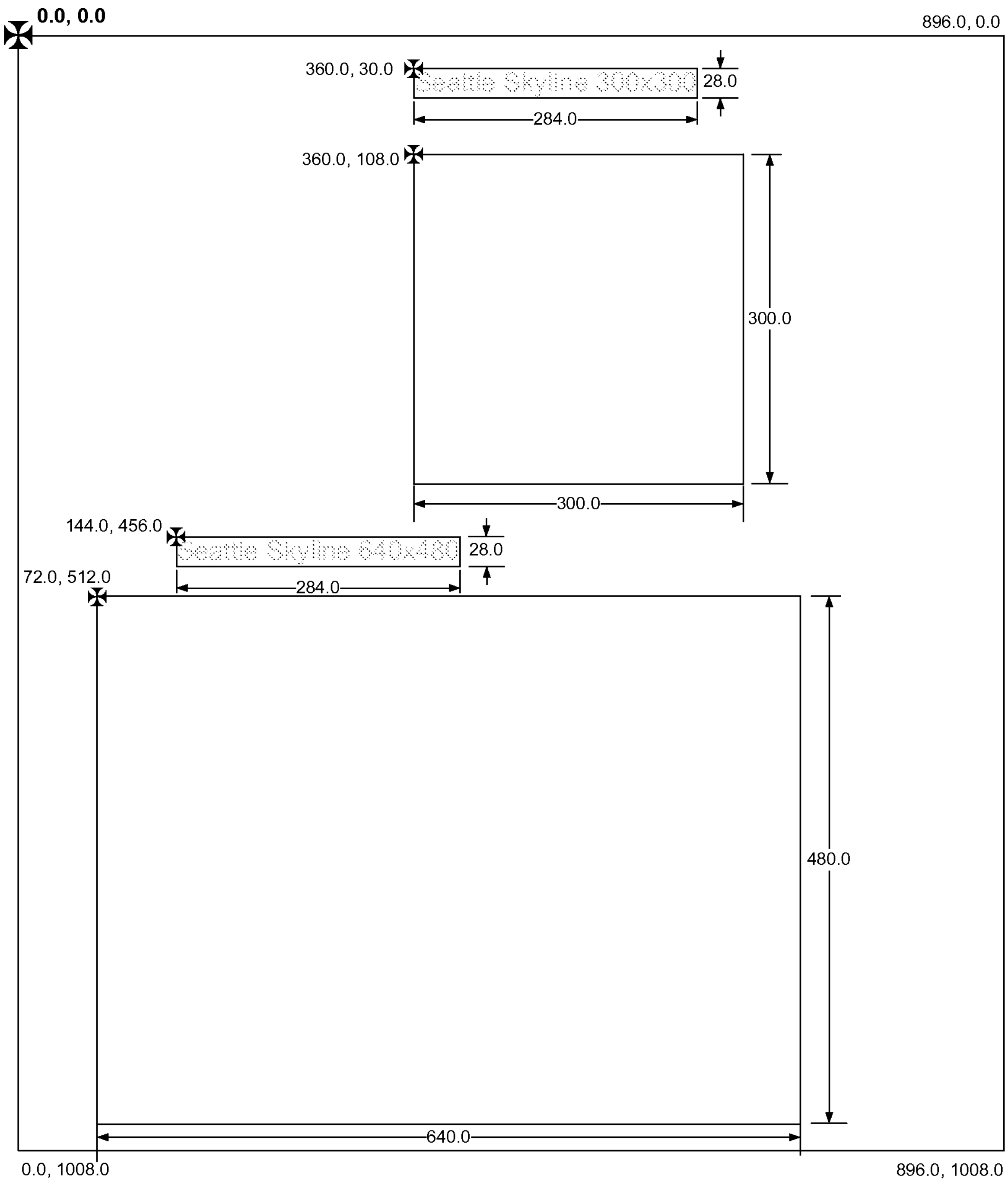
---

[13] SVF also provides support for using integer coordinates.

[14] The effective rendering instructions provided by an SVF drawing command includes the applicable context of the current graphic state at the time the drawing command is processed. For example, the graphics state context may include such things as current pen position, pen color, pen width, fill color, fill mode, font type (e.g., family and style), font size, font color, etc.

SoftView browser employs the flipped SVF coordinate system; however, it shall be understood that the default SVF coordinate system may also be used by flipping and offsetting applicable object coordinates from corresponding coordinates employed by Gecko.

In the following example, the use of SVF using its flipped coordinate system is used. As such, the pixel-based coordinates of the Gecko page layout are mapped to corresponding points in the SVF coordinate system without flipping the Y axis.



Layout Mapped to SVF Coordinate Space (Flipped Y axis to match Gecko)

In one non-limiting embodiment, the coordinates of the points corresponding to selected datums and bounding box corners are mapped from integer values corresponding to the coordinate locations in the pixel-based coordinates employed by

Gecko to corresponding floating point values in the SVF coordinate space. In one embodiment a 1:1 mapping is used, as illustrated in the figures herein; however since SVF employs floating point coordinates, other mappings could be used, as well. For example, the X,Y pixel coordinate of 360, 108 for the 300x300 image of the Seattle skyline is mapped to an X,Y coordinate of 360.0f, 108.0f (where f denotes floating point and is used here for point of illustration to indicate that these are floating point values) in the SVF coordinate space. The page layout information for other page content, such as various text and image objects, is mapped to the SVF vector-based coordinate space in a similar manner using applicable SVF drawing commands[15].

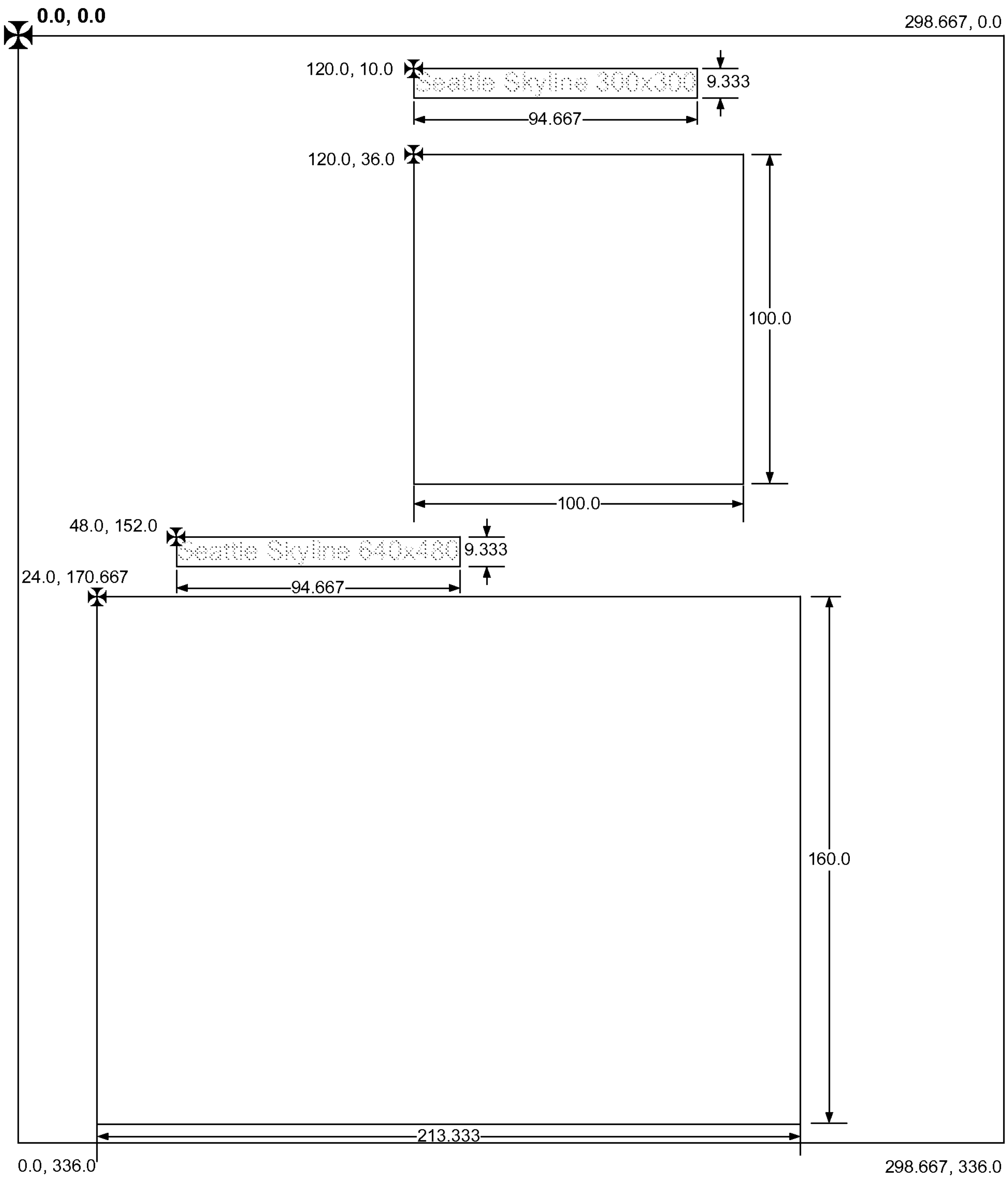
As discussed above, the content area of the Firefox browser was adjusted such that the interpreted width of the body block was 912 pixels. The reason for this was so that the following scaling operation can employ simple fractions. Suppose that the mobile device has a pixel resolution of 320 x 320 pixels, such as is the case for the Sony Clie used in the foregoing examples of nytimes.com. Of the 320 pixels in the width dimension (when oriented in a portrait position), approximately 304 pixels are used for the content area and 16 are used for a vertical scroll bar. The SoftView browser also has a default page width, which can be set by a user. In this instance, the default page width is set to 912 (pixels) such that it is three times the content area width (3 x 304 = 912).

It is desired to view the full width of the web page on this mobile device. Accordingly, a scale factor of 304/912 or 1/3 is applied to the page layout coordinate points on the SVF virtual coordinate system to generate a full page-width view having a width of 304 units. The results of this are shown in the next two figures. The first figure shows the floating point coordinate values after scaling, and the second figure

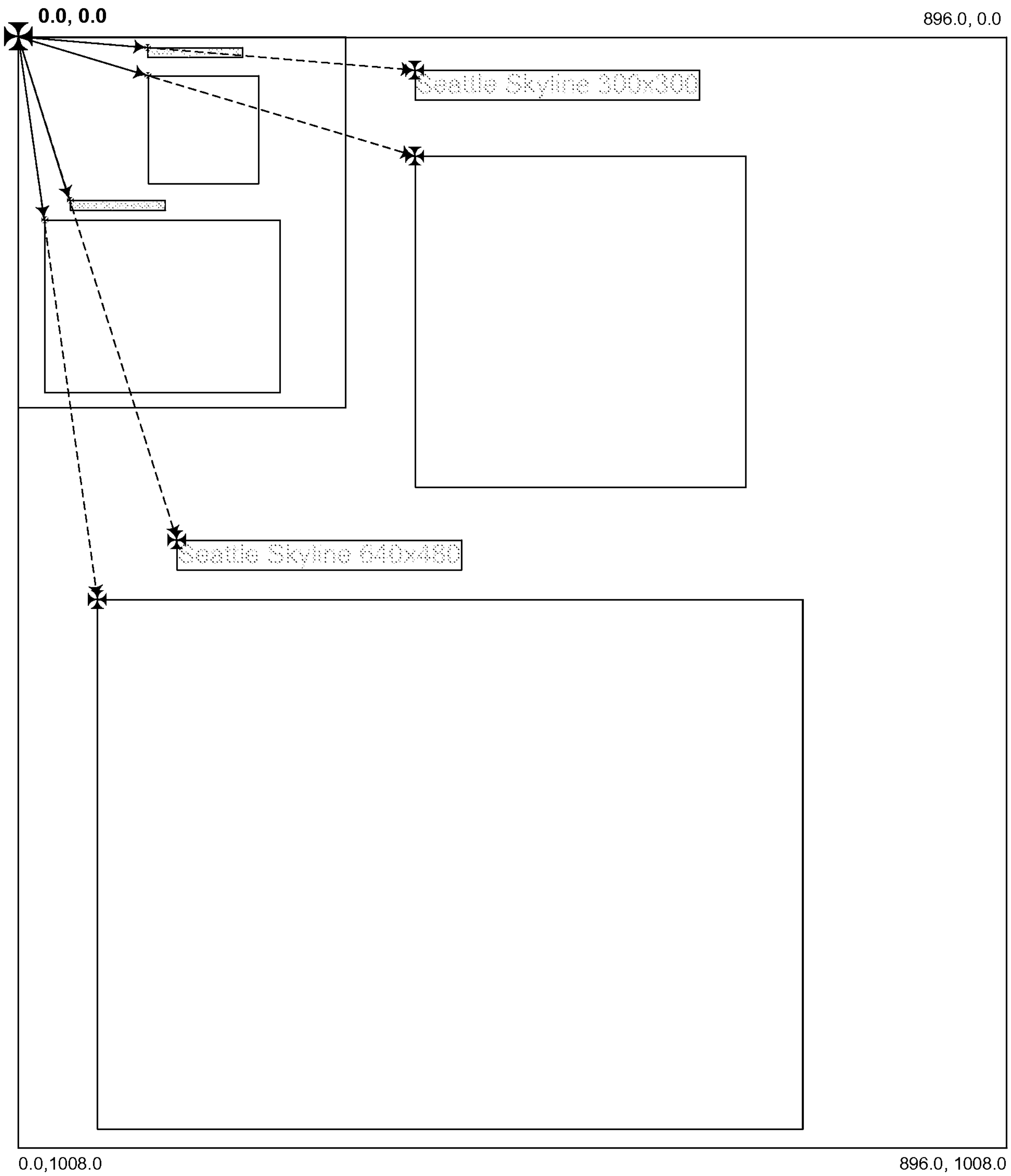
---

[15]Details of SVF drawing commands are included in the SVF v2.0 specification, which may be accessed at www.svf.org/spec.html. The SVF v2.0 specification has been publically available at this web site since approximately December 1999.

schematically shows the page layout and corresponding content being scaled by 1/3, including graphically depicting the point vectors for the object datums being scaled. Since a vector in a two-dimensional coordinate system is defined by a length and direction (i.e., angle), when a vector is scaled the length is multiplied by the applicable scale factor while the direction remains the same. This result is achieved by multiplying each of the X and Y floating point coordinate values by the same scale factor (in this case simply dividing each floating point coordinate by 3). For example, when the original datum for the 300x300 Seattle skyline image is scaled by 1/3, its X, Y coordinates are transformed from 360.0f, 108,0f to 120.0f, 36.0f, as shown below. Also, since the coordinates corresponding to the corners of the bounding boxes are scaled, the width and height dimensions of the bounding boxes are likewise scaled by the same amount. For example, the size of the bounding box for the 300x300 Seattle skyline image is 100.0f by 100.0f after being scaled by 1/3.



1/3 Scale – Flipped SVF Coordinates



Graphical Depiction of Objects and Layout being Scaled by 1/3

In summary, in one non-limiting embodiment the element of "*translating the HTML-based Web content to produce scalable vector-based page layout information*" includes employing a rendering engine to interpret the page layout and mapping selected page layout coordinates from a pixel-based coordinate system to a vector-based virtual coordinate space. Once the layout information is defined by vector-based points in the virtual coordinate space, the coordinates of the layout information can be scaled to produce scaled page layout information. Scaled views of Web page content can then be generated by rendering display objects using applicable scale factors at locations defined the scaled coordinates corresponding to each display object.

Reservation of Rights

The foregoing comments are not intended to comprehensively address all issues arising from the statement of reasons for allowance. Failure to specifically object to one or more aspects of the statement of reasons for allowance is not intended to be, and should not understood to be, an acquiescence or concession with respect to the correctness of any aspect or portion of the statement of reasons for allowance.

The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicant's position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such amendments. It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not signify concession of unpatentability of the claim prior to its amendment.

Comments regarding Executable Code for Opera 3.6 and related IDS materials

During prosecution of U.S. Application Serial No. 11/045,649 (issued as U.S. Patent 7,584,423) and U.S. Application Serial No. 11/045,757 (issued as U.S. Patent

7,451,353), the Applicant attempted to submit copies of executable code for the Opera 3.6 browser. However, both attempts were not accepted by USPTO, and it was determined that there is presently no mechanism known to the Applicant for submitting executable code for consideration, via an IDS or otherwise. In view of this, further attempts to submit the executable code for the Opera 3.6 browser have not been made in the present application or any of the co-pending family members.

In addition, various screen shots created using Opera 3.6 and corresponding discussion materials were submitted by way of IDSs in each of the '649 and '757 applications. However, these materials were inadvertently not submitted in any of the IDS submissions of the present application. Upon realizing this (shortly after receiving the Notice of Allowance) and discussing it with the Examiner (who was the same Examiner for the '649 and '757 applications and indicated he was aware of the reference materials and would consider the references if submitted in an IDS and issue a supplemental Notice of Allowance), the undersigned representative attempted to submit these materials in an IDS and accompanying letter filed June 22, 2010. In the IDS USPTO form SB/08 neither of the boxes pertaining to a statement under a 37 CFR 1.97(e)(1) or 37 CFR 1.97(e)(2) was checked since the IDS materials were known by the Applicant more than three months prior (thus both statements would be false). Rather, only the box for the fee under § 1.17 was checked, and the corresponding fee was submitted. However, since this IDS was submitted after the Notice of Allowance, a statement under 37 CFR 1.97(e) *and* the fee was required. As a result, the IDS submission was deemed non-compliant by the Patent Office.

Upon receiving notification of the non-compliant IDS submission, the undersigned representative contacted the Examiner, and the Examiner indicated again that he was aware of the Opera 3.6 related materials and further indicated that the allowed claims were patentable over these materials. Accordingly, it is clear that the

Examiner is aware of the materials and thus a further attempt to submit them via an IDS will not be made.

Status of co-pending cases

Below is a table showing the status of co-pending applications that are related to the present application (status of present application shown in bold).

Application No.	**Filing Date**	**Relationship**	**Status**
60/211,345	06-12-2000	Provisional Application	Expired
60/217,345	07-11-2000	Provisional Application	Expired
09/828,511	04-07-2001	Original Non-provisional application	Abandoned
09/878,097	06-08-2001	Continuation-in-part of 09/828,511	7,210,099
11/045,649	01-28-2005	Divisional of 09/878,097	7,584,423
11/045,757	01-28-2005	Divisional of 09/878,097	7,461,353
11/735,477	04-15-2007	Continuation of 09/878,097	Awaiting First Action
11/735,482	04-15-2007	Continuation of 09/878,097	Non-Final Action
11/738,486	**04-21-2007**	**Continuation of 09/878,097**	**Allowed**
11/738,932	04-23-2007	Continuation of 09/878,097	Allowed
11/868,124	10-05-2007	Divisional of 11/045,757	Non-final Action
12/326,092	12-01-2008	Continuation of 11/045,757	Awaiting First Action

Comments regarding ongoing litigation of US Patent No. 7,451,353

In accordance with the provisions of MPEP 2001.06(c) and 37 C.F.R §§ 1.56, 197, and 1.98, a Notice of Litigation was filed on May 23, 2009 identifying that U.S. Patent No. 7,461,353, which is a divisional of the parent of the present application (U.S. Application Serial No. 09/878,097 issued as U.S. Patent 7,210,099) is in litigation, Case No. 1:10-cv-00389-JJF-LPS, in the United States District Court for the District of Delaware. Copies of the complaint and Report on the Filing or Determination of an Action Regarding a Patent or Trademark were previously submitted in an IDS filing dated May 23, 2009. Copies of the additional case documents are being submitted in an IDS submitted herewith.

Conclusion

In view of the foregoing and prosecution of record, it is respectfully submitted that all of the claims pending in this patent application are in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: *September 9, 2010* *\/S/ R. Alan Burnett*

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NOVEMBER 24, 2010 REMARKS

REMARKS

This amendment is made in response to the Office Action mailed August 24, 2010. In the Office Action, the drawings were objected to for failing to comply with 37 C.F.R. 1.84(p)(5) for including improper reference characters. Claims 1-25 were rejected on the ground of nonstatutory double patenting over claims of U.S. Patent Nos. 7,461,353 and 7,584,423, and provisionally rejected over the claims of co-pending Application Nos. 11/735,477 and 11/738,486. Claims 1-14 and 20-25 were rejected under 35 U.S.C. § 102(a) as being anticipated by *WEST*: A Web Browser for Small Terminals by Staffan Björk et al. (Viktoria Institute, Göteborg, Sweden, 1999) hereafter *WEST*. Claims 15-19 are rejected 35 U.S.C. § 103(a) as being unpatentable over *WEST*, further in view of The Zoom Browser by Lars Erik Holmquist (Åter till Human IT, 3/1998), hereinafter *Holmquist*. Claims 15-19 were also rejected under 35 U.S.C. § 112, second paragraph, as being indefinite.

Claims 1, 3, 6-8, 10, 12, 15-19, 21, 23, and 25 are amended herein. In particular, independent claims 1 and 15 are amended to more clearly recite elements of their claimed inventions. Claims, 9, 11, 13, 20, 22, and 24 have been canceled. New claims 26-37 have been added. Accordingly, claim 1-8, 10, 12, 14-19, 21, 23, and 25-37 are now pending. In view of the amendments and following remarks, Applicants respectfully assert all claims are in condition for allowance.

<u>Correction of Application Number in Specification</u>

Applicants thank the Examiner for identifying the inadvertent error in identification of U.S. Non-provisional Application No. 09/82**<u>5</u>**,511 in paragraph [0001] of the specification. The application number has been corrected to 09/82**<u>8</u>**,511.

<u>Correction to Drawings</u>

Applicants thank the Examiner for identifying the inadvertent errors in the drawings. Amendment has been made to paragraph [0063] to specifically reference blocks 117, 119, and 121 in FIG. 2C. Reference numbers 32A and 34A have been respectively corrected to 232A and 234A in FIG. 4A. Reference numbers 268" and 270" have been respectfully corrected to 268' and 270' in FIG. 4G. No new matter has been added. Replacement sheets for FIG. 4A and FIG. 4G are submitted herewith.

Discussion of new claim terminology and operations of exemplary embodiments of the invention reduced to practice

In reviewing the above-identified rejections, Applicants believe that the Examiner did not fully comprehend the scope of the original claims. Moreover, Applicants assert the original claims were clearly patentable over the cited references. However, Applicants have chosen to amend the claims herein to provide further clarification to the intended scope of the claims, and to differentiate the claimed inventions from inventions claimed in related patents and applications. Additionally, certain claim elements are discussed in detail below so that their respective claim scope is more clearly understood. Arguments in support of patentability then follow.

Scalable or Scaled Page Layout Information

The terminology "scalable page layout information" is recited in independent claim 1, and an operation comprising "scaling page layout information …" is recited in independent claims 15 and 30. In order to clarify the scope of this claim terminology, the following discussion is provided.

Independent Claim 1– "scalable page layout information"

Independent claim 1 recites, in part,

> …
>
> retrieving … HTML-based Web content associated with the Web page;
>
> *processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine;*

*employing the page layout information to generate **scalable page layout information**; and*

*employing the **scalable page layout information** and/or content derived therefrom to,*

. . .

The terminology "scalable page layout information" refers to page layout information (that is information used to layout the Web page content) that includes layout objects that are mapped to a virtual coordinate space[1], as discussed in further detail below. The claim element of "*processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine*" does not restrict the element to a single process or operation, but may include multiple operations. Similarly, the claim element of "*employing the page layout information to generate scalable page layout information*" may be implemented by one or more operations, and may be implemented directly or indirectly, as discussed below.

In accordance with one or more embodiments disclosed in the present application, the processing of the retrieved HTML-based content begins by employing a rendering engine to determine page layout information that includes information from which the location for each displayed object[2] (*i.e.*, HTML element or block having content that is to be displayed) can be determined. In general, the page layout information includes information from which at least one of a datum or bounding box for each object can be determined. In one embodiment, the page layout is interpreted

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[1] The usage here of "virtual coordinate space" is not to be limiting. In general, a virtual coordinate space may also be commonly referred to as a virtual drawing environment, virtual coordinate system, logical coordinate system, or a virtual drawing system.

[2] Page layout information may also include information corresponding to objects that are not displayed in rendered content, such as layout container objects, as described below.

using the rendering engine based on a default page width in pixels, and the location of the page layout objects is interpreted by the rendering engine are defined by corresponding pixel locations on the page. Accordingly, at this point the page layout information, such as a datum, is defined by corresponding pixel locations in a two-dimensional (XY) pixel-based coordinate space used by the rendering engine. The page layout information is further processed to generate Simple Vector Format (SVF) drawing commands to map the page layout information from the pixel-based coordinate system to a vector-based virtual coordinate space used by the SVF vector-based drawing model. Under the SVF vector-based drawing model, each coordinate point comprises a vector (*i.e.*, a point vector), and paths for drawing content are defined using vector-based definitions (*i.e.*, a mathematical description of the path using vectors). As such, the vector for each coordinate point can be scaled by applying a scale factor to the point coordinates, resulting in a transformed point (and corresponding scaled vector). In addition, the virtual coordinate space is resolution independent, wherein a resolution of the coordinates employed by the virtual coordinate space is independent of the resolution of the displays of devices used to display content. Accordingly, the same content defined by corresponding SVF drawing commands can be mapped to displays having different resolutions, and rendered at an applicable resolution for each display.

These operations may more easily be understood by an example corresponding to a simple web page, such as shown below. The exemplary web page includes four objects: a text object comprising the text "Seattle Skyline 300x300"; a JPEG image of the Seattle skyline having an original (full scale) size of 300x300 pixels; a text object comprising the text "Seattle Skyline 640x480"; and a JPEG image of the Seattle skyline having an original (full scale) size of 640x480 pixels. The web page also has an interpreted size of 912 pixels wide by 1026 pixels high in the example figures herein, as discussed in further detail below. The HTML for generating this web page is shown following the image. The web page was designed using Microsoft Expression Web 4 software. As such, the upper portion of the code (between the <style …> and </style> tags comprises Cascading Style Sheet style definitions. For more complex pages, the CSS style definitions may be contained in one or more separate CSS documents. Style definitions may also be defined inline (*e.g.*, when the definition for a given element, such as a line of text, paragraph, *etc.*). All of this corresponds to conventional HTML and CSS standards, which are well-known in the art.

Seattle Skyline 300x300

Seattle Skyline 640x480

Original Web Page Layout and Design

```
<!DOCTYPE html PUBLIC "-//W3C//DTD XHTML 1.0 Transitional//EN"
"http://www.w3.org/TR/xhtml1/DTD/xhtml1-transitional.dtd">
<html xmlns="http://www.w3.org/1999/xhtml">

<head>
<meta content="en-us" http-equiv="Content-Language" />
<meta content="text/html; charset=utf-8" http-equiv="Content-Type" />
<title>Seattle Skyline</title>
<style type="text/css">
.auto-style1 {
	margin-left: 360px;
	margin-top: 0px;
}
.auto-style2 {
	margin-left: 72px;
	margin-top: 0px;
}
.auto-style3 {
	margin-top: 50px;
}
.auto-style4 {
	font-size: x-large;
	font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode", Geneva,
Verdana, sans-serif;
	margin-left: 144px;
	margin-top: 48px;
}
.auto-style5 {
	font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode", Geneva,
Verdana, sans-serif;
	font-size: x-large;
	margin-left: 360px;
	margin-top: 30px;
}
	.auto-style6 {
		border-style: solid;
		border-width: 1px;
	}

</style>
</head>

   <body style="margin-top: 10px">
	<div class="auto-style6">
		<div class="auto-style5" style="width: 284px">
		Seattle Skyline 300x300</div>
		<p class="auto-style3">
		<img alt="" class="auto-style1" height="300" src="seattle%20300x300.jpg" width="300" /></p>
		<p class="auto-style4" style="width: 284px">Seattle Skyline 640x480</p>
		<p>
		<img alt="" class="auto-style2" height="480" src="Seattle%20640x480.jpg" width="640" /></p>
	<div>
   </body>

</html>
```

Example Web Page HTML

The following figure shows the layout information for the page as interpreted by the Mozilla "Gecko" rendering engine.[3] The rendering engine is part of the Firefox browser (current version 3.6). An earlier version (from approximately 2000-2002) of the Gecko rendering engine is employed for the SoftView™ browser screenshots herein.

It is common practice to lay out web page content using a page origin of 0,0[4] at the upper left hand corner of the page. Accordingly, web page rendering engines such as Gecko typically employ a pixel-based coordinate system having an origin at 0,0 with X values increasing to the right, and Y values increasing downward. The coordinates of the pixel-based coordinate system are integer values corresponding to the location of the pixels in a rendered page.

One of the operations performed during page layout is parsing of the HTML to identify the corresponding HTML elements. For "free-form" pages such as this example, the order of the elements affect the page layout (vertically in this case), as objects are laid out relative to other objects, as opposed to having a fixed position. Commercial pages (*e.g.*, nytimes.com, CNN.com, WSJ.com, *etc.*) typically employ one or more cascading style sheets to define a more structured page layout; however, in order to not obscure the page layout concepts taught here a simple web page example is used.

Browser rendering engines typically determine page layout based on the size of the browser window content area (*i.e.*, the portion of the browser application window in which the page content is rendered on a display, such as a desktop computer monitor). In particular, the width of the content area is employed. Depending on the web page design, the width of the content may affect the page layout. In this particular, example, however, there are no objects that are located based on the content area width, as each

---

[3] For further details, see the following section concerning an overview of the SoftView™ browser operation.

[4] Optionally, the page layout datum may be considered at 1, 1, representing the X, Y location of the pixel at the upper left hand corner of a content drawing area used to render page content in a browser.

of the four objects has a defined offset from the left edge of the page, as defined by corresponding HTML elements in the HTML code.

The height of the page is interpreted by aggregating the vertical dimensions of the object layout in the page, as determined by the page layout interpreted by the particular rendering engine used by the browser. Different rendering engines may use different default spacing values and fonts (and/or the default fonts and sizes can be changed by a user), such that the same content may be laid out differently by the different rendering engines. In this particular example, the Gecko rendering engine determined the body block to be 1008 pixels in height. The Firefox browser window width was adjusted such that the body block was interpreted to be 896 pixels wide to simplify the content scaling example herein, as discussed below.

As shown in the page layout below, the Mozilla Gecko rendering engine produces page layout information using container blocks in a nested manner. HTML is coded in a hierarchical manner using HTML tags to define HTML elements (*aka* HTML blocks or objects). As the HTML page source is parsed, the HTML elements are identified and an element hierarchy called a tree is generated. The layout of objects within a given container block are relative to the location of the container block itself, which may further be relative to other container blocks in a layout hierarchy. In general, the html block (content between <html> and </html> tags) comprises the top level container block for the page. However, the top level container block for this example page is effectively the body block, since all content internal to the body block is laid out relative to the body block. Other typical container blocks are defined by <div> elements, paragraph <p>element, *etc.*

It is typical for browsers to apply their own interpreted amount of padding (small vertical and horizontal offsets) around the body block so the edges of a page are not coincident with the edges of the content drawing area. In the case of Firefox, the padding around the body block for this example page for the top, left, right, and bottom is respectfully 10, 8, 8, and 8 pixels. Notably, the 10 pixel top margin offset is explicitly specified by the HTML, while the 8 pixels offsets appear to be default offsets employed by Firefox. Since the content in this example is laid out relative to the body block, the upper left hand corner of the body block container box is defined as the 0, 0 datum for the examples herein rather than the upper left hand corner of the page (again for simpler explanation of the scaling examples).

Under Gecko, the horizontal and vertical position of a given object relative to its container in this example web page is labeled as a “margin.” This is in accordance with the CSS box model[5], which may also include parameters defining an optional border and/or and padding around the content bounding box for a given object. Each content bounding box, in turn, is defined by a width and a height. To determine the position of each object relative to a body block datum (*e.g.*, an X, Y pixel coordinate position of 0, 0 in this example), the object’s location is determined first by determining the location of its immediate container block, and then applying the applicable offsets in the X and Y directions relative to the container block’s box definition (more specifically the X offset is from the container block box’s left edge and the Y offset is from the box’s top). The container blocks themselves may be nested and/or may be stacked on top of one another vertically; accordingly, their location is determined in a similar manner. The net result is the layout of each object on the page relative to a page datum can be determined by processing the layout information determined by the rendering engine for each object relative to its containing block and aggregating the total X and Y offsets. This is commonly termed as “walking the render tree.”

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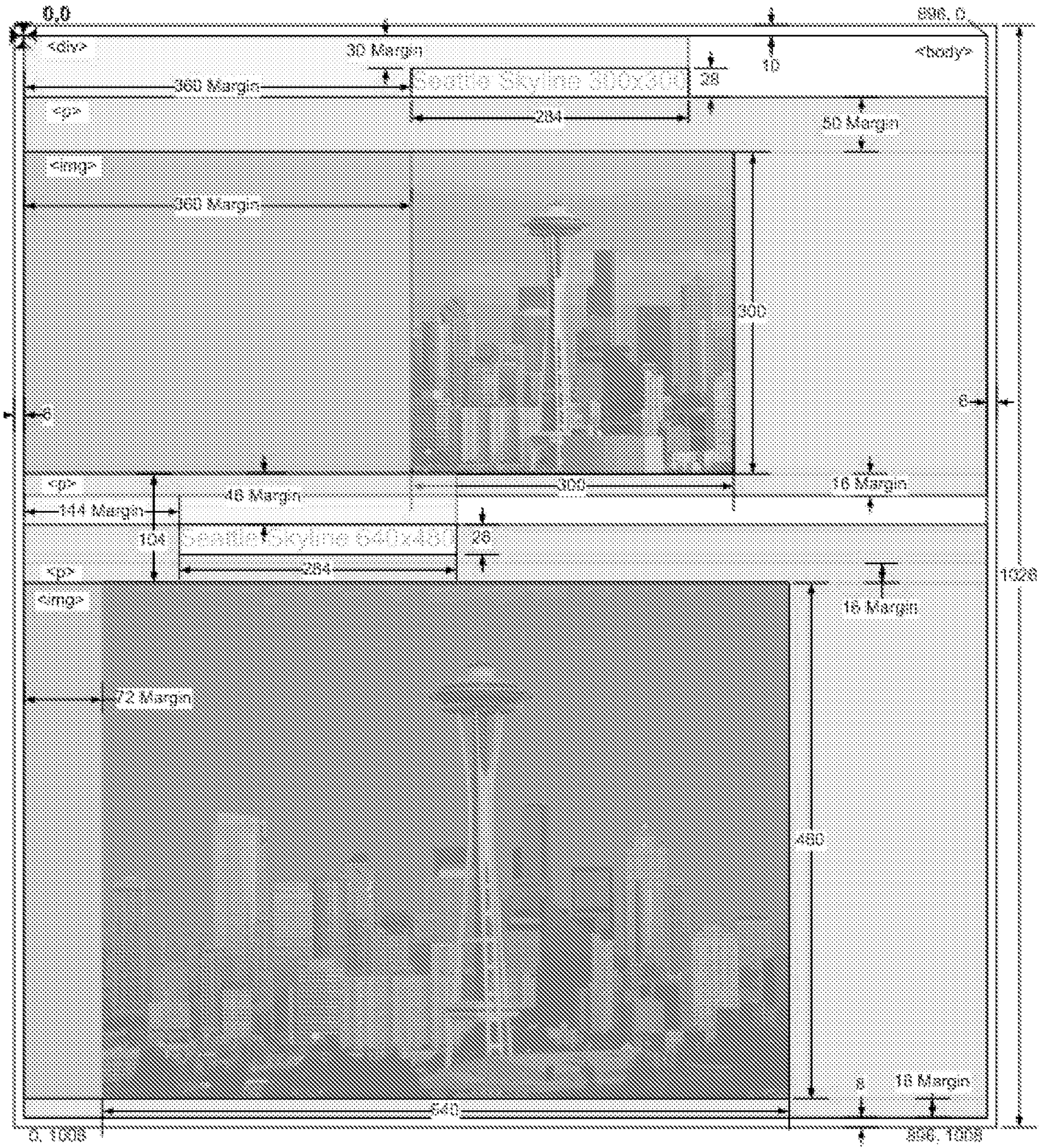
[5] See. e.g., http://www.w3.org/TR/CSS2/box.html



Page Layout (as interpreted by the Mozilla Gecko Rendering Engine)

In the layout, a bounding box for the “Seattle Skyline 300x300” text object is located at an X, Y datum of 360, 30 (corresponding to the upper left-hand corner of the box) and has a width of 284 pixels and a height of 28 pixels. The font and location of this text object is defined by the following HTML,

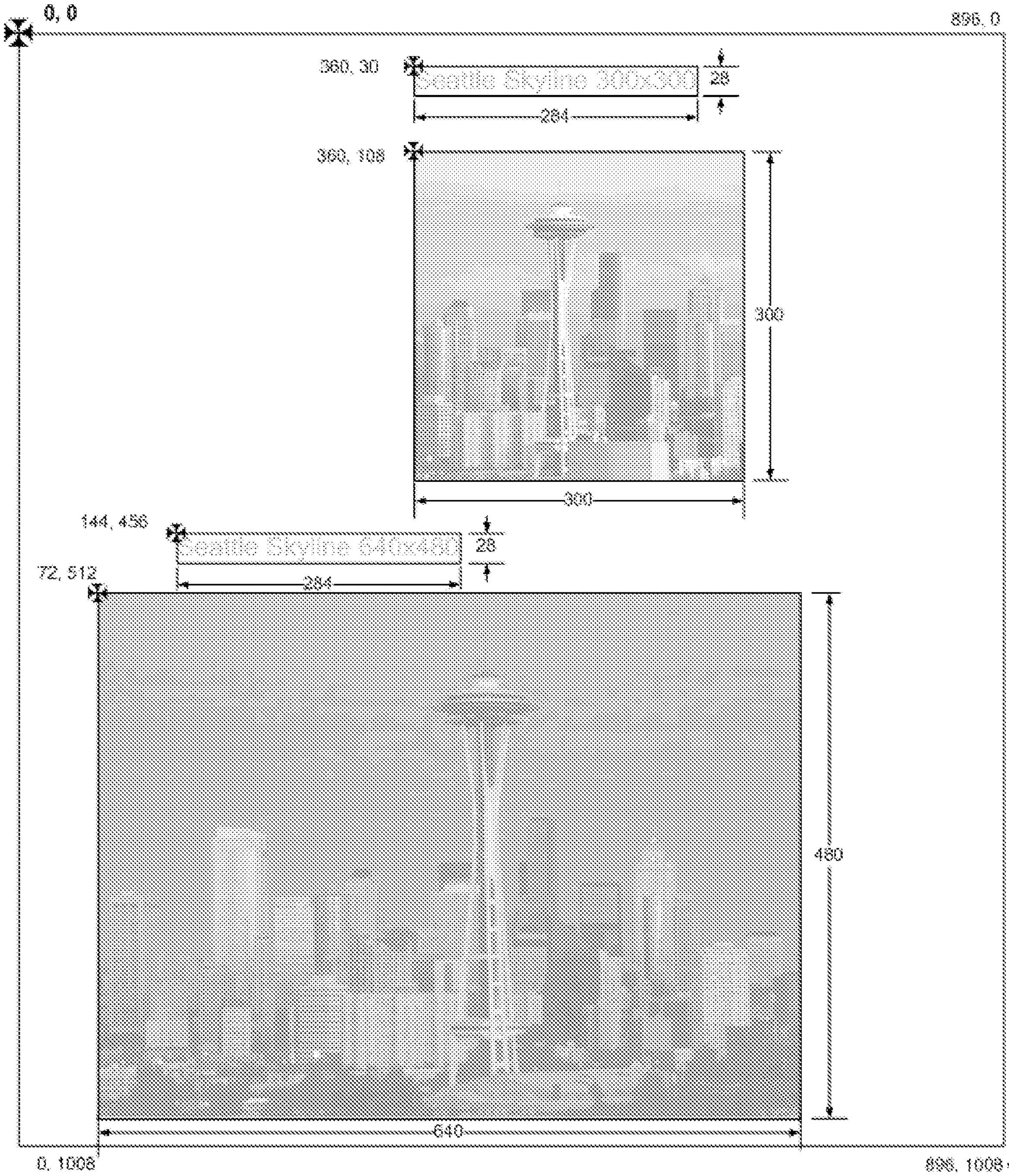
.auto-style5 {

```
        font-family: "Lucida Sans", "Lucida Sans Regular", "Lucida Grande", "Lucida Sans Unicode",
Geneva, Verdana, sans-serif;
        font-size: x-large;
        margin-left: 360px;
        margin-top: 30px;
}
```

Notably, a font size of “extra large” corresponding to this font family may be interpreted differently by different browsers. In the case of the Sony Clie examples shown herein, which employs a Palm operating system, a system font may typically be substituted for a given font family. Since this web page was designed using Microsoft software, it is believed that the font definition in the HTML above is clearly understood by a Microsoft Internet Explorer browser, but may not be understood by other browsers. Moreover, the font size of “x-large” may be interpreted differently by different rendering engines.

The left and top margins are relative to the page “body” or “body block,” which is the top-level container block for this page’s content. In more complex web pages, there may be multiple container blocks, including nested container blocks. Under HTML, the margin offset information defines a margin offset for the object relative to each object’s container block.

The layout locations for the other objects are determined in a similar manner, with the results depicted in the figure below. The object datums are depicted as X, Y pixel coordinates corresponding to the upper left-hand corner of the bounding box for each object. The selection of the upper left-hand corner is exemplary and not limiting, as the lower left-hand corner may also be used. Moreover, a combination of upper and lower left-hand corners may be employed for object datums, as long as the use for particular object types is consistent. For example, since it is common to layout text content based on a baseline location, using a lower-left hand corner for the datum for a text object bounding box may be employed by some implementations. For simplicity and clarity, upper-left hand corners are used for the datums for the four page objects in this example Web page.



Object location derived from Mozilla Gecko Page Layout

At this stage, selected page layout information is "mapped" to the virtual coordinate space employed by SVF using corresponding SVF drawing commands.

SVF employs a "painters" model under which content is "rendered" to a virtual drawing area (*aka*, virtual drawing space or canvas) using SVF drawing commands, and content may be rendered on top of previously rendered content, much like adding paint to a canvas. SVF also employs the concept of a graphics state including current pen position under which certain types of content are rendered based on current parameters for the graphics state at a location defined by the current pen position. The position of the content is defined by one or more points included in a given drawing command and/or an existing current pen position. When using SVF double (floating point) coordinates[6], each point is defined by corresponding X and Y floating point coordinates in the SVF virtual drawing space, and a given SVF drawing command may include floating point parameters defining a location of one or more coordinate points relating to content to be rendered via processing the drawing command. As such, SVF drawing commands are deemed to have a vector format, and thus an SVF drawing command (as defined by the applicable graphics state when rendered[7]) and its embedded or referenced content comprise vector-formatted content, as used in the present application. Alternatively, SFV drawing commands and their embedded or referenced content may be referred to as vector-based content.

By default, SVF uses a conventional two-dimensional graphics coordinate system under which X values increase to the right, and Y values increase going upward. As is evident from the prior images, the Y axis is flipped from that used by the Gecko rendering engine. SVF also has a provision for flipping the Y axis (so that the coordinate system is the same as that used by Gecko). In one embodiment, the

---

[6] SVF also provides support for using integer coordinates.

[7] The effective rendering instructions provided by an SVF drawing command includes the applicable context of the current graphic state at the time the drawing command is processed. For example, the graphics state context may include such things as current pen position, pen color, pen width, fill color, fill mode, font type (e.g., family and style), font size, font color, etc.

SoftView™ browser employs the flipped SVF coordinate system; however, it shall be understood that the default SVF coordinate system may also be used by flipping and offsetting applicable object coordinates from corresponding coordinates employed by Gecko when mapping objects to the SVF drawing space.

In the following example, the use of SVF using its flipped coordinate system is used. As such, the pixel-based coordinates of the Gecko page layout are mapped to corresponding points in the SVF coordinate system without flipping the Y axis.

In one non-limiting embodiment, the coordinates of the points corresponding to selected datums and bounding box corners are mapped from integer values corresponding to the coordinate locations in the pixel-based coordinates employed by Gecko to corresponding floating point values in the SVF coordinate space. In one embodiment a 1:1 mapping is used, as illustrated in the figures herein; however since SVF employs floating point coordinates, other mappings could be used, as well. For example, the X,Y pixel coordinate of 360, 108 for the 300x300 image of the Seattle skyline is mapped to an X,Y coordinate of 360.0f, 108.0f (where f denotes floating point and is used here for point of illustration to indicate that these are floating point values) in the SVF coordinate space. The page layout information for other page content, such as various text and image objects, is mapped to the SVF vector-based coordinate space in a similar manner using applicable SVF drawing commands[8].

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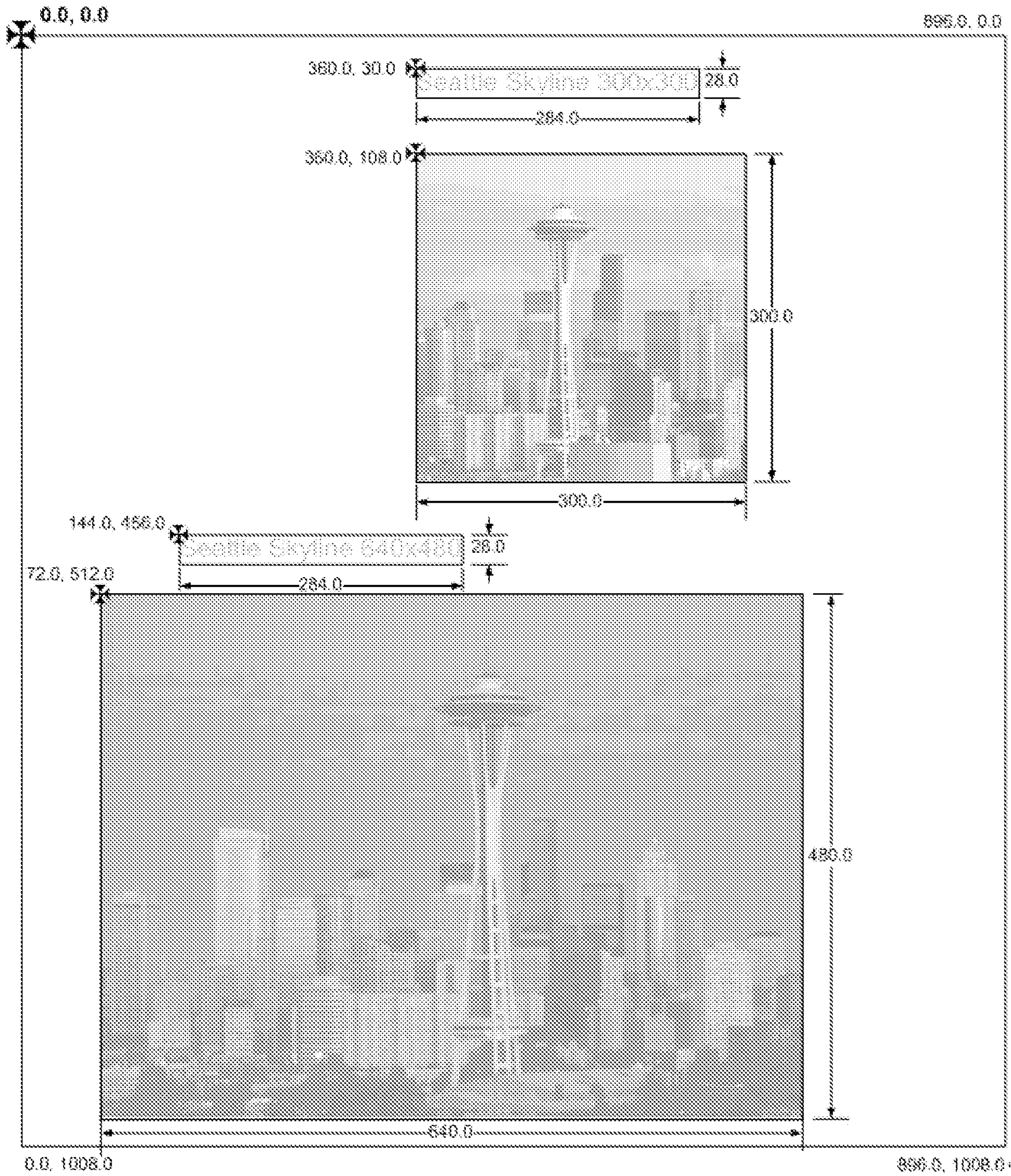
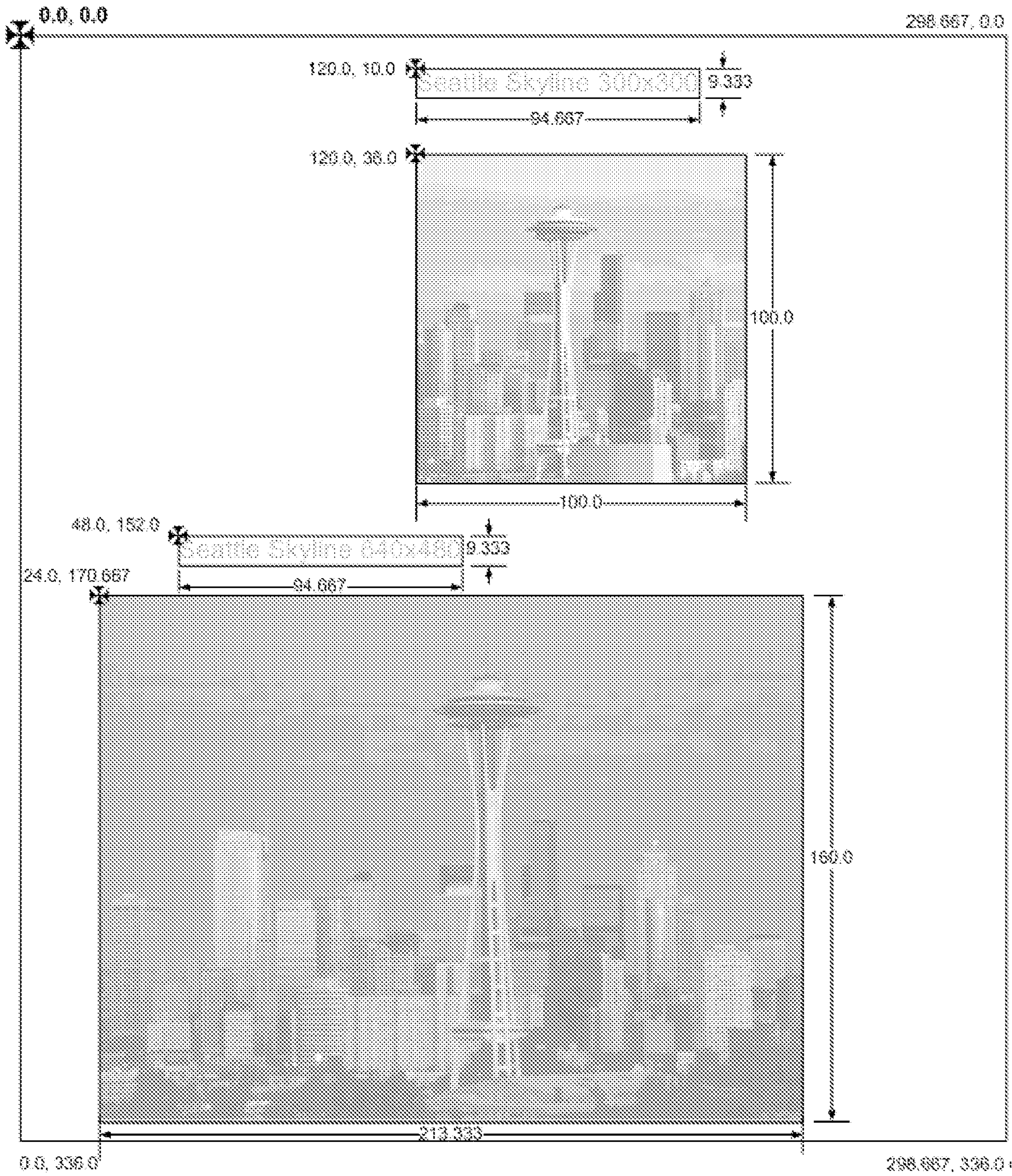
[8]Details of SVF drawing commands are included in the SVF v2.0 specification, which may be accessed at www.svf.org/spec.html. The SVF v2.0 specification has been publically available at this web site since approximately December 1999.



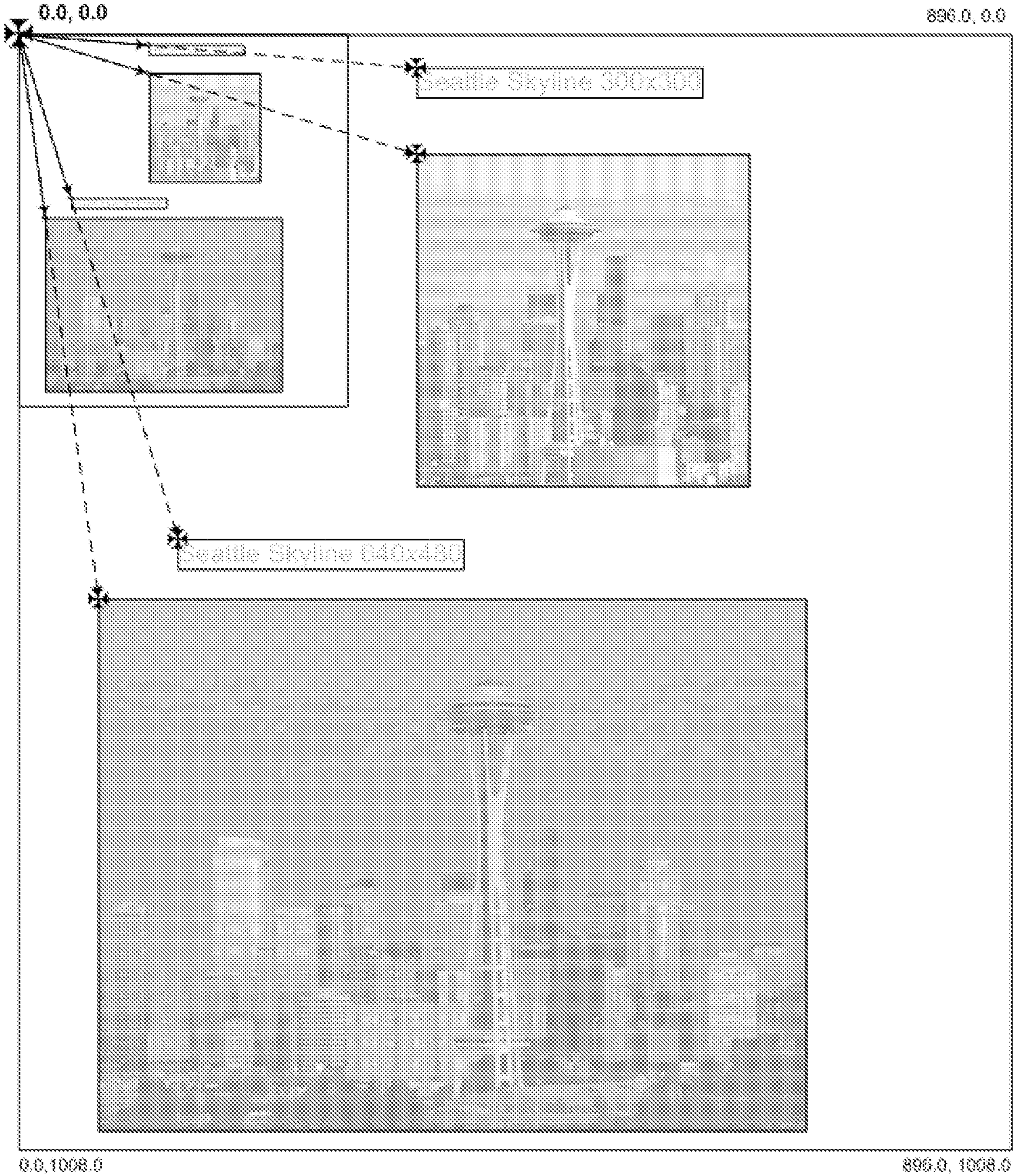
Layout Mapped to SVF Coordinate Space (Flipped Y axis to match Gecko)

As discussed above, the content area of the Firefox browser was adjusted such that the interpreted width of the body block was 896 pixels. The reason for this was so that the following scaling operation can employ simple fractions. Suppose that the mobile device has a pixel resolution of 320 x 320 pixels, such as is the case for the Sony Clie used in the examples of nytimes.com screenshots shown later herein. Of the 320 pixels in the width dimension (when oriented in a portrait position), approximately 304 pixels are used for the content drawing area and 16 are used for a vertical scroll bar. The SoftView™ browser also has a default page width, which can be set by a user. In accordance with this example, the Firefox browser window width was adjusted to illustrate the results of its interpreted page layout as if a default page width set to 912 (pixels) was used, such that the page width would be three times the content area width (3 x 304 = 912).

In some embodiments, users are enabled to view the full width of the web page on this mobile device. In accordance with this example, a scale factor of 304/912 or 1/3 is applied to the page layout coordinate points on the SVF virtual coordinate system to generate a full page-width view having a width of 304 units. The results of this are shown in the next two figures. The first figure shows the floating point coordinate values after scaling, and the second figure schematically shows the page layout and corresponding content being scaled by 1/3, including graphically depicting the point vectors for the object datums being scaled. Since a vector in a two-dimensional coordinate system is defined by a length and direction (*i.e.*, angle), when a vector is scaled the length is multiplied by the applicable scale factor while the direction remains the same. This result is achieved by multiplying each of the X and Y floating point coordinate values by the same scale factor (in this case simply dividing each floating point coordinate by 3). For example, when the original datum for the 300x300 Seattle skyline image is scaled by 1/3, its X, Y coordinates are transformed from 360.0f, 108,0f to 120.0f, 36.0f, as shown below. Also, since the coordinates corresponding to the corners of the bounding boxes are scaled, the width and height dimensions of the bounding boxes are likewise scaled by the same amount. For example, the size of the bounding box for the 300x300 Seattle skyline image is 100.0f by 100.0f after being scaled by 1/3.

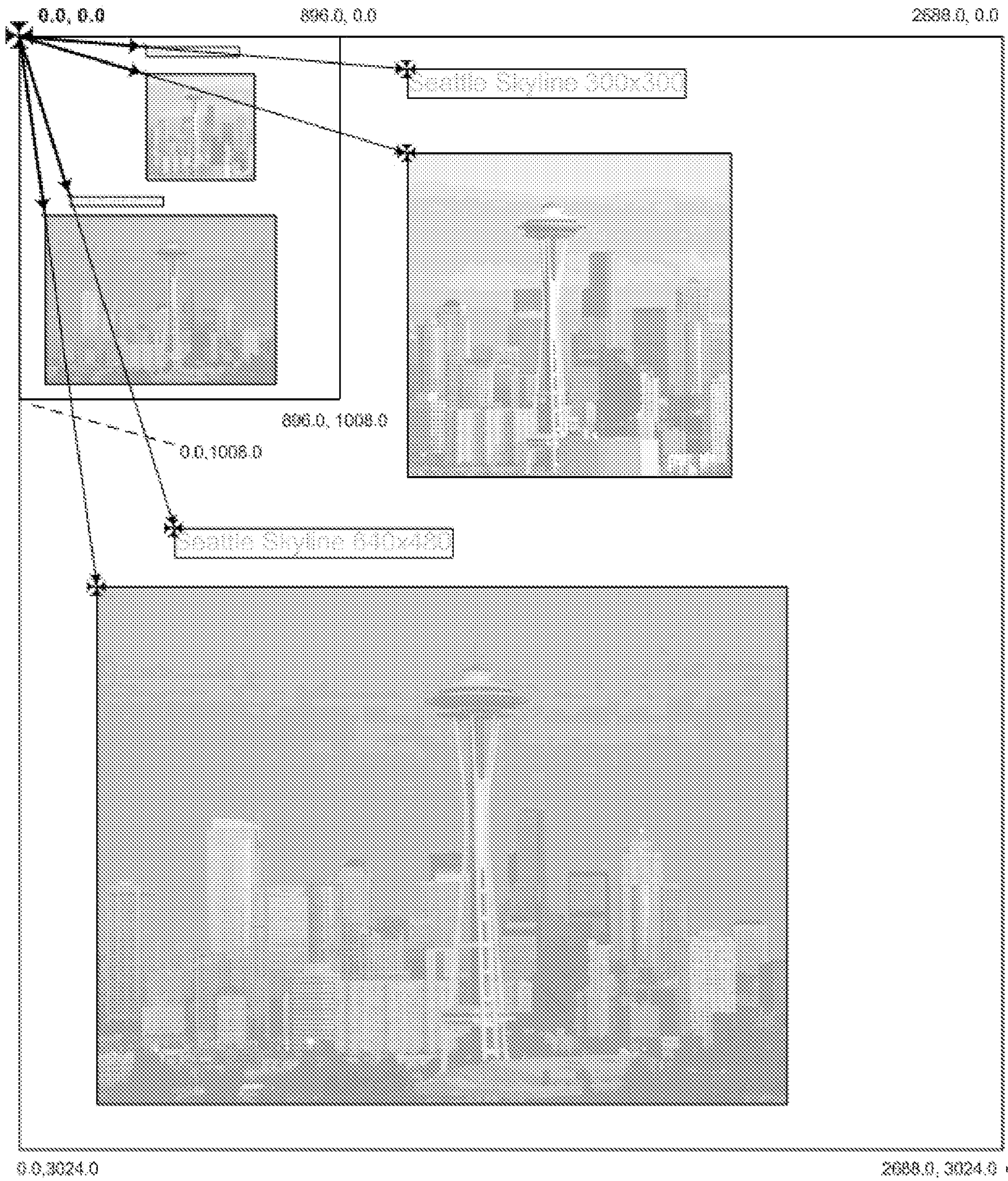


1/3 Scale – Flipped SVF Coordinates



Graphical Depiction of Objects and Layout being Scaled by 1/3 relative to full scale

In addition to scaling at scale factors less than full scale (*i.e.* 1x, or 1 times full scale), the scalable page layout information can be scaled to scale factors greater that 1x. For example, in the following Figure the page layout has been scaled be 3x. This results in generation of a scaled Web page with an effective resolution of *n* times (*i.e.*, *n*x) the full scale page resolution, where *n* corresponds to the scale factor.



Graphical Depiction of Objects and Layout being Scaled by 3 (3x) relative to full scale

Notably, under a vector-based drawing model, scale factors are not limited to integer values or integer fractions, but rather may include substantially any finite value (from a theoretical viewpoint)[9]. From a practical standpoint, the range of scale factors (and zoom levels[10]) will typically be limited to a relatively low value[11], such as 5x or 10x, for example. As screen pixel densities and resolutions increase, the use of higher scale factors will become more prevalent. For example, if the screen pixel density of a display screen doubles, the scale factor must also double to produce content such that it has the same size on respective display screens having the original and doubled pixel densities.

In summary, in one or more non-limiting embodiments a rendering engine is employed to process HTML-based Web page content to interpret the page layout of the Web page display content (*i.e.*, display objects) and selected page layout coordinates are mapped from a pixel-based coordinate system used by the rendering engine to corresponding floating point coordinates in a virtual coordinate space. Once the layout information is defined by the floating point coordinates in the virtual coordinate space, the coordinates of the page layout information can be scaled to produce scaled page layout information. Scaled views of Web page content can then be generated by

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[9] From a theoretical perspective, the scaling of the page layout information itself will only be limited by the floating-point math limitations of the processor implemented by the device. Similarly, when text content is implemented using vector fonts, such as TrueType, the font glyphs can be scaled indefinitely. However, there are practical limitations to scaling image content in a manner that preserves a reasonable level of quality.

[10] This is not to imply that scale factors and zoom levels are synonymous or must be related on a 1:1 basis. For examples, rendered bitmap content corresponding to a given zoom level may be derived from interpolating bitmap content derived from employing scale factors that are different than the zoom level.

[11] As scale factors are doubled, the amount of memory for rendering corresponding bitmap content increases four-fold (assuming the same amount of memory allocated per pixel). This problem is typically addressed by only rendering bitmap content corresponding to a portion of a full web page at a time when using higher scale factors.

rendering display objects using applicable scale factors at locations defined the scaled coordinates corresponding to each display object.

Overview of operation of ClearView™/SoftView™ browser

New claim language relating to "preserving the original page layout" and "preserving the original page layout and design" of the HTML-based Web content has been added by amendment herein. To more fully understand the scope of this language, a discussion of operations pertaining to an exemplary use case of a mobile device enabled by the presented application is now presented. A similar discussion was first presented in the December 9, 2007 response of Application No. 11/045,757, which is a divisional of the present application; for clarity, much of this description is repeated below, while some details are omitted for brevity. The operations are discussed in the context of the following FIG. 1.

The schematic drawing of FIG. 1 shows an exemplary infrastructure comprising well-known components for facilitating access to and delivery of Web pages. Web page content (*i.e.,* Web content) is served by servers that are accessed via the Internet, also commonly referred to as the World Wide Web (WWW). Accordingly, these servers are typically referred to as "Web" servers. More accurately, they are HTTP (Hypertext Transport Protocol) servers, as they serve content of various types using the HTTP protocol. FIG. 1 shows a pair of exemplary Web servers, including a New York Times (NYT) Web server and an Advertisement (ADV) Web server. It will be appreciated that literally millions of similar Web servers are connected to the Internet across the world, thus forming the World Wide Web. In turn, these Web servers serve billions of Web pages.

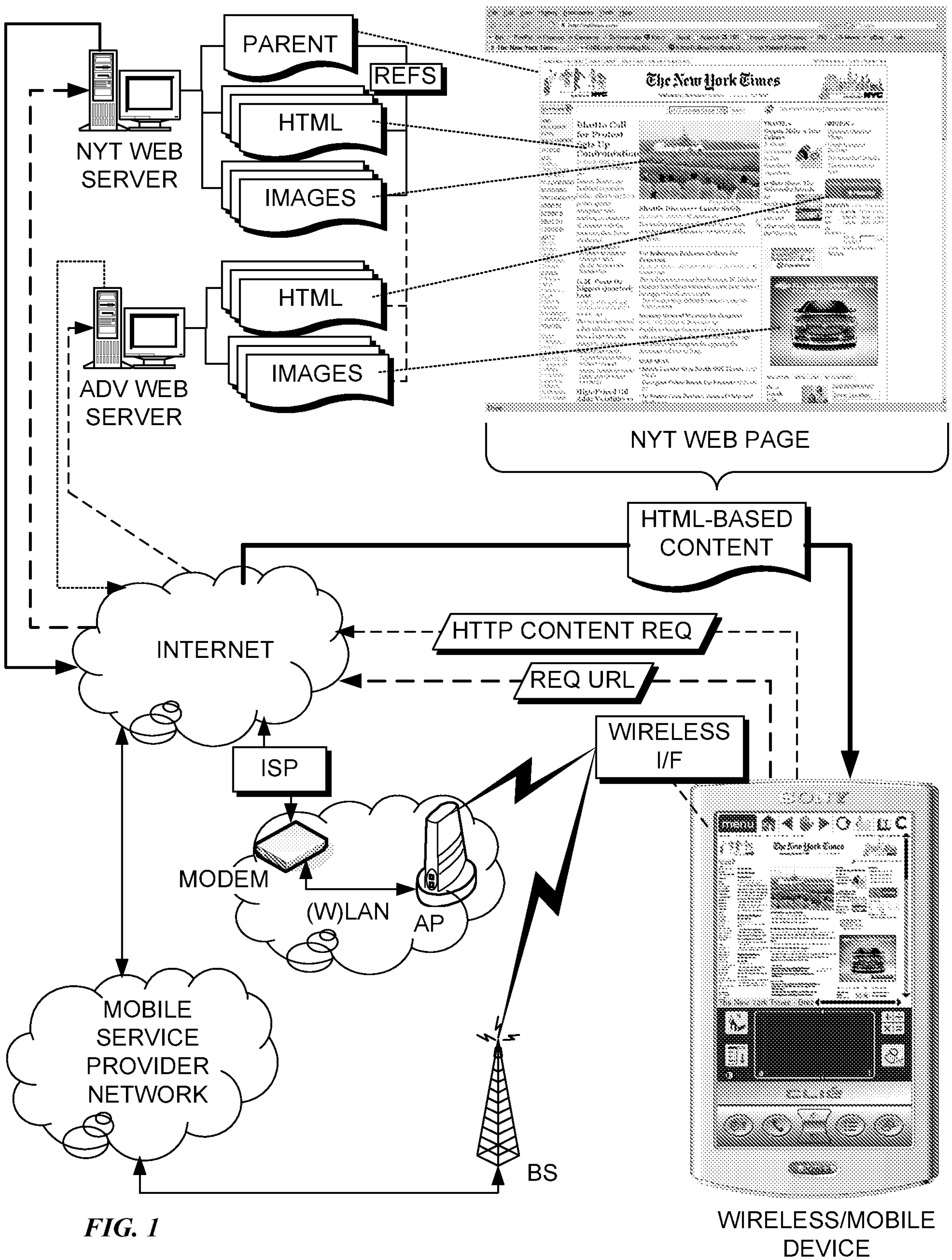
PARENT
REFS
HTML
IMAGES
NYT WEB
SERVER
HTML
IMAGES
ADV WEB
SERVER
NYT WEB PAGE
HTML-BASED
CONTENT
HTTP CONTENT REQ
REQ URL
INTERNET
WIRELESS
I/F
ISP
MODEM
(W)LAN
AP
MOBILE
SERVICE
PROVIDER
NETWORK
BS
WIRELESS/MOBILE
DEVICE

FIG. 1

To access WWW web servers, users use client devices that are communicatively coupled to the Internet through applicable network infrastructure. In the desktop environment, desktop clients, such as personal computers and workstations, are typically coupled to a Local Area Network (LAN) via an Ethernet link to a LAN host device. (It is noted that some desktop clients may wirelessly connect to a Wireless LAN (WLAN), in a manner similar to that discussed below for wireless clients.) The LAN, in turn is usually connected to the Internet via network infrastructure provided by an Internet Service Provider (ISP). Connection between the LAN and the ISP is typically provided by some type of Modem (*e.g.,* Cable or xDSL Modem) or dedicated hardware (for larger customers, such as businesses). (It is also noted that many individual users still connect to their ISP through a telephone modem.)

Wireless and mobile devices, including those devices covered by the claims herein, typically connect to the Internet in one of the manners illustrated in FIG. 1, or otherwise described in the December 9, 2007 response for Application No. 11/045,757. (Further details are omitted here for brevity.) By way of example but not limitation, wireless access to the Internet and World Wide Web may typically be provided via a mobile service provider (using appropriate radio facilities), or via other types of wireless connections, such as via a WiFi (IEEE 802.11x) or WIMAX connection, for example.

Now that the infrastructure of FIG. 1 has been described, we proceed with discussion of retrieving and processing the Web page content such that the Web page can be accessed via a wireless/mobile device. In the illustrated example, the process is initiated by a user desiring to access the New York Times (*i.e.,* and electronic version of the New York Times published to the Internet on a given day). This is facilitated by a browser in accordance with teaching of the present application running on the wireless/mobile device. The New York Times may be accessed via the Internet by downloading corresponding Web pages from the NYT Web server. More specifically, the New York Times home page may be accessed by entering the URL (Universal Resource Locator) www.nytimes.com via the browser's user interface.

As discussed above and in further detail in the present specification, Web pages comprise HTML-based content which may be stored in one or more documents commonly referred to as HTML documents. In addition, Web pages may include dynamically-generated content. Each Web page has a corresponding main or "parent" HMTL document that includes HTML code defining the Web page content layout, at least at some level. The parent HTML document may reference other HTML documents, as well as other content (such as image content) that further define the layout of content contained in the referenced documents. This may proceed in a hierarchical or nested fashion.

To access the Web page, the browser initiates an HTTP connection with the Web server hosting the Web page, and begins downloading the parent HTML document. Depending on how the Web server and/or Web page is configured, additional content (*i.e.,* beyond that included in the parent HTML document) referenced by the parent HTML document, may be retrieved by the Web page host server and then downloaded to the requesting client device, or a portion of this content may be downloaded by the client device via a separate connection. Generally, content that is hosted by a Web server or Web site is assembled by the Web server and downloaded to the client device. On the other hand, externally-referenced content (that is, content that is not stored on the Web server or Web site), is often left to the client device (*i.e.,* the browser) to retrieve.

An example New York Times home page (dated November 7, 2007, 2:22PM ET), as rendered by the Mozilla Firefox browser running on a desktop or laptop computer (and captured as a screenshot), is shown at the upper right-hand portion of FIG. 1. The same Web page is shown rendered on a Sony Clié using a SoftView™ browser at the lower right-hand portion of FIG. 1.[12] Notably, the same HTML-based content is downloaded by each of the Mozilla Firefox and SoftView™ implementation. Moreover, the same HTML-based content would be retrieved by other desktop browsers, such as Microsoft Internet Explorer, Apple Safari, Google Chrome, and Opera browsers, to render the New York Times home page.

As discussed above, the Parent HTML document typically includes HTML code to define the overall layout of the Web page and its content. For example, the HTML code will define whether the Web page includes frames, and, if so, where those frames are located on the rendered page. The Parent HTML document may also contain Cascaded Style Sheet (CSS) data defining various design aspects of the page, or contain one or more references to other documents containing such CSS data. Various content displayed on the Web page may be stored in the Parent HTML document and/or one or more other HTML documents referenced by the Parent HTML document. If the content is to be rendered in a frame referenced by the Parent HTML document but whose content is not defined within the Parent HTML document, the actual reference to the HTML document storing the content may be in the document defined by the frame reference. For example, for illustration purposes, the content in the column with the heading "U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site" is depicted to be stored in an HTML document that is hosted by the NYT Web server, but is separate from the Parent HTML document.

Likewise, image content may be stored separate from the Parent HTML document. This is typically done since images, which often contain a large amount of

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[12] It is noted that the use of the Sony Clie and corresponding SoftView browser screenshots are for illustrative purposes to demonstrate how web page views on a mobile device in accordance with the claims herein might appear. The screenshots were produced using a SoftView proxy server and browser client running on a Palm OS Emulator 3.0a8S1.0, 2000-2001 using a Sony Clie PEG-700 Skin. At the time of filing Application Serial No. 09/878,097, the browser was referred to as "ClearView" rather than "SoftView."

data due to the nature of image data, may require significant download time, especially over a slow connection. By putting image content in (a) separate document(s), the basic page layout and text content can be rendered much faster. Typically, HTML code defining the page layout location of an image on the page may be used to place an image "placeholder" or other indicia on the screen prior to rendering of the image.

As discussed above, various portions of the Web page content may be stored on Web servers that are external to the Web page host server. This is often the case with advertisement content. Rather than have the advertisement content stored locally on each Web server, the advertiser will use an advertisement host site to store and serve the advertisement content. For example, in Fig. 1, image data for rendering the "DON'T MISS HISTORY IN THE MAKING" advertisement is depicted as being stored in an image document on the Advertisement Web server.

Under a typical conventional approach, externally referenced advertisement content is downloaded by the browser directly from the advertisement content host site, rather than from the Web page host site. The network location of the advertisement content host server is identified by parsing the retrieved HTML-based content, and an HTTP GET request is used to download the associated advertisement content from its host server.

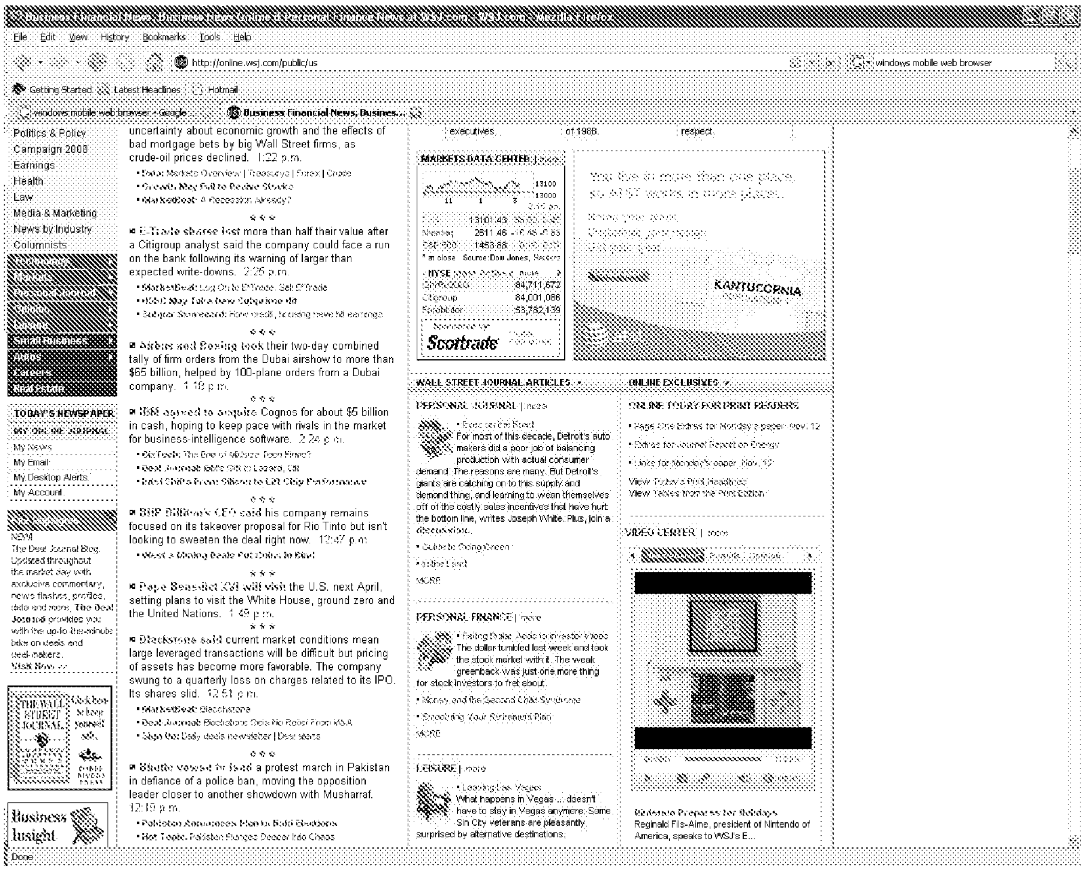
Some Web pages may include "embedded" content hosted by an external site. Oftentimes, such embedded content may be dynamic in nature (that is, may change over time or differ depending on identification of the target user). Generally, embedded content may be retrieved by the browser from an external host site (*e.g.,* advertisement Web server depicted in FIG. 1), or such content may be first retrieved by the Web page host site and served to the browser.

It is common terminology to refer to a browser "retrieving" or "downloading" a Web page. For example, upon entry of a new URL in the browser Web address box of a desktop browser, the browser will download the Web page referenced by the URL. It is well understood that this doesn't imply that all of the content associated with the Web page must be retrieved or downloaded. Some of the content is typically used for search engine or other purposes, such as some Metatag header information, or is otherwise not used for rendering purposes. Other Metatag information may be employed for rendering purposes, such as defining browser compatibility information. In other cases, content may be referenced that is not supported by the requesting browser. For example, "Flash" content typically requires a Flash plug-in viewer (or built-in Flash support provided by some browsers); if the plug-in viewer is not loaded by the browser (or such support isn't built in), the Flash content cannot be displayed. This is also true for TIFF images on the USPTO Web site. Unless an appropriate TIFF plug-in viewer is loaded, the TIFF images will not be displayed.

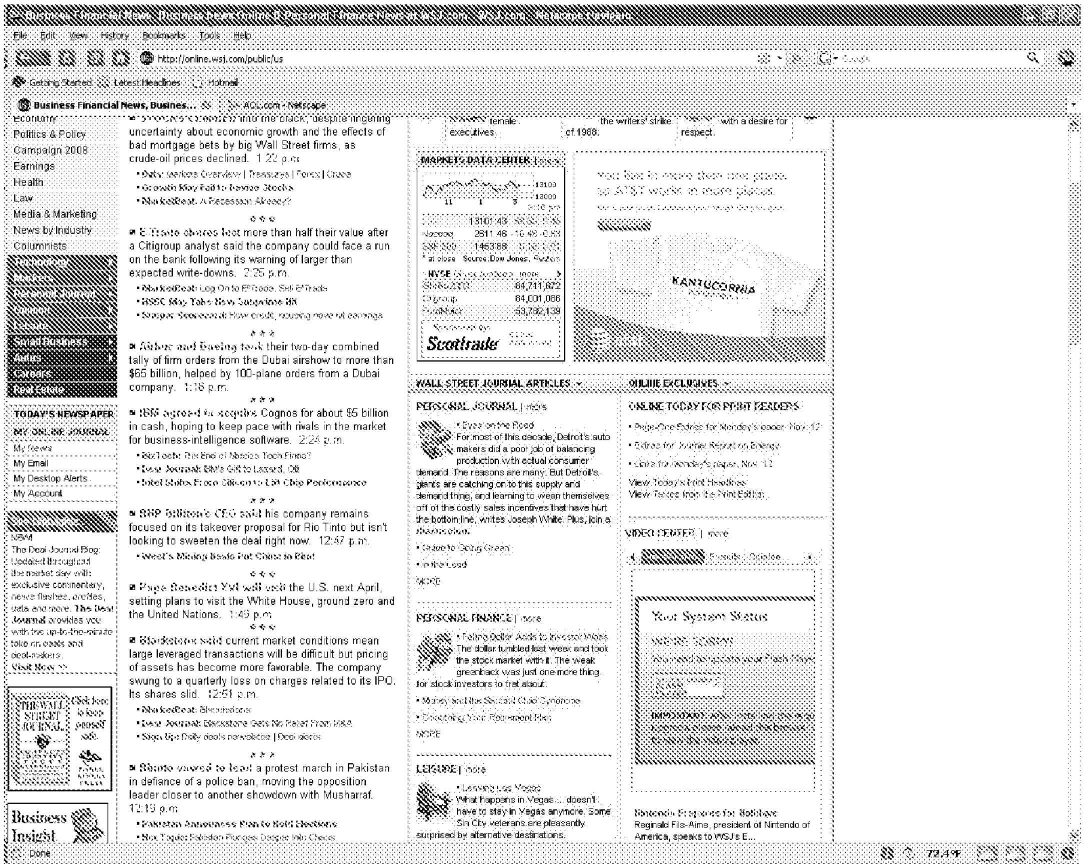
A similar situation exists with Active-X controls. In order to use the Active-X controls, the browser needs to provide support for Active-X controls. Since Active-X controls were developed by Microsoft, all recent versions of Microsoft Internet Explorer provide support for Active-X controls. Meanwhile, browsers from other vendors, such as Apple Safari, Mozilla Firefox, Google Chrome, and Opera, do not support Active-X controls.

When a browser encounters content that is not supported "natively" by the browser, the browser will typically check to see if an appropriate plug-in is available. Depending on the browser and/or particular Web site, if an appropriate plug-in cannot be found, the browser or Web site may apprise the user of the situation and enable the user to download the plug-in. In other instances, the content is simply ignored. Thus, in some cases, the Web page may reference content that is never retrieved when the Web page is retrieved by the browser.

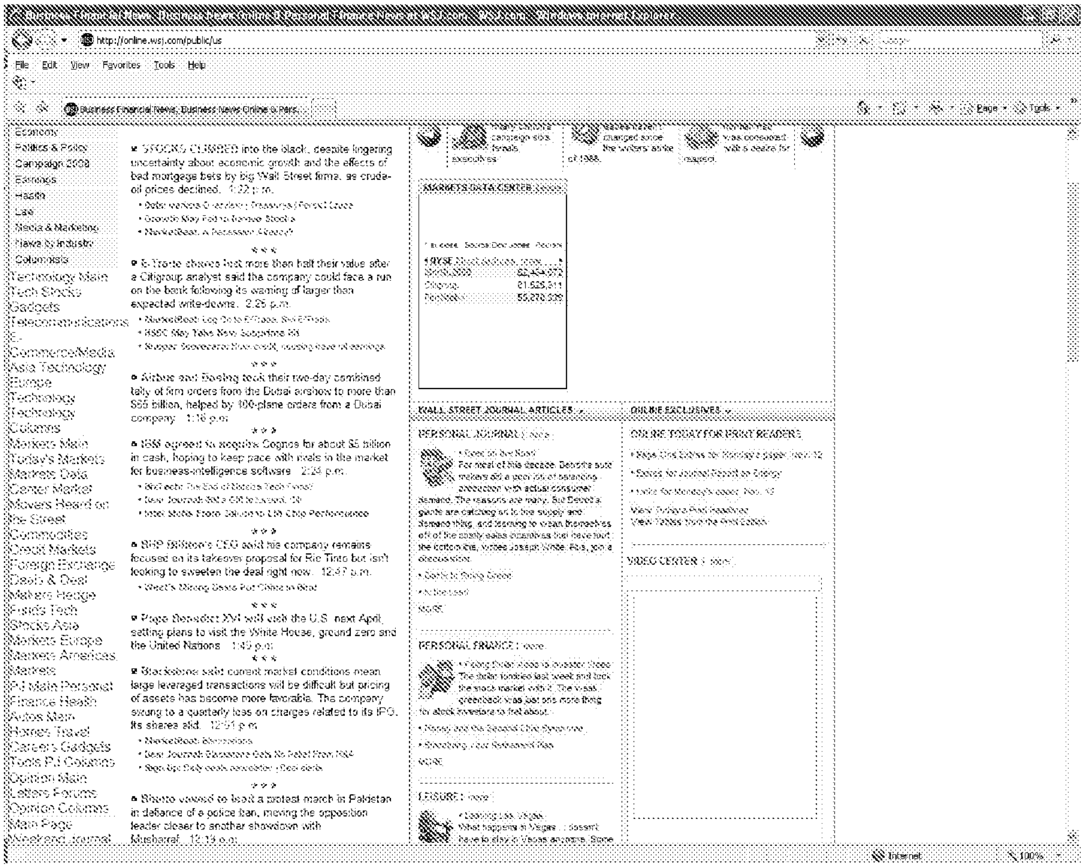
The three screen shots below respectively show the same Web page (WSJ.com home page) rendered on a Netscape Navigator 9 browser, a Mozilla Firefox 2.0 browser, and an Internet Explorer 7 (IE 7) browser. In this particular instance, certain features of the IE7 browser are disabled for security reasons. It is also missing some plug-ins. Each of these browsers is running on the Microsoft Windows XP operating system.



Mozilla Firefox 2.0 Browser



Netscape Navigator 9 Browser



Microsoft Internet Explorer 7 Browser

It will be observed that the Web page is rendered substantially the same by the Netscape Navigator 9 and Firefox 2 browsers, while portions of the Web page are rendered in a different manner by the IE 7 browser (notably the left-hand column). The similarity between Netscape and Firefox is expected since they both use the same Mozilla core rendering code, while IE 7 uses Microsoft's rendering code. It is further noted that some Web pages are coded to account for different browser features. For example, some Web pages will have provisions for Active-X controls for pages to be viewed by Internet Explorer browsers, while possibly including provisions for alternate mechanisms when using other browsers.

This example Wall Street Journal Web page includes various embedded ***non-HTML content*** requiring support of one or more plug-ins[13] or otherwise built in support for rendering ***non-HTML*** content of a particular content type. In particular, the VIDEO CENTER object in the lower right-hand corner requires an Adobe (formerly Macromedia[14]) Flash viewer for rendering Flash content, which uses vector and raster graphics, a native scripting language called ActionScript and bidirectional streaming of video and audio.[15]

It is noted that there is a message in the VIDEO CENTER box in the Web page rendered by the Netscape Navigator 9 browser indicating that the browser needs to update its Flash player. In the case of the Firefox 2 browser, either the appropriate Flash player was found or an appropriate level of support for Flash content is built into the browser. In this case, the Flash .SWF file including data to render a video image of a Nintendo DS console is retrieved from a corresponding host server and rendered by the browser (if it has built-in support) or Flash player, as applicable. In the case of the Netscape Navigator 9 browser, the appropriate Flash player plug-in is not available; accordingly, the video image of the Nintendo DS console is not retrieved.

In the case of the particular IE 7 browser configuration used to obtain the IE7 screen shot, the Flash player is either missing or blocked. As a result, the aforementioned VIDEO CENTER image is missing (just an empty box is rendered, as defined by corresponding HTML). Moreover, the IE 7 browser did not render a

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[13] As defined by Wikipedia, A **plugin** (**plug-in**, **addin**, **add-in**, **addon** or **add-on**) is a computer program that interacts with a host application (a web browser or an email client, for example) to provide a certain, usually very specific, function "on demand". Applications support plugins for many reasons. Some of the main reasons include: enabling third-party developers to create capabilities to extend an application, to support features yet unforeseen, reducing the size of an application, and separating source code from an application because of incompatible software licenses.

[14] Macromedia is now a division of Adobe Systems

[15] For more details on the Adobe Flash Player, see, *e.g.,* http://en.wikipedia.org/wiki/Adobe_Flash_Player

message indicating the Flash player needed to be upgraded. In addition, the source for the AT&T advertisement in the upper right-hand portion is blocked via a security setting, resulting in this portion of the page being rendered using the same background color as the frame it (would be) embedded in.

A point for discussing the foregoing is to make it clear that,

1. Even when rendering the same Web page source content (*i.e.,* the HTML code definition of the Web page), conventional Web browsers may not render the (full scale) Web page identically. Under aspects of embodiments of the invention the overall layout and appearance (design) of the Web page representations defined by the HTML code for the Web page (as interpreted by the rendering/layout engine) are preserved at various zoom levels and panned views. That is, the preservation is relative to how the page layout and design of the Web page content is interpreted by the rendering/layout engine employed for a particular implementation, and is not relative to how the Web page might appear on a particular desktop browser, although they might appear the same or substantially similar if using the same rendering/layout engine.
2. Plug-ins may be required to render ***non-HTML content*** that is embedded within some web pages or used in a separate window launched from a web page. Notably, the plug-in content is not a Web page, but rather a specific type of content requiring a corresponding plug-in application to render the content.

Preservation of Original Page Layout

As discussed above, new claim language has been added by amendment, and includes the language "preserving the original page layout" of the HTML-based Web content. With respect to preserving the original page layout, the page layout (to be preserved) is determined as interpreted by rendering/layout engine components, rather than as a comparison to how the page might be rendered by a particular desktop browser. As described above and in other remarks, browsers often do not render Web pages derived from the same HTML-based definition identically. Accordingly, one of ordinary skill in the browser art would not expect Web pages rendered using an implementation in accordance with the teachings disclosed in the present application to render pages as *exact* scaled replicas of the same page rendered by a conventional desktop browser, such as Internet Explorer or Safari, for example. Due to rendering limitations such as fixed size fonts, renderings of the same page when viewed at different zoom levels may result in small variations, as opposed to an exact scaled version of the same content (*i.e.*, as if viewed by a magnifying glass). While conceivably an implementation might produce this exact (*i.e.*, perfect magnification) result, such results are not required by the scope of the terminology "preserving the original page layout … of the content."

A similar context exists with respect to "preserving the [original page layout and] design" of the content. Preserving the design of a Web page's HTML-based content corresponds to support for rendering of a Web page at different zoom levels and panned views in accordance with its design as defined by corresponding HTML-based content, which includes such things as type fonts, separator bars, tables, columns, *etc.* (It is noted that in the case of CSS, some design elements affect the page layout, while other relate to object design attributes, such as font color.) Again, the Web page's design is a matter of interpretation by the particular browser (typically via its rendering/layout engine), as, for example, the same content (as defined by its corresponding HTML definition) may be rendered using different colors by different browsers. Similarly, browsers may substitute fonts for original fonts (as defined by corresponding HTML code) that are not supported by the browser or operating system used by a given host device. With respect to the scope of the terminology "preserving the [overall layout and] design" of the content, this refers to preserving the design as interpreted by the rendering engine while at different zoom levels and panned views, as opposed to rendering the content identically to how it is rendered by a particular desktop browser that may interpret the page design differently. As discussed above, some design aspects relating the Cascading Style Sheets may not be implemented or may be implemented incorrectly by some browsers and/or rendering/layout engines. The preservation of the design is relative to the interpretation of the design aspects of the Web page by the rendering/layout engine that is employed.

Examples of SoftView™ Browser Screen Shots

The following pages illustrate various screen shots of the aforementioned nytimes.com Web page as translated by the SoftView™ proxy server and rendered on a SoftView™ browser client running on a Sony Clie emulator[16]. Under the claims herein, operations performed by a proxy server in accordance with these examples would be performed by a mobile and/or wireless device via use of browser software in conjunction with an operating system and potentially other facilities on the device, as would be understood by one skilled in the art. Figs. 2a-2d further include screen shots of the Web page as rendered on a Firefox 3.0.5 desktop browser for comparison purposes.

As can be readily observed, the SoftView™ implementation produces a Web page with substantially similar display content to that rendered by the Firefox browser. However, there are some differences, which are to be expected. For example, since the nytimes.com site uses rotating advertisements, different advertisements will appear at different times, depending on exactly when the screen shots are captured. In addition, since some types of content, such as flash content, were not supported by the SoftView™ implementation employed to take the screen shots, this content is not displayed on the rendered page. For example, the nytimes.com web page includes

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[16] Palm OS Emulator 3.0a8S1.0, 2000-2001 using a Sony Clie PEG-700 Skin. The emulator was used for the purpose of creating the screen shots – similar page renderings are produced using an actual Sony Clie PDA.

code referencing a flash-based video (*i.e.*, the Play Video content under the VIDEO header). The corresponding area is rendered blank, such as shown in SoftView™ browser screen shot of Fig. 2b. Also, portions of the page layout may be adjusted in position depending on whether the content is supported or was available or successfully retrieved. Adjustments of this type are typically defined by layout rules implemented by the rendering/layout engine. For example, in the SoftView™ implementation an advertisement occupying the position of the "DON"T MISS HISTORY IN THE MAKING" in the desktop browser screenshots was either unable to be retrieved (potentially due to a timeout error or some other undetermined reason) or was of an incompatible type (*e.g.*, a flash advertisement that was one of multiple rotating advertisements used for this area on the nytimes.com home page[17]), and thus content below the missing advertisement is shifted upward in accordance with interpretation of the page by the version of the Mozilla rendering engine employed by the SoftView™ proxy server.

As discussed above, different browsers may render the same HTML-based Web page content slightly differently. Also, since aspects of Web page design and implementation have become more standardized, new types of content and design elements have been added or are otherwise now supported by some rendering/layout engines, and more are likely to be added in the future. As a result, earlier browsers using rendering/layout engines that were developed prior to the definitions of the new types of content and/or design elements or otherwise did not include support for such content or design elements will not display the content or design element(s) or may attempt to display them in an erroneous manner. Typically, when a browser rendering engine encounters content or a CSS element it doesn't recognize, it simply ignores is. In other cases, the HTML-based content may include support for functionality that is

[17] It has been observed that the nytimes.com home page uses both external img (image)-based advertisements and flash-based advertisement in this portion of the page.

applicable to a desktop environment, but not applicable to a mobile device. For example, there are several web sites that include mouse "hover-over" menus under which a menu will pop-up or otherwise appear when a user places a mouse or pointer cursor over a corresponding portion of the screen. Since there is no mouse or equivalent on a typically mobile device, the browser's rendering/layout engine may be configured to ignore support of such functionality.

The claim language "preservation of the original page layout and design" is to be considered in the context of the browser implementation itself. That is, the preservation is relative to the interpretation of the page by the browser implementation itself, as opposed to preservation of the original layout, functionality and design based on some rigid consideration of a "perfect" interpretation of the page. As discussed above, a perfect interpretation does not realistically exist, as the HTML and related design specifications are too imprecise to begin with, and due to legacy considerations may remain so in the future.

Returning to the screen shots, Figs. 2a-d represent comparisons between the nytimes.com home page using Firefox 3.0.5 and the SoftView™ proxy server – browser client implementation. It is noted that the SoftView™ implementation (employed for the screenshots herein) uses a version of the Mozilla rendering engine from approximately 2002. As a result, there may be certain types of page design aspects that are not included in the rendered page, since corresponding aspects of the Cascading Style Sheets (CSS) specifications were not supported by this earlier version of the Mozilla rendering engine.[18] These include support for rendering some of the thin light gray column separator elements, which are defined in the common layout CSS document for the nytimes.com Web site.

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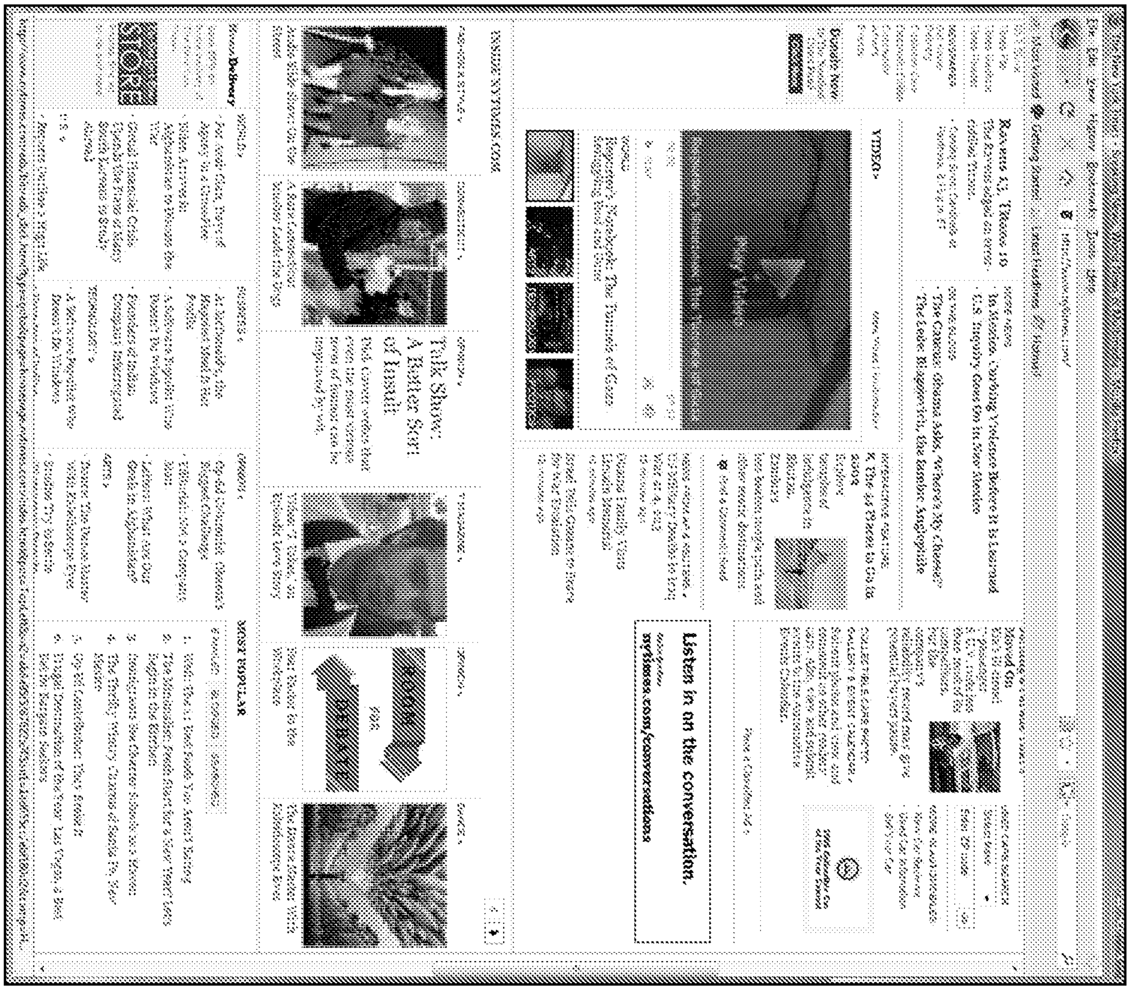
[18] See http://en.wikipedia.org/wiki/Cascading_Style_Sheets for an excellent discussion of the Cascading Style Sheets, their history, and in particular the section concerning difficulty with adoption.

The New York Times
U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site
DON'T MISS HISTORY IN THE MAKING.

SONY
menu
POWER

Fig. 2a


Listen in on the conversation.

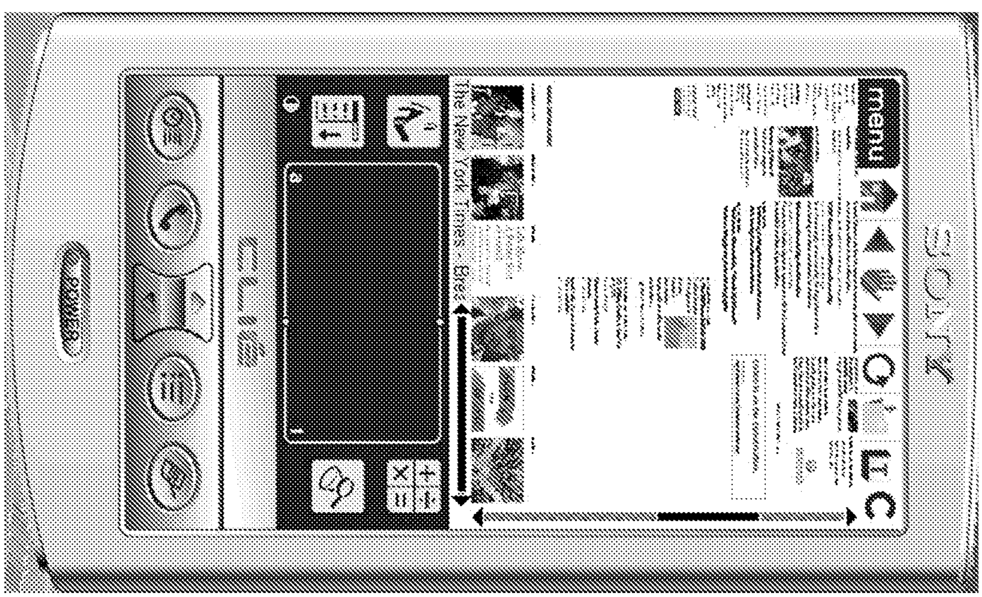

SONY
menu
The New York Times
CLIE
POWER

Fig. 2b

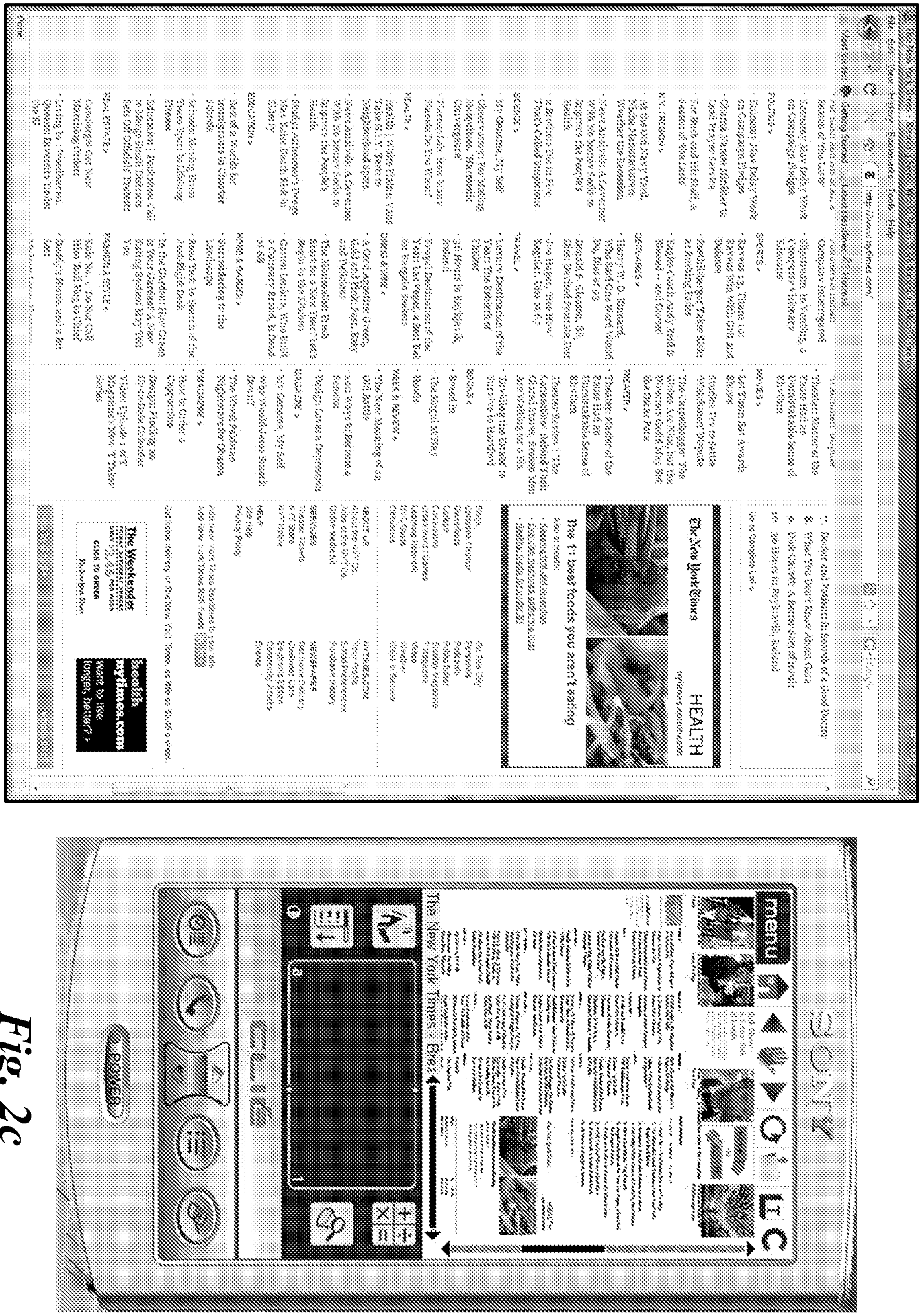


Fig. 2c

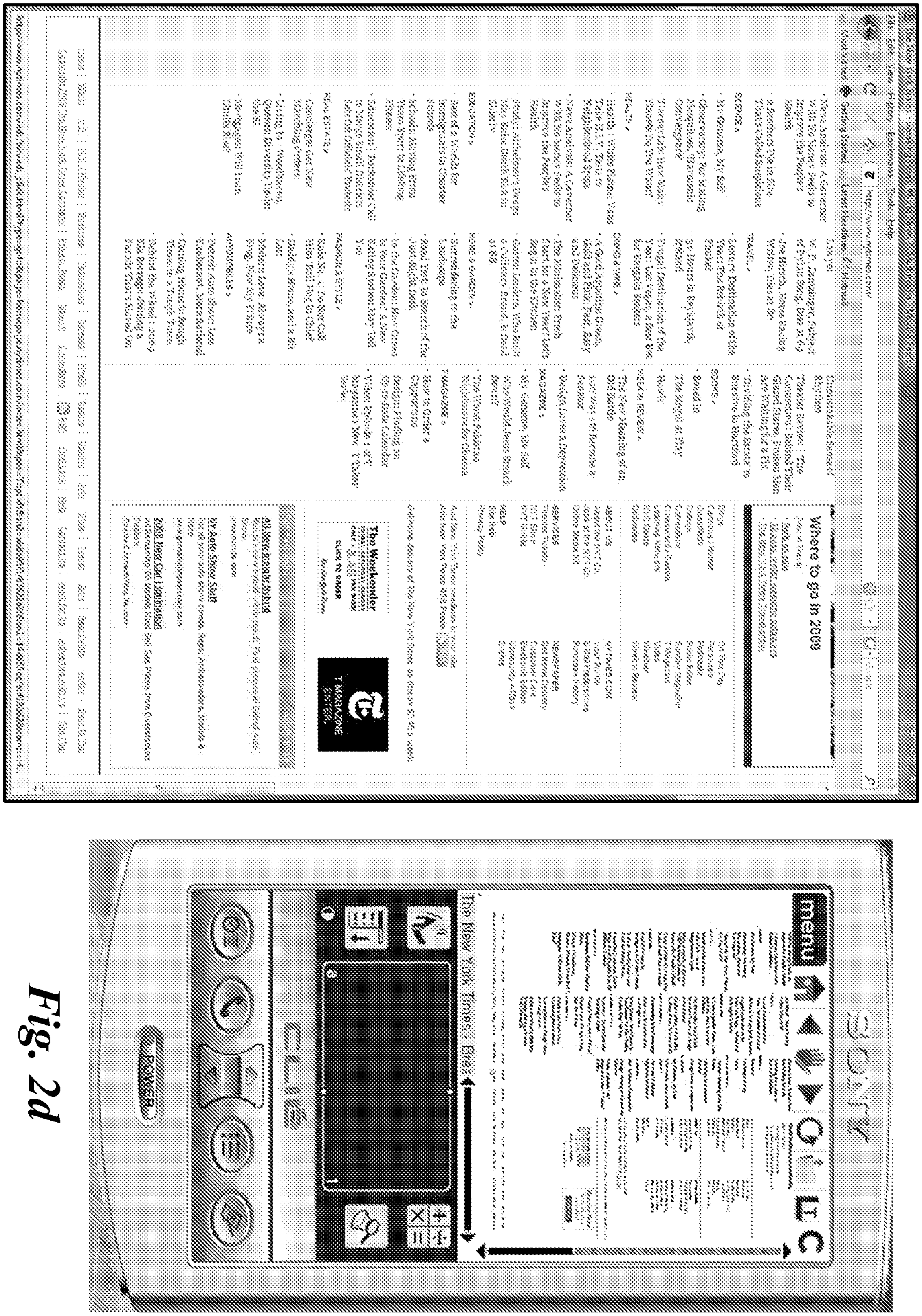


Fig. 2d

Figs. 3a-3f show various portions of the nytimes.com Web page in a full-width view (above) and corresponding zoom views (below) using the SoftView™ implementation. The above view shows a screen capture of the emulator, while the below views comprise screen captures of just the display. As can be readily observed, each zoomed-in view preserves the original page layout and design of the Web page, as interpreted by the SoftView™ implementation.


SONY
menu
The New York Times
The New York Times - Brea
menu
The New York Times - Bres
menu
The New York Times - Bres

Fig. 3a

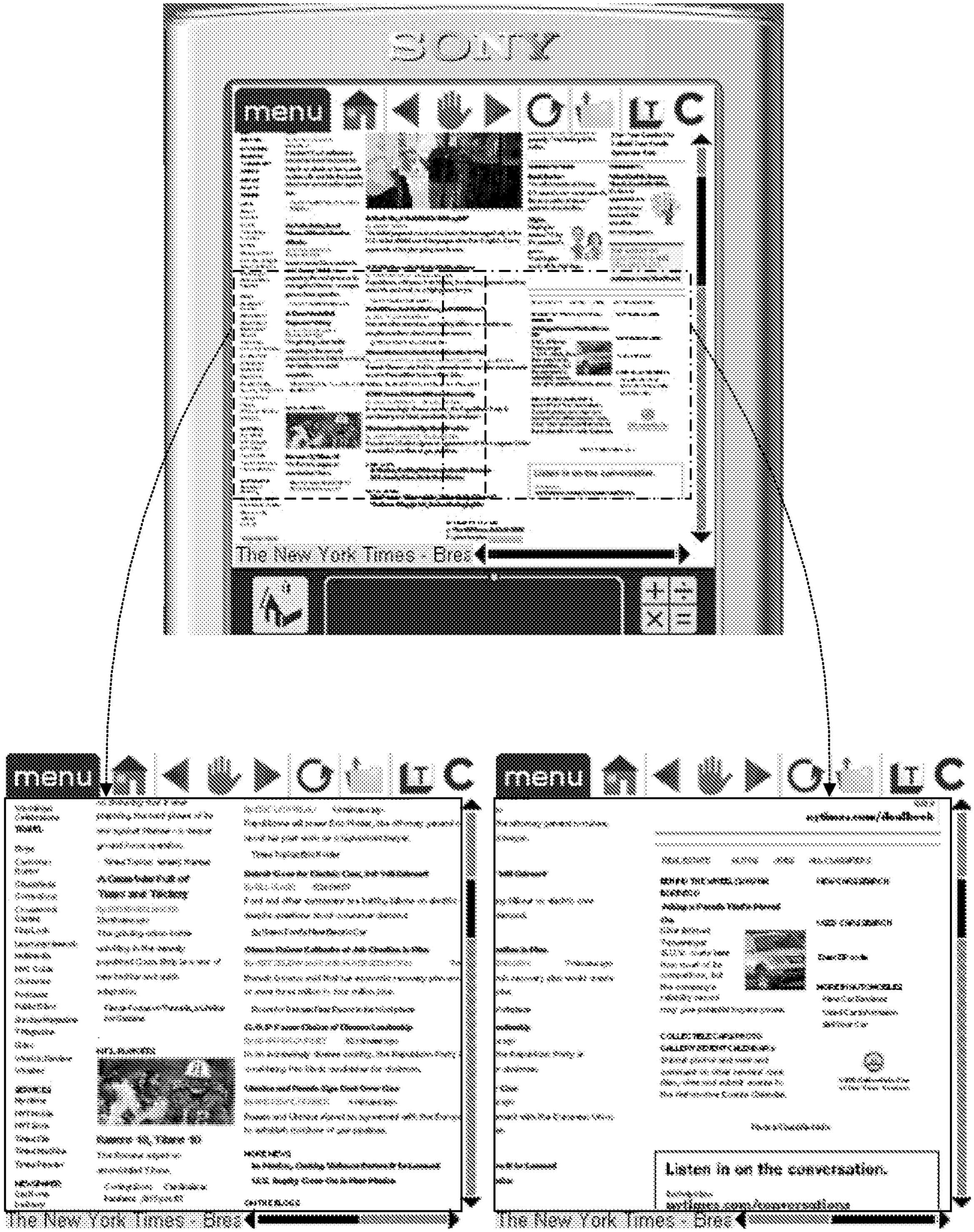

SONY
menu
The New York Times - Bres
Listen in on the conversation.

Fig. 3b

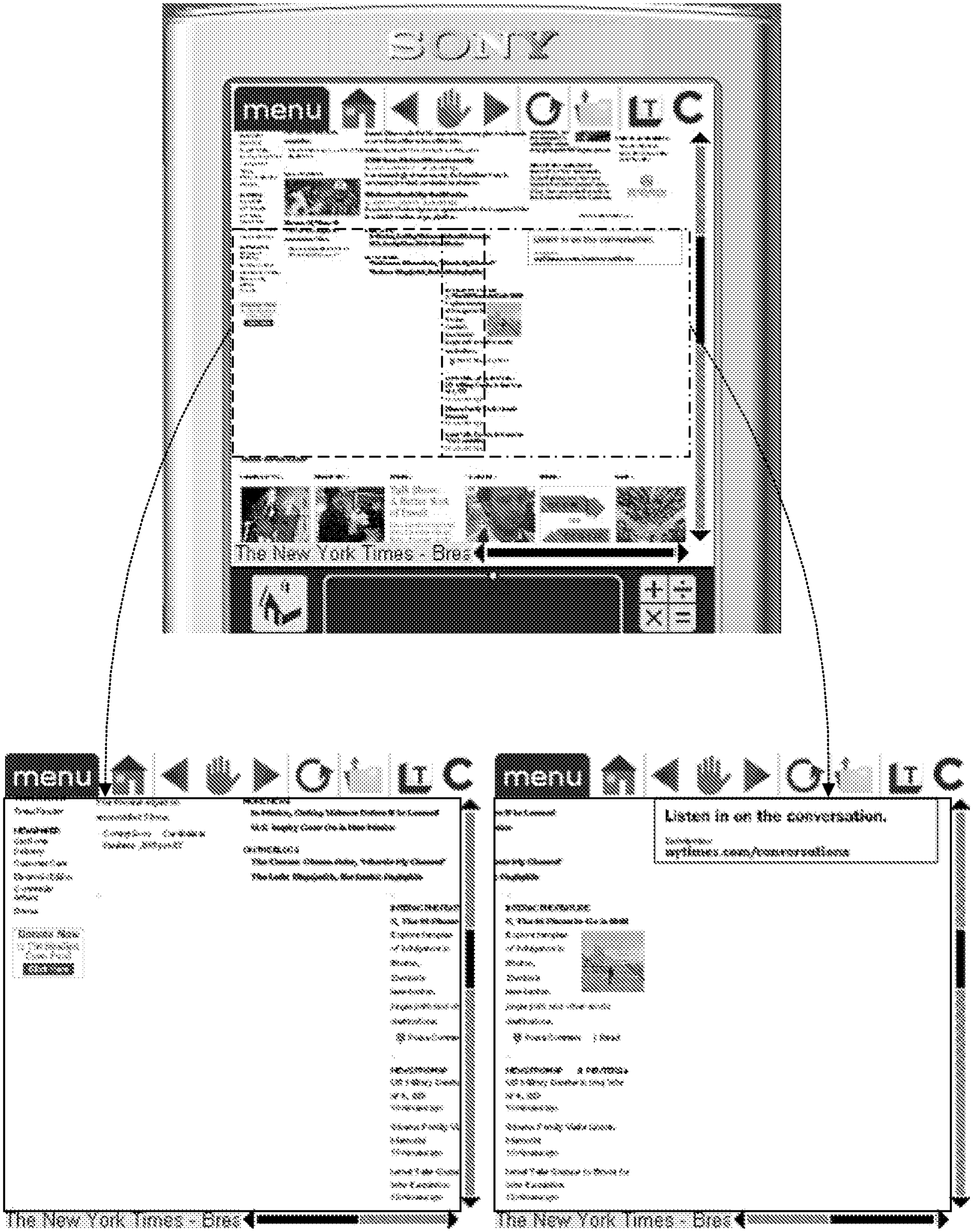

SONY
menu
The New York Times - Bres
Listen in on the conversation.
nytimes.com/conversations

Fig. 3c

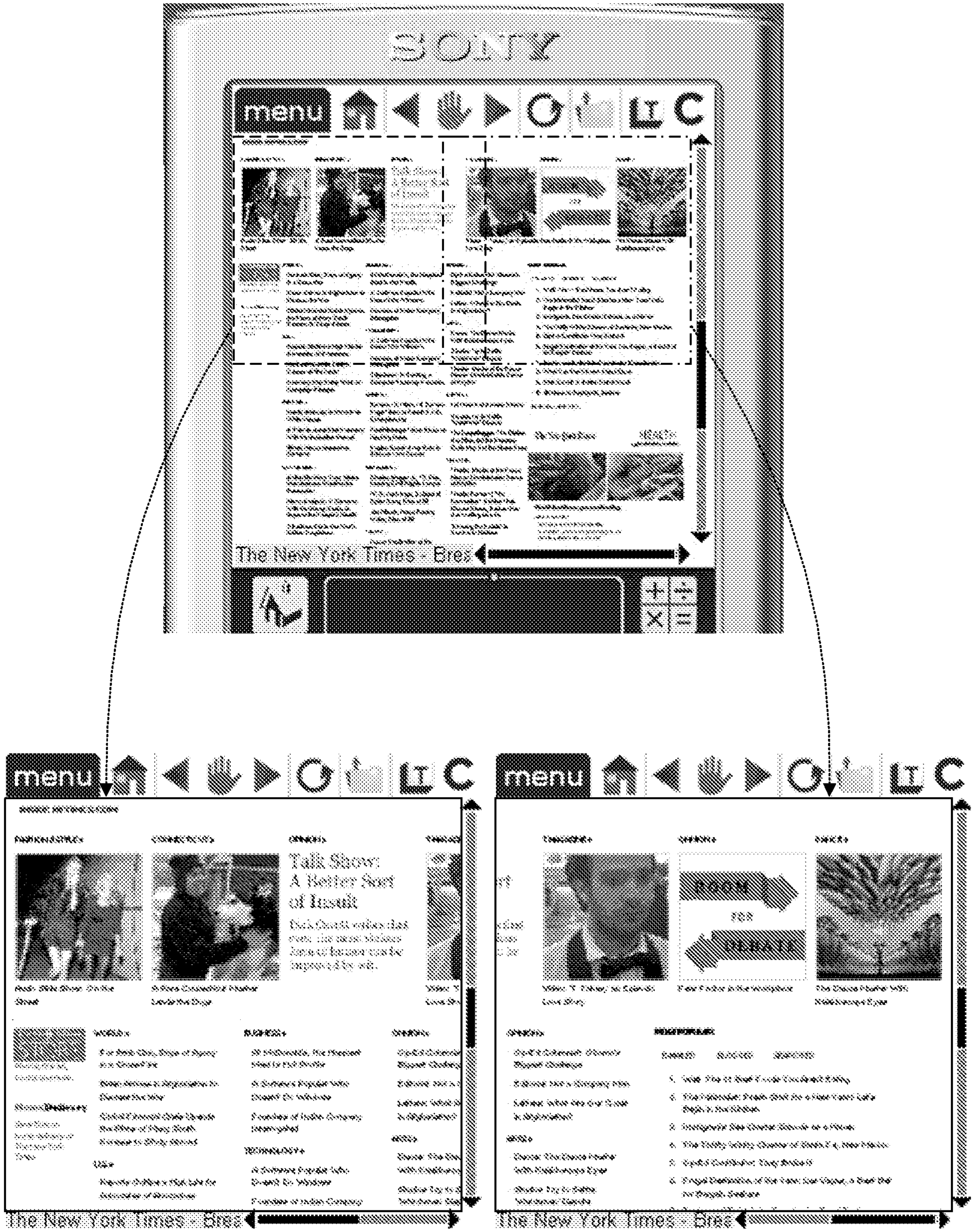

SONY
menu
The New York Times - Bres
menu
Talk Show:
A Better Sort
of Insult
The New York Times - Bres
menu
ROOM
FOR
DEBATE
The New York Times - Bres

Fig. 3d


SONY
menu
The New York Times - Brea
menu
The New York Times - Brea
menu
The New York Times - Brea
HEALTH

Fig. 3e

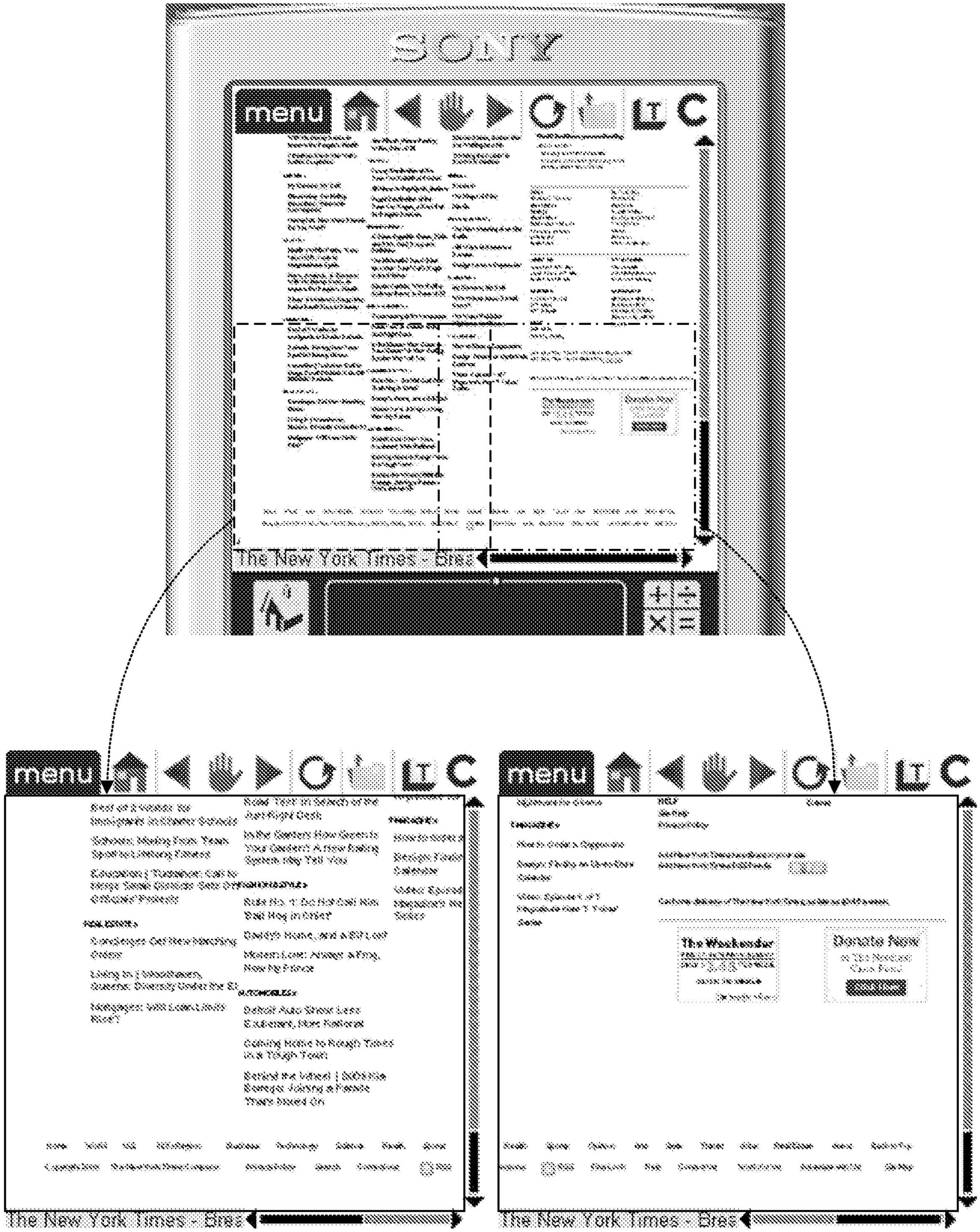


Fig. 3f

Figs. 4 and 4a show various zoomed-in views of an INSIDE NYTIMES.COM content “ribbon.” Figs. 5-7 show selected zoomed-in views of the upper portion of the page, while Figs. 8 and 9 show various zoomed-in portions of the bottom portion of the page. It is noted that the “Ads by Google” portion is missing on the SoftView™ browser screen shots due to a server connection timeout error (which caused this content to not be retrieved).

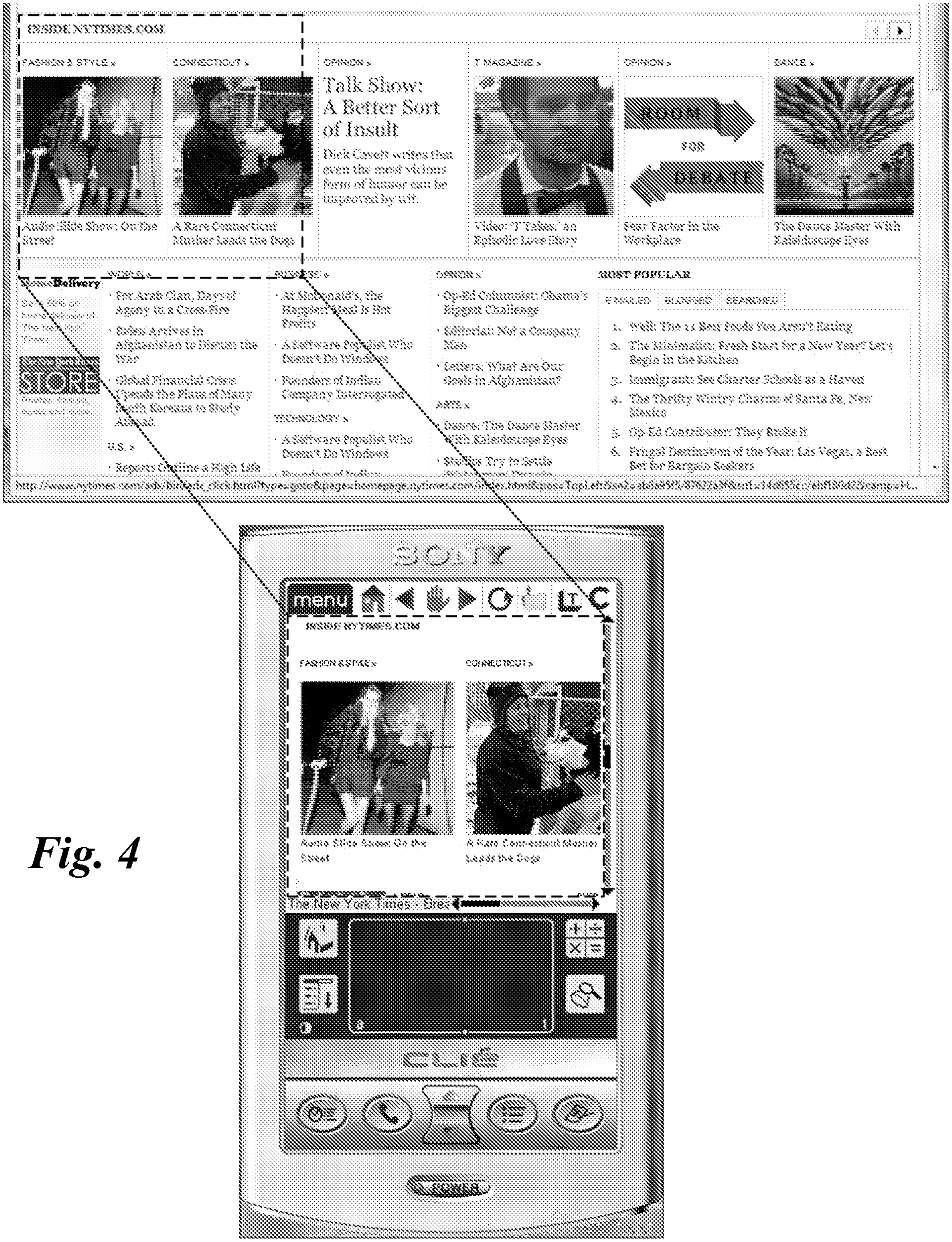

INSIDE NYTIMES.COM
Talk Show:
A Better Sort
of Insult
ROOM
FOR
DEBATE
MOST POPULAR
STORE
SONY
menu
The New York Times - Bre

Fig. 4

Fig. 4a


The New York Times
U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site
In Nashville, A Ballot to Go 'All English'
As Talks Falter, Israel Warns of More Extensive Attacks
DON'T MISS HISTORY
menu
Iranian Nuclear Site
THE LATEST ON DEAL MAKERS AND DEAL BREAKERS
The New York Times - Bres

Fig. 5


The New York Times
Saturday, January 10, 2009
U.S. Rejected Aid for Israeli Raid on Iranian Nuclear Site
President Bush deflected a request by Israel last year for help in an attack on Iran's main nuclear site and told the Israelis about new covert action against Iran.
As Talks Falter, Israel Warns of More Extensive Attacks
In Nashville, A Ballot to Go 'All English'
The ballot proposal would make Nashville the largest city in the U.S. to bar official use of languages other than English. Above, opponents of the plan going door to door.
A Public Servant's Private Stint Is at Issue
Republicans will press Eric Holder, the attorney general nominee, about his past work as a high-priced lawyer.
Detroit Goes for Electric Cars, but Will Drivers?
OPINION »
Editorial: Who Owns White House History?
IN SUNDAY'S TIMES
Book Review
YOUR MONEY »
When Cash Is Scarce, There's Comfort in Miles
DON'T MISS HISTORY IN THE MAKING
menu
The New York Times - Brea

Fig. 6


In Nashville, A Ballot to Go 'All English'
As Talks Falter, Israel Warns of More Extensive Attacks
A Public Servant's Private Stint Is at Issue
Detroit Goes for Electric Cars, but Will Drivers?
A Gaza War Full of Traps and Trickery
Obama Raises Estimate of Job Creation in Plan
G.O.P. Faces Choice of Diverse Leadership
Ukraine and Russia Sign Deal Over Gas
Ravens 13, Titans 10
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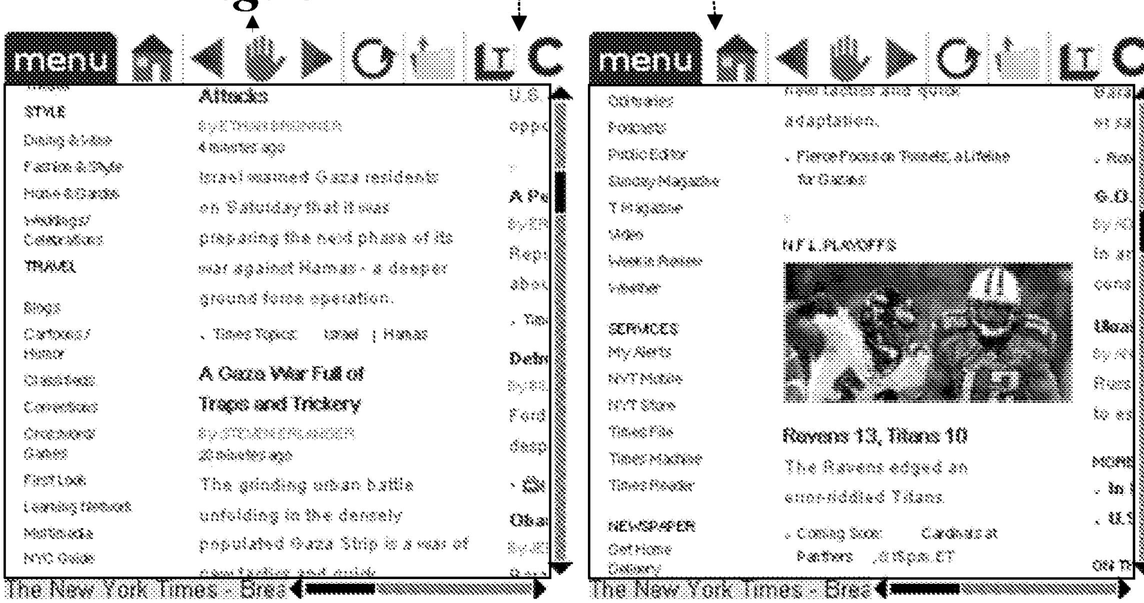
OPINION
ARTS
STYLE
TRAVEL
SERVICES
NEWSPAPER

Fig. 6


menu
menu
Attacks
STYLE
TRAVEL
A Gaza War Full of Traps and Trickery
The grinding urban battle unfolding in the densely populated Gaza Strip is a war of
adaptation.
N.F.L. PLAYOFFS
Ravens 13, Titans 10
The Ravens edged an error-riddled Titans.
SERVICES
NEWSPAPER
The New York Times - Brea
The New York Times - Brea

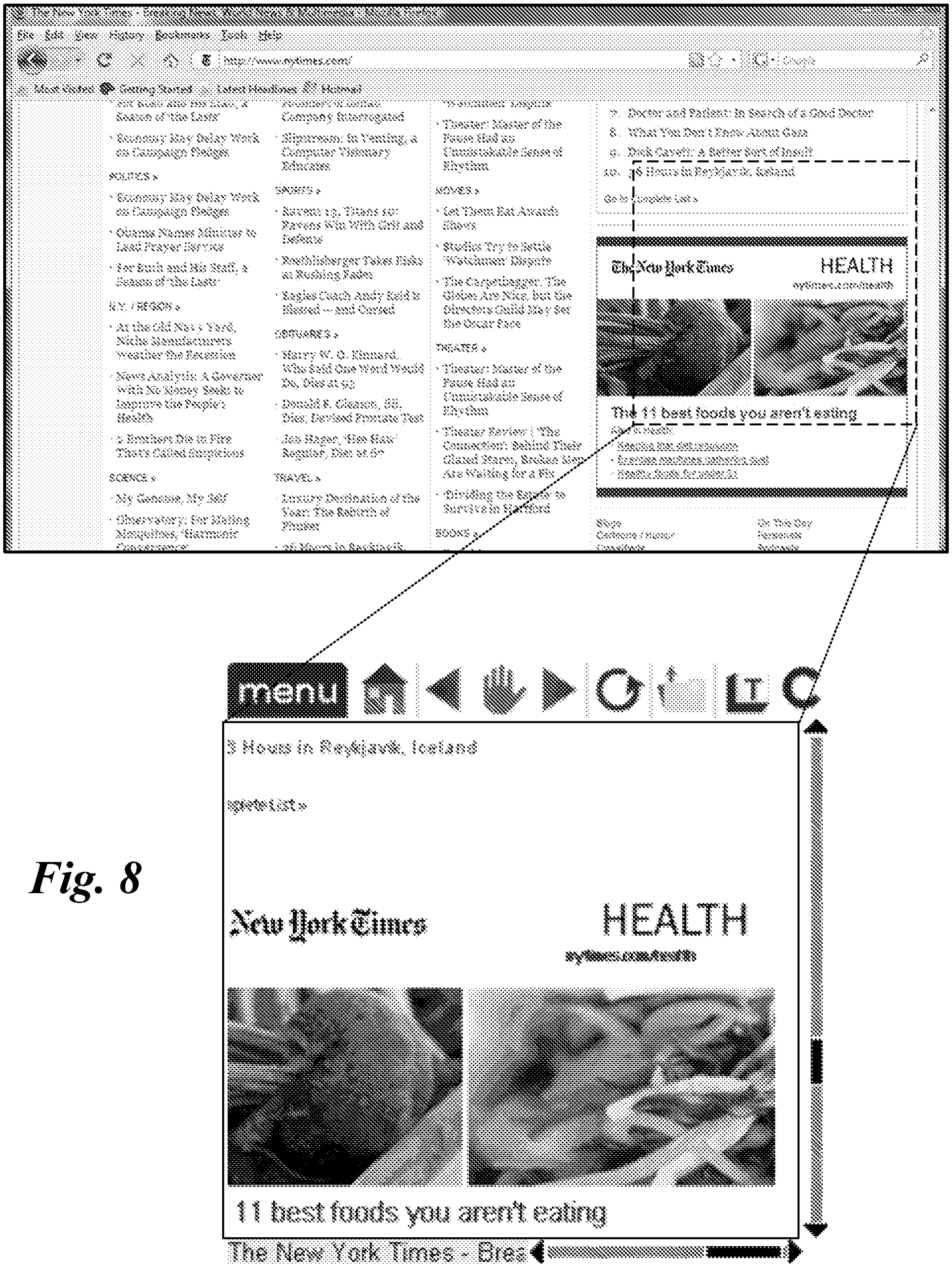

menu
3 Hours in Reykjavik, Iceland
New York Times
HEALTH
11 best foods you aren't eating
The New York Times - Brea

Fig. 8

Preservation of Functionality

New claim language entered by amendment to claim 30 introduces the term preservation of "functionality." Preserving functionality generally pertains to preserving the interoperability of various HTML-based Web page content, such as hyperlinks and UI (user interface) controls such as input forms defined via corresponding HTML-based code. It is noted that the HTML code defining a Web page's overall layout, functionality and design does not define how a user interaction with the Web content is to be supported, but rather defines the existence of a corresponding function within the Web content to support the interaction. For example, a hyperlink definition within a Web page merely defines a link (hyperlink reference of *href*) to corresponding content, it does not define how the hyperlink associated control is to appear on the screen nor how the hyperlink is to be activated. That is up to the browser's implementation, which varies by browser. For example, some browsers underline text content associated with a hyperlink, while others change the appearance of a pointer when over a control (*e.g.,* text content) associated with a hyperlink (or otherwise change the appearance of such content). Moreover, how the hyperlink is activated is not defined by the corresponding HTML-based definition, but again is left to the browser implementation. Accordingly, preserving content functionality means that functionality defined by corresponding HTML code (*e.g.,* activation of a hyperlink in the present example) is supported, without limiting the particular user interface for how that activation is facilitated.

In the implementation of a zoomable browser, it may be desirable to change user interface behavior depending on a current use and/or view context. For example, the hyperlink controls of a conventional Web page designed to be viewed with a desktop browser are typically activated via the same user interface input (*e.g.,* clicking with a mouse), since all of the hyperlinks controls (on at least well-designed Web pages) are (presumably) designed to be viewable on the desktop browser (at least viewable to most users). In contrast, when the same page is rendered so as to fit on a handheld device's display, corresponding hyperlink controls may not be readable. As a result, it may be advantageous to implement a context-based user interface that may result in a different action for the same user input depending on a current user and/or zoom context. For example, under the zoom to column, image, and paragraph user interface features disclosed in the present application, touching proximate to content associated with a hyperlink control may or may not activate the hyperlink control, depending on a current zoom level. By way of illustration, when touching content proximate to a hyperlink control that is also contained within a column when in a zoomed-out view, such as a full page view, the browser may interpret the input as an input to zoom to the column rather than an input to link to a hyperlinked reference associated with the content, particularly when the content is not readable in the current view.

<u>Enabling access to Web pages from among billions of Web pages</u>

Applicants have amended claims 1 and 15, and included similar language in new claim 33 to recite,

"enabling a user of the mobile device to request access to Web pages *from among billions of Web pages accessible via the World Wide Web* …"

The scope of the foregoing claim language is intended to convey that under each claimed invention (including this language), a user of the corresponding mobile device is enabled to be able to access Web pages from among billions of Web pages accessible via the World Wide Web *(i.e.*, the Internet), such as a user's favorite Web page or other Web pages selected to be accessed by the user. This language is further meant to preclude coverage of or anticipation by an apparatus or method that requires Web pages to be encoded in a particular manner to provide functionality specific to a corresponding apparatus or technique that is required to support corresponding aspects of the claimed invention.[19] In other words, the claimed inventions can be used to

[19] This does not mean the Web pages among the billions of Web pages (corresponding to the claims herein) cannot

access billions of Web pages in their existing form, without requiring any modification or special coding of the Web pages. Meanwhile, any apparatus, technique or scheme, etc., that requires a Web page to be specifically encoded to support corresponding functionality applicable to that apparatus, technique, or scheme will be excluded from the claim coverage (or from being used for anticipation or obviousness purposes) because there were not billions of existing Web pages that were encoded in a similar manner at the time of their respective claimed inventions.

At the same time, the foregoing claim language does not mean the user is enabled to access any Web page accessible via the World Wide Web, as some Web pages may only be accessed via use of the proper security credentials (*e.g.*, userID and password), while pages having display content written in languages that are not supported by the browser and/or operating system implemented on the host device might be accessible but would not be rendered correctly[20].

At the time of the filing of the non-provisional parent application (US 09/878,097 – issued as US 7,210,099) (June 8, 2001) to which the present application claims priority, there were on the order of a several billion web pages associated with the "World Wide Web" and accessible via the Internet, with the specific number being

---

include any content that is defined for mobile devices. For example, the use of Metatag values in Web page code, such as used to define page widths, does not constitute encoding a Web page in a particular manner to provide functionality specific to a corresponding apparatus or technique that is required to support corresponding aspects of the claimed invention.

[20] One of skill in the browser art would recognize that rendering engines do not render Web pages completely by themselves, but rather employ various support functions provided by the host operating system for particular rendering operations. Among these support functions is support for rendering text in various languages. The particular languages that are supported will vary depending on the operating system and/or extensions to the operating system (or otherwise add-on functionality provided by the browser) for rendering text of a particular language. If support for rendering text in a given language via either the operating system or a particular extension is not available, the text content in such a language will not be able to be rendered on pages that include such text content.

somewhat indeterminable. As stated in paragraph [0093] of the present application, ". . . users are enabled to view the entire content of billions of existing Web pages using hand-held devices in a simple and reasonable way." This statement was based on the observation that, when tested, a browser incorporating the principles of the invention disclosed in the present application enabled the test user to browse, zoom, and pan the entirety of nearly every Web page that was tested.[21] Based on the inherent principles and teachings disclosed, this result was expected, as the rendering engine employed by the browser (the Mozilla rendering engine) was based on the same rendering engine used in one of the two most dominant browsers at the time (*i.e.*, the rendering engine used by the Netscape Navigator browser, with the other dominant browser being Microsoft Internet Explorer). (It is respectfully noted that the use of the Mozilla rendering engine in an embodiment in the present disclosure is merely exemplary, and not limiting in any way.) Since Netscape Navigator was a dominant browser at the time, many if not most Web pages were designed to support browsing with Netscape Navigator (either by intent and/or based on good HTML coding practices for manually designed pages, or through use of one of many Web page design tools that generated HTML that could be properly interpreted by Netscape Navigator).

One of skill in the art will recognize that the principles and teachings disclosed in the present application may be applied in a browser implementation employing one of many different rendering engines, such as but not limited to today's version of the Mozilla rendering engine ("Gecko") used by the Firefox browsers, the rendering engine employed by Microsoft Internet Explorer ("Trident" (*aka* MSHTML)), or the Webkit rendering engine use by Apple's Safari browser, Google's Chrome browser, and mobile

---

[21] Of approximately 500 of the most browsed (at the time) Web pages that were tested, only a handful did not work. Of particular note was a Sony Web site that was substantially flash-based (and thus not HTML-based). It is also noted that some Web pages were/are designed to be browsed by a specific browser, such as Internet Explorer; such pages may not render and/or function properly under other browsers.

browsers including Apple Mobile Safari, Google Android, Nokia S60, Palm Web OS browser, and Research in Motion's recently introduced browser. Since each of these rendering engines are capable of rendering the vast majority of today's Web pages, a browser implementing such a rendering engine in combination with the principles and teachings disclosed in the present application would likewise be capable of rendering the vast majority of billions of today's Web pages while preserving the page layout, hyperlink functionality, and design of the Web pages under various zoom levels and panned views.

<u>Plurality of zoom levels; at least one of the zoom levels is at least 4 times full scale;</u>

<u>Plurality of scale factors; at least one of the scale factors is at least 4 times full scale</u>

Claim 1 has been amended to recite, in part

"wherein in the multiple zoom levels include zoom levels that are not predefined, and the user is enabled to view the entirety of the HTML-based content of the Web page at a zoom level of at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine."

In addition, each of claim 15 and new claim 33 recite, in part,

"scaling the page layout information to generate scaled Web page content comprising scaled objects at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor, and at least one of the scale factors is at least 4 times full scale, wherein full scale corresponds to the native pixel resolution of the Web page as interpreted by the rendering engine."

First, as a general comment, Applicants want to reiterate that while a 1:1 relationship between zoom levels and scale factors may exist, there is not a requirement that content displayed at a given zoom level be directly derived by scaling content at an equal scale factor, although such may be the case. However, in the case of the terminology “full scale,” a zoom level of 1x (1 times full scale) and a scale factor of 1x (1 times full scale) are equivalent.

The HTML-based content of a Web page includes HTML elements that define the page layout of the objects on the Web page, as discussed above. Among the layout information that is determined by a rendering engine is the size of the Web page, including its Width and Height. The Width of the Web page may be explicitly defined by the HTML-based content, be defined by aggregating layout information, or determined by using a default page width and/or the width of the content area for the browser. The latter technique is employed for pages that do not provide HTML-based content from which a page width can be explicitly determined, such as pages employing one or more variable-width content areas (*e.g.*, such as pages on Wikipedia.com.) Thus, the native pixel resolution of the Web page is the Width and Height resolution of the page in pixels, as interpreted by the rendering engine.

When the aspect ratio of the page is maintained when scaled, there is only one of the Width and Height values that needs to be considered for determining the scale, and that is the Width. At full scale or 1x, the pixel-based resolution of the Web page content presented on the display is the same as the resolution of the page if displayed at its native resolution. On a typical modern desktop monitor, the full page width of a Web page can generally be displayed when the content area of the desktop browser’s application window is wide enough. For example, many Web pages are designed to have a native resolution of approximately 980 pixels wide so that they can be displayed at full-width on a monitor having a pixel resolution width of at least 1024 pixels (with consideration that a small portion of the display screen is used for a vertical scroll bar and the window frame).

In the following example, the window of a Firefox 3.6.10 browser has been adjusted such that the width of the body block of the Web page is 960 pixels, and as depicted by the Firefox Firebug inspector, the body block of the Web page has a size of

960 x 1948 pixels. For simplicity and point of illustration, we are going to state for this example page that its native resolution is 960 x 1948 – that is, the size of the body block[22].

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[22] It is noted that some desktop browsers add padding or margin around the body block of Web pages, such that it could be argued the native resolution is actually the size (in pixels) of the body block plus the padding/margin. However, since the padding is not specified by the HTML (it is added by the particular browser implementation), for consistency herein the native resolution will be considered the size of the body block, as interpreted by the rendering engine.


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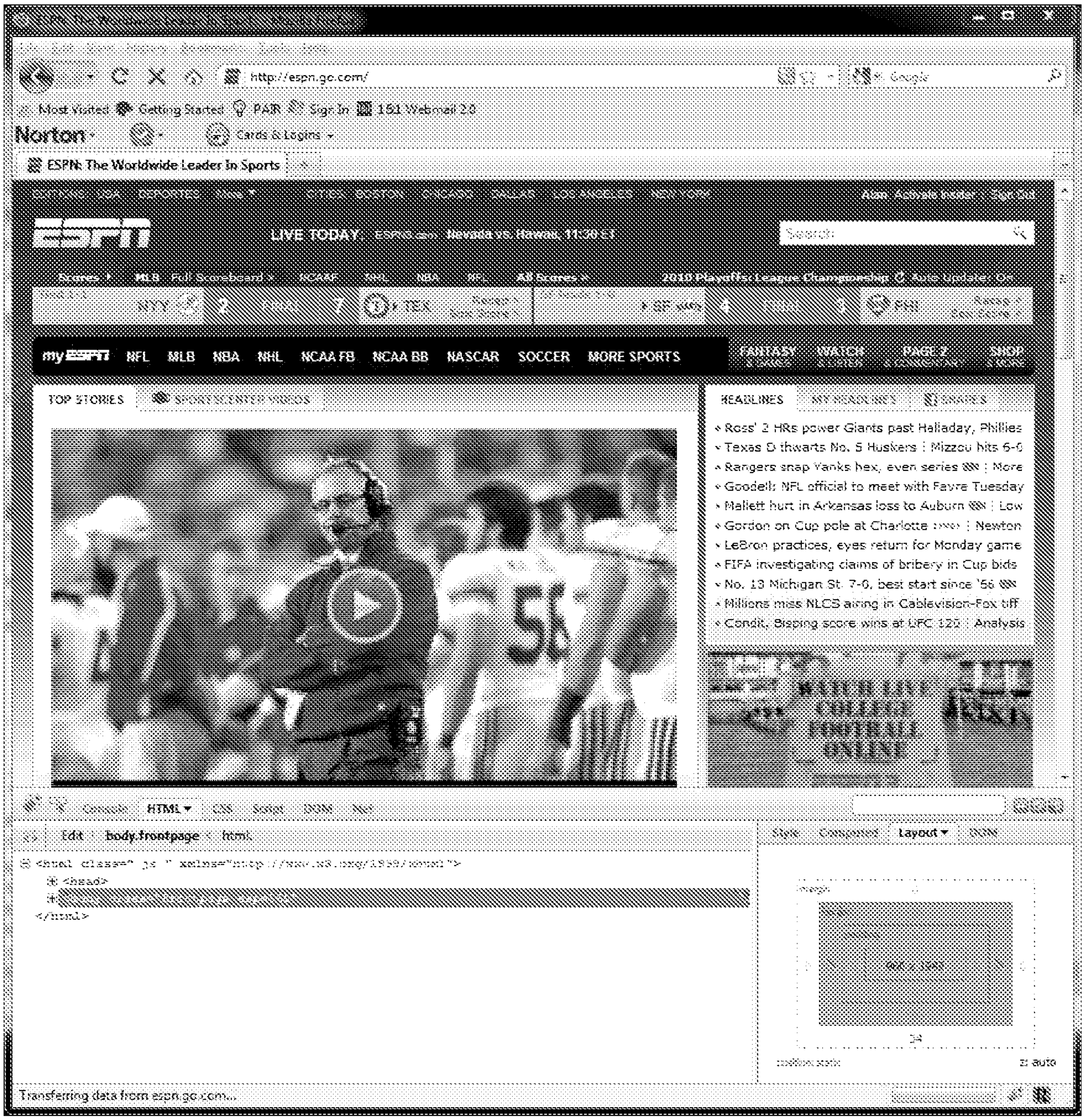
Cards & Logins
ESPN: The Worldwide Leader In Sports
LIVE NOW:
my NFL MLB NBA NHL NCAA FB NCAA BB NASCAR SOCCER MORE SPORTS
TOP STORIES
HEADLINES
Ross' 2 HRs power Giants past Halladay, Phillies
Texas D thwarts No. 5 Huskers | Mizzou hits 6-0
Rangers snap Yanks hex, even series | More
Goodell: NFL official to meet with Favre Tuesday
Mallett hurt in Arkansas loss to Auburn | Low
Gordon on Cup pole at Charlotte | Newton
LeBron practices, eyes return for Monday game
FIFA investigating claims of bribery in Cup bids
No. 13 Michigan St. 7-0, best start since '66
Millions miss NLCS airing in Cablevision-Fox tiff
One Big Disappointment
Texas Ties Series
Season-Ticket Rankings
Kobe vs. LeBron
Scouts Inc.
Transferring data from espn.go.com...

ESPN.com Web Page



Firefox Firebug showing body block has a size of 960 x 1948 pixels

Now further suppose that the display resolution of a hand-held device is 320 x 320 pixels (*e.g.*, the resolution of the Sony Clie discussed above). At a full scale or 1x zoom level, a pixel on the display screen maps 1:1 with a corresponding pixel in the native resolution of the web page. This is illustrated in the following figure, were the

320 x 320 block in the upper left hand corner of the page represents the pixel area of the display screen, and the shaded translucent area represents the portion of the display used for viewing Web page content, which is approximately 304 x 272 pixels. In this example configuration[23], the upper portion of the display is used for a Menu, the right hand edge is used for a vertical scroll bar, and the lower portion is used for an information bar and a horizontal scroll bar.

[23] This illustrated configuration is merely exemplary, as other configurations may be employed, including configuration without areas that are allocated for menus, information bars, scroll bars, etc.

Depiction of Web page view on example display configuration

It will be understood that when page content is rendered at full scale, the corresponding zoom level is 1x or 1 times full scale. Similarly, within the scope of applicable claims herein, a scale factor of 1x or 1 corresponds to 1 times full scale. In general, the zoom level referred to in claim 1 and the scale factor referred to in claims 15 and 33 will have a value of *n*x, meaning *n* times the resolution of full scale, wherein the scale *n* is relative to the full scale resolution and associated page layout as interpreted by the rendering engine.

At a zoom level of 4x or a scale factor of 4x (also referred as four times full scale), the effective resolution of the Web page is 4x (*i.e.*, 4 times) the native resolution of the Web page. Thus, in this instant example, the effective resolution at the Web page when scaled using a scale factor of 4x would be 3840 x 7792 pixels. The word "effective" is used in the foregoing statements to convey that this would be the resolution in pixels of the entire Web page if it were to be fully rendered on a display (or to an off-screen bitmap context) at a given point in time. In practice, at a minimum only a portion of the Web page comprising a bitmap having the pixel resolution of the Web content display area for a given device would need to be rendered to the display for a given view. Viewing content corresponding to the full Web page is achieved by panning around the full Web page using the Web content display area as a viewport of the Web page. Rendering of additional off-screen bitmap content for purposes such as to facilitate panning or storing one or more previous views would be optional.

<u>Zoom levels that are not pre-defined</u>

Claim 1 has been amended, in part, to recite,

"wherein in the multiple zoom levels include zoom levels that ***are not predefined***, …"

Embodiments of the present invention, such as implemented by the SoftView™ browser, enable users to view Web page content at multiple zoom levels, including "arbitrary" zoom levels that are not predefined. For example, an arbitrary zoom level may result from a user selection of an area to zoom on, or a context zoom, such as results from zooming on column, image, or paragraph. Since the user selected area or column, image, or paragraph may be arbitrary in dimension, the corresponding zoom level which is derived as a function of such dimension may likewise be arbitrary. By contrast, a pre-defined zoom level corresponds to zoom level that is defined in advance, such as 100%, 125%, 150%, 200%, 50%, *etc.*

No degradation in quality of the presentation of text content

Claim 1 has been amended to recite, in part,

… wherein there is ***no degradation in quality of the presentation of text content*** *when the zoom level is increased to at least 4 times full scale.* Support for this claim element is based on principles inherent to the use of scalable vector-based fonts, and analogous language in paragraph [0037] of the specification.

Under implementation of aspects of the present disclosure, there is no degradation in quality of the presentation of text content when the zoom level increases (upon completion of a change in zoom levels, as discussed further below). As will be understood by those skilled in the art, the quality of the presentation of text content pertains to the clarity of how text characters and corresponding font glyphs are displayed in Web page views, as perceived by the naked eye.

In some embodiments scalable fonts are used, such as exemplified by, but not limited to, TrueType fonts. Scalable fonts of this class are sometimes termed "vector fonts" or "outline fonts."[24] In brief, the outline of the glyphs used to build the text characters is described by mathematical formulas, such as Bezier curves[25]. Typically, a closed path is described by the mathematical description of the glyph, and the path is then filled. Glyph hinting may be applied to alter the control points that define the outline, with the objective that the rasterizer produces fewer undesirable features on the glyph. Since the glyphs are based on mathematical formulas, they can be scaled with substantially indefinitely, with no degradation in quality.

Although the glyph outlines may be defined using high-precision math, there ultimately is a rasterizing operation that maps the mathematically-defined glyph outlines onto pixels, which reduces the precision and sharpness of corresponding text

[24] See http://en.wikipedia.org/wiki/Computer_font for an excellent discussion of computer fonts.

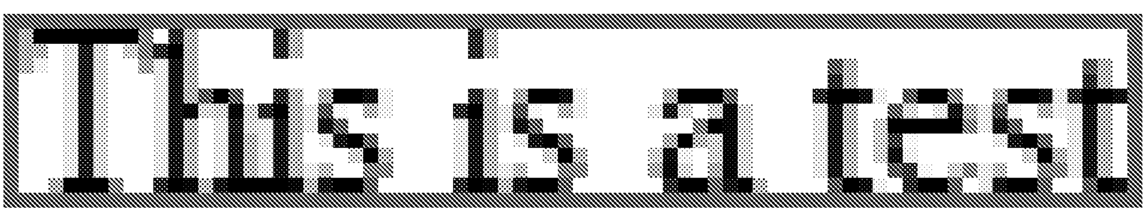
[25] The mathematical definitions are generally referred to a vectors or vector images, hence the terminology vector fonts.

characters. As is well known, various approaches such as anti-aliasing is employed to make the outlines of the characters appear smoother (*i.e.*, less jagged). Such minor discontinuities in the smoothness of the outlines are generally more pronounced, for smaller size fonts and for displays with lower pixel densities.

The following screenshots illustrate examples of presentation of text content that result in no degradation in quality of the presentation of text content when the zoom level is increased, and examples of when such degradation results. These screenshots, which are reduced in scale herein to fit the width of the page, where obtained using a desktop SoftView™ browser client implementation running on a version of the Microsoft Windows 7 operating system. It is noted the same proxy server as used in the www.nytimes.com examples presented above was used. However, the text is now rendered by the Windows 7 OS using scalable fonts, as opposed to the text in the Palm emulator examples, which employ a bitmap font at a lower resolution. The text is from a portion of the www.softview.us page.

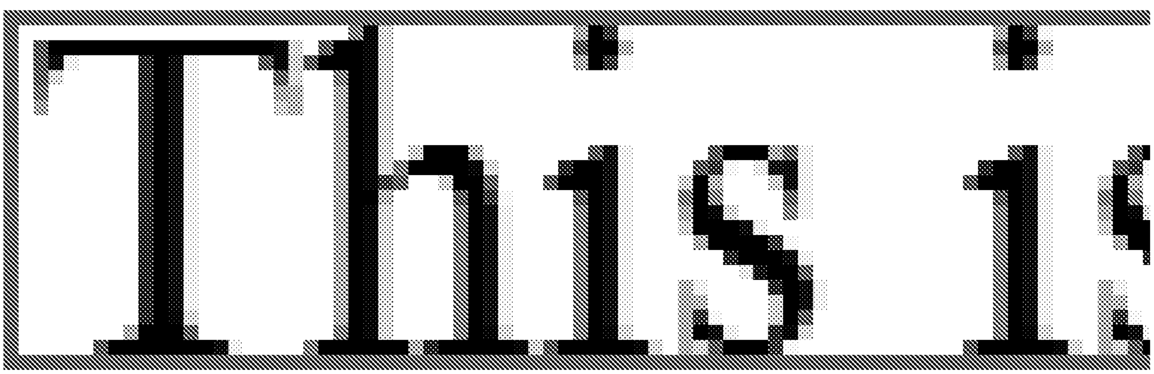
The top example shows the text “SoftView:” at a zoom level of 100%, or 1x (*i.e.*, full scale). The middle shows the text when the browser client was at a zoom level of 200% or 2x, and the bottom shows the text when the browser client was at a zoom level of 400% or 4x. Each of these screenshots comprises a bitmap. In the following representation, the bitmap of the text at 100% has been scaled by a factor of 4x, while the bitmap of the text at 200% has been scaled by a factor of 2x such that the text is now the same size. This illustrates an example of degradation in the quality of the presentation of text content.

The screenshot of the scaled bitmaps were derived by copying the original 1x and 2x text into Microsoft Paint, changing the zoom level to 400% and 200% respectively, and then capturing new screen shots. It is believed that Microsoft Paint employs a simple bit “blowup” when the zoom level is changed, as demonstrated below:



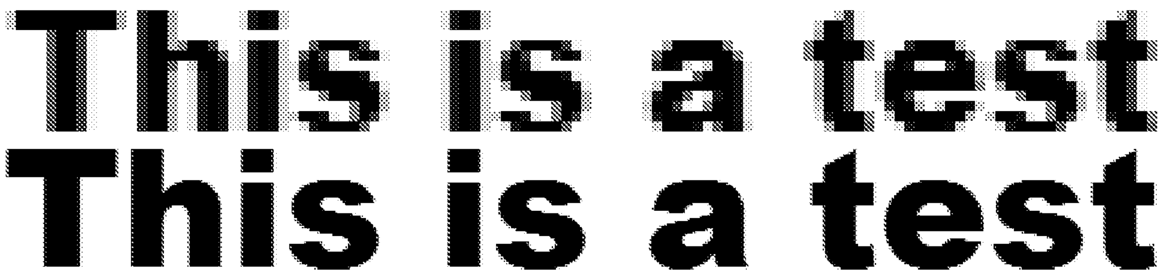
In this screenshot, each square block represents an original pixel of a 12 point Times New Roman font that has been blown up by a factor of 800%. This also shows an example of anti-aliasing, wherein pixels of different colors are selectively employed to make the font outline look smoother to the naked eye.

In general, the relative portion of pixels employed for anti-aliasing of a font glyph to the pixels in the glyph is not proportional with font size. As the font size is increased, the relative portion of pixels employed for anti-aliasing is reduced, since these pixels are usually employed using different colors to augment the outline of the font glyphs. This can be shown graphically by comparing text using various fonts (and corresponding font glyphs) at different sizes. The following screenshots respectively show the same text as above using a 48 point Times New Roman font blown up by 200% and a portion of the text using the 48 point Times New Roman font blown up by 800%:



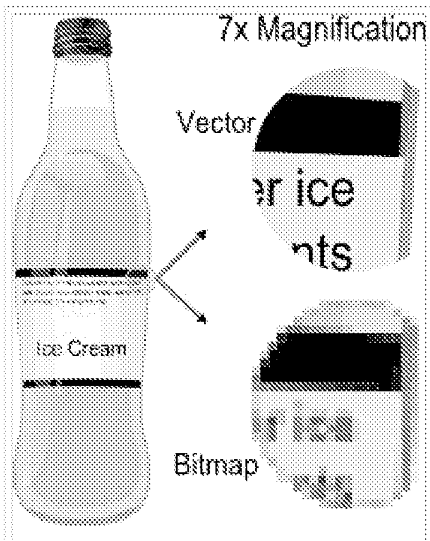
The effect is more pronounced with fonts employing wider glyphs, such as bolded fonts. For example, the following screen shots show 12-point and 48-point Arial Bold font blown up by 800%:

The following screen shots show the same 12-point Arial Bold font blown up by 800% compared with a 48-point Arial Bold font blown up by 200%:



In the above example, as well as the SoftView™ screenshots, the portion of pixels along an axis employed for rendering a font glyph is proportional to the zoom level. As a result, there are more pixels available for rendering the outline of the font glyphs at relatively higher zoom levels, resulting in increased sharpness in text content as the zoom level is increased.

It is generally known to those of skill in the computer graphics art that the use of vector fonts, such as but not limited to TrueType fonts, enable corresponding text content to be scaled substantially indefinitely with no degradation in quality. For example, the following illustration is included on a Wikipedia page concerning vector graphics.[26] It is noted that in this example both the graphical definition of the bottle and the text content on the label is defined by corresponding vector graphic elements; however, the point of inclusion of this example is directed at just the text content. As stated, "raster images are based on pixels and thus scale with loss of clarity, while vector-based images can be scaled indefinitely without degrading quality." In the context of this statement, quality concerns the presentation of the scaled vector-based content when rendered to a display context, such as a computer screen or printer output. In the context of claim 1, this claim element applies to the rendering of text content.



Example showing effect of vector graphics versus raster graphics. The original vector-based illustration is at the left. The upper-right image illustrates magnification of 7x as a vector image. The lower-right image illustrates the same magnification as a bitmap image. Raster images are based on pixels and thus scale with loss of clarity, while vector-based images can be scaled indefinitely without degrading quality.

[26] http://en.wikipedia.org/wiki/Vector_graphics. It is noted that in the Bitmap magnification, it is likely the next neighbor interpolation algorithm was used, which generally produces the greatest loss in clarity.

Applicants would like to note several important considerations that shall be understood with respect to the scope of the terminology,

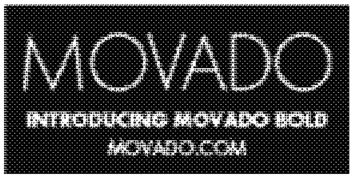
"no degradation in quality of the presentation of text content *when the zoom level is increased to at least 4 times full scale."*

First, the "no degradation in the quality of the presentation of text content" aspect concerns the quality of the presentation of text content when an operation that results in a change in zoom level is <u>completed</u>. This means that if animation is employed <u>during</u> a zoom operation, the quality of the presentation of text content during the animation is irrelevant to the claim scope.

A second consideration is the claim scope applies to text content corresponding to text objects in the Web pages, and is not applicable to text depicted in images (corresponding to image objects in the Web pages). For example, many advertisements included in Web pages comprise images depicting text, and are stored as image files (*e.g.*, JPEG images, GIF images, bitmap images, etc.) on corresponding servers, such as shown below.[27]

---

[27] The screenshots were captured from the www.nytimes.com Web page using the Firefox 3.6.12 browser on Microsoft Windows 7. The original HTML definition is <img height="90" border="0" width="184" src="http://graphics8.nytimes.com/adx/images/ADS/24/87/ad.248781/movado_sov_left.jpg">.



Original size (full scale)

Scale approximately 3 times full scale

The clarity of text included in such images will generally degrade when the images are scaled (depending on the amount of scaling and the type of bitmap interpolation used), such as illustrated by the blurred text content in the 3x (3 times) full scale image. This is due to aspects of scaling bitmap images, as discussed below.

Third, the "no degradation in quality" corresponds to how the quality of text presentation relative to the text presentation at full scale, as perceived by the naked eye, as considered by one skilled in computer graphics art. As discussed above, the no degradation in quality aspect is a recognized result (to those of skill in the computer graphic art) of using scalable vector fonts.

Several of the references identified during prosecution of the present application and related family members concern techniques for providing Web page content to small client devices such as PDAs under which Web pages are rendered using a conventional Web browser on a server or the like and then bitmap images of portions of the Web page comprising entire views (corresponding to the screen resolution of the small devices) are transmitted to the client device to be replicated on the client device's screen. For example, one technique that was employed proximate to the filing of the earliest application sharing the same disclosure of the present application to which priority is claimed (June 8, 2001)[28] was to generate a bitmap image of a rendered Web page at full scale on a server, and then send portions of the bitmap (or corresponding bitmap content after a color reduction or color space translation was applied) to a client in response to requests from the client. Typically, a zoomed in view resulted in viewing the Web page content at full scale, which as discussed above, corresponds to a zoom level of 1x. The quality of the display content (on the client device) was very good at full scale, since the bitmap portions of the Web page represented by the views sent to the client were derived directly from bitmap content corresponding to the rendering of the Web page at full scale on the server using a conventional Web browser. Thus, at full scale, there is no loss in quality with respect to text content in the original Web page. To zoom out, the full scale bitmap was simply downsampled at the server using a basic interpolation technique, such as next neighbor, which has a very low computational cost, and a corresponding bitmap was sent to the client. This produced a degraded appearance of the Web page when zoomed out at moderately low zoom levels (e.g., .5x), and very degraded appearance at low zoom levels (e.g., .25x). This result is expected, since by definition the resolution of the downsampled images corresponding to the bitmap views sent to the client device is lower that the effective resolution of the full scale views. For example, compare the resolution of a typical image thumbnail to a

[28] Applicants do not admit that such techniques qualify as prior art under §102 or §103, and reserve the right to swear behind references teachings such techniques, if applicable.

full image – the thumbnail is achieved by downsampling the bitmap of the full image and has a much lower resolution then the full image.

A similar reduction in quality results when bitmap image content is scaled upward to support viewing content at zoom levels of greater than full scale. In this instance, since the number of pixels to be represented in views at zoom levels greater than full scale is greater than the number of pixels at full scale, there is not enough information in the sampled image to reproduce a scaled image without performing interpolation to "fill in" color values for the extra pixels. The greater the scaling of the bitmap image, the greater the amount of interpolation, leading to degradation in quality, particularly for text content.

By definition, a bitmap image in its original (or raw) form is resolution dependent. In its original form a bitmap image is sometimes referred to as a "sampled" image, meaning the individual pixels represent samples of an original image. This definition works well when considering how original images are digitized (*i.e.*, converted into a digital form). The converting device, such as a digital camera or scanner, acquires samples of the image (using a CCD array, for example) and converts the samples to corresponding bitmap content. For example, a 1 megapixel digital camera operating at its maximum resolution would acquire 1 million samples using its CCD array. Thus, the digitized image in raw form (when processed and rendered to a display) would likewise comprise 1 million pixels.

Generally, storing bitmaps in their original form is inefficient, both in terms of storage size and in terms of transmission speed. As a result, bitmap content is typically converted (compressed) into a more compact form obtained by processing the raw bitmap content with a corresponding algorithm, such as JPEG (Joint Photographic Experts Group), GIF (Graphics Interchange Format), TIFF (Tagged Image File Format) or PNG (Portable Network Graphic). Each of these algorithms employ "lossy" compression, meaning some of the original bitmap content is lost. In addition to storing image content in a compressed form, images stored in each of these formats can be scaled up or down using a corresponding Codec. Since the algorithms are lossy, there is a corresponding loss in quality in the scaled images, with the level of degradation being a function of the amount of scaling, the compression ratio, and the original content itself. Also, aspects of several of these compression algorithms tend to preserve the quality of image content relating to natural scenes better than text content.

Another consideration when translating image content relates to color space mapping. Generally, the sample information for each sample is stored in a corresponding form that is defined by a color space having an associated color resolution. For example, a typical 24-bit sample stores corresponding values for Red, Blue, and Green color 8-bit values. If the color resolution of a destination device differs from the color space used to store the image, a color space mapping is required.

While JPEG, GIF, TIFF and PNG are typically employed for storing bitmap image content in a compressed form, there are other types of bitmap algorithms that are usually used for scaling bitmap content, commonly referred to as bitmap interpolation. These most common of these include next neighbor, bilinear, and bicubic interpolation. More recently, more complex algorithms have been introduced, including, hqx and supersampling algorithms. In addition, other types of algorithms, including wavelet-based algorithms, may be used for scaling image content. The selection of which of these algorithms to employ is generally based on processing "cost" of the algorithm in consideration of the processing and memory resources available on the device and speed at which the scaling needs to be performed. For example, if speed is important, an algorithm that has a lower processing cost may be used. On the other hand, if the most important consideration is quality of the scaled image, a more processor intensive algorithm may be used.

Applicants respectfully note that none of the algorithms identified herein (and certainly none of the algorithms identified in any of the cited references) can be applied to an image bitmap at full scale to produce text content at a zoom level of at least 4 times full scale without degradation of the quality of the text content. This is because there is only a single bitmap (i.e., the full scale rendering of the page on the server) to base the interpolation on, and each these algorithms produce substantial degradation in quality of text when scaling a bitmap by a factor of 4 (which in this instance would correspond to interpolating a bitmap rendered at 1x so as to scale it to 4x). Moreover, because the effective resolution of web pages at 4x is very high and the bandwidths available at the time were very low, it would have been commercially impractical to implement a browser that could zoom at zoom levels up to at least 4x using a proxy server scheme under which the bitmap content is rendered on the server and transmitted to the client (even in compressed form). As discussed above, the effective resolution (X by Y in pixels) of a Web page at 4x comprises 16 times the number of pixels for the Web page at full scale. This would mean to browse the full Web page content at a zoom level of 4x, transmission of 16 times as much content to the client would be required.

The following example shows various levels of degradation resulting from interpolation of an example word "Wiki" using conventional next neighbor, bilinear interpolation, and bicubic interpolation algorithms, plus an addition more complex algorithm (hq2x) when simply doubling the size of text (*i.e.*, 2x) using an example font[29]. The results would be significantly worse at 4x.

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[29] This image was obtained by capturing a screen shot of the Web page http://en.wikipedia.org/wiki/Image_scaling using monitor with a resolution of 1280 x 1024 pixels.

Scaling methods [edit]

An image size can be changed in several ways. Consider doubling the size of the following image:

The easiest way of doubling its size is nearest-neighbor interpolation, replacing every pixel with four pixels of the same color:

The resulting image is larger than the original, and preserves all the original detail, but has undesirable jaggedness. The diagonal lines of the W, for example, now show the characteristic "stairway" shape.

Other scaling methods are better at preserving smooth contours in the image. For example, bilinear interpolation produces the following result:

Linear (or bilinear, in two dimensions) interpolation is typically better than the nearest-neighbor system for changing the size of an image, but causes some undesirable softening of details and can still be somewhat jagged. Better scaling methods include bicubic interpolation:

For magnifying computer graphics with low resolution and/or few colors (usually from 2 to 256 colors) the best results will be achieved by hqx or other pixel art scaling algorithms. These produce sharp edges and maintain high level of detail. hq2x:

It is noted that even the best result using hq2x produces a noticeable level of degradation in quality of the text content to the naked eye, such as exemplified by the waviness in the outline of the angled portions of the characters.

By comparison, the following screenshot presents the same "Wiki" text rendered by a Microsoft Windows operating system using Times New Roman font (a scalable vector font)[30]. at 36pt. (1x), 72pt. (2x), and 144pt. (4x).

The difference in the result cannot be understated. By enabling a user to view text content using zoom levels of at least 4x without degradation in text quality, browsing Web pages is significantly enhanced. Moreover, as devices implement screens with higher pixel densities, the amount of scaling relative to full scale will need to increase proportionally to provide text at the same size. For example, if the pixel density of a screen is doubled, it requires doubling of the scale factor to render text at

[30] Microsoft formerly employed TrueType fonts, but now employs OpenType scalable computer fonts. OpenType is built on TrueType, retaining TrueType's basic structure and adding data structures for prescribing typographic behavior. See, e.g., http://en.wikipedia.org/wiki/OpenType. Screen capture using Microsoft Word (Office 2007) running on Microsoft Windows 7 Ultimate with the same monitor having a 1280 x 1024 resolution.

the same size. Under the resolution-independent approach disclosed in the present application, text content can scaled and rendered to devices of any resolution while maintaining quality of the presentation of the text content.

Applicants want to clarify that the foregoing discussion does not preclude the use of interpolation of bitmap content to achieve the claimed aspect of "no degradation in quality of the presentation of text content" at a zoom level of at least 4 times full scale. Rather such a result cannot be achieved by interpolation of a single bitmap corresponding to Web page content rendered at full scale (when such result is required to be achieved to support browsing of Web pages from among billions of Web pages available on the World Wide Web at a zoom level of at least 4 times full scale). For example, some interpolation techniques may be employed to scale bitmap content by a relatively small amount (e.g., 50%) to produce scaled text content such that degradation in quality of the presentation of text content may be unnoticeable to the naked eye. Moreover, techniques such as trilinear filtering[31] may be employed to produce text content without degradation at a zoom level of at least 4x if the resolution of at least one of the mipmaps[32] used for the trilinear filtering is close enough to the at least 4x zoom level.

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[31] Also known as trilinear scaling or trilinear interpolation. For an explanation see, e.g., http://en.wikipedia.org/wiki/Trilinear_filtering, http://en.wikipedia.org/wiki/Texture_filtering and http://tech-algorithm.com/articles/trilinear-interpolation-image-scaling/.

[32] For example, when implementing conventional mipmap levels of detail that differ by a factor of 2 (*i.e.*, the level of details of the mipmaps are 2^n), the result of the interpolated text content will be presented without degradation if the mipmap content of at least the closest level of detail is derived by rendering text using scalable vector fonts that are scaled in accordance with the scale factor corresponding to that level of detail. Moreover, if the text content for each level of detail is rendered using scalable vector fonts and the mipmap level of detail spacing is 2, there will be no degradation in quality of the presentation of text content as the zoom level is increased over the mipmap level of detail range that is implemented. For example, if mipmap content is generated at 1x, 2x, 4x, and 8x using scalable vector fonts and trilinear filtering is implemented, corresponding text content can be viewed at zoom levels between 1x and 8x with no degradation in quality.

Scope of the terminology “in real-time”

The term “real-time” is included as a limitation in claim 7. The scope of the terminology “in real-time” is intended to pertain to the concept of real-time as perceived by humans when interacting with software, as opposed to the use of real-time to describe machine operations (*e.g.,* a real-time operating system), as discussed below.

One of skill in the art would recognize the meaning of the terminology “real time” varies depending on the particular use context. For example, for an embedded real-time operating system or implementation, real-time might mean a timeframe in the millisecond or even microsecond range. In this context, the time context is machine time and real-time means instantaneous. In another use context, such as replying to e-mail, real-time is significantly longer. For example, many people refer to responding to e-mail in “real time” – this means the people respond to new e-mails as they come in, as compared with waiting until the end of the day or some other time to respond to e-mails in more of a batch manner. In a real time flight tracking context, the data that is provided may actually reflect a tracking position that is several seconds, or even minutes, old.

One of skill in the art would recognize that in a software user-interface context, which is applicable to the present claims, the use of real-time typically means the user is enabled to continue an operation in a non-disrupted manner, meaning the user doesn’t have to wait a period of time of significance for the operation to be performed. In this context, real-time is perceived by the user’s sense of time.

As defined by SearchSMB.com Definitions[33]

real time

[33] http://searchsmb.techtarget.com/sDefinition/0,,sid44_gci214344,00.html

DEFINITION- Also see real-time clock and real-time operating system.

Real time is a level of computer responsiveness that a user senses as sufficiently immediate or that enables the computer to keep up with some external process (for example, to present visualizations of the weather as it constantly changes). *Real-time* is an adjective pertaining to computers or processes that operate in real time. Real time describes a human rather than a machine sense of time.

In the days when mainframe batch computers were predominant, an expression for a mainframe that interacted immediately with users working from connected terminals was *online in real time*.

Applicant wants to make it clear that under the context of the user of in "real-time" as recited in the claims herein, "real-time" does not mean instantaneously. Rather, the operation that is enabled to be performed in "real-time" is performed in a non-disrupted manner, as experienced by the user. For the purpose of a defined time period, "in real time" as used herein means the operation is performed in a few seconds or less.

Terminology "in a fraction of a second"

New dependent claim 31 recites, in part, "dynamically generating scaled Web page content in a fraction of a second." Support for this limitation is provided in paragraph [0037], which recites, in part (emphasis added, text in brackets added),

> The graphics rendering engine within the client is so efficient that file manipulation happens in ***a fraction of a second***. There is no perceptible wait for the user as the file is resized [i.e., for zooming], or the window is repositioned [i.e., for panning].

In the foregoing recitation, the "file" refers to the SVF (simple vector format) content, which comprises SVF drawing commands that are processed by the graphics rendering engine to support rapid zooming and panning of content. It will be understood that while the terminology "in real-time" may encompass "a fraction of a second," the scope of real-time shall not be limited to a fraction of a second, but rather have the scope discussed above. It is further noted that the graphics rendering engine discussed in paragraph [0037] is different than the rendering engine employed for interpreting the HTML-based content.

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Arguments in Support of Patentability of the Amended Claims

Prior to amendment of the pending claims, original claims 1-14 and 20-25 were rejected under 35. U.S.C. § 102(a) as being anticipated by *WEST*: A Web Browser for Small Terminals by Staffan Björk et al. (Viktoria Institute, Göteborg, Sweden, 1999) (*WEST*). A claim is anticipated only if each and every element of the claim is found in a single reference. M.P.E.P § 2131 (citing *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628 (Fed. Cir. 1987)). "The identical invention must be shown in as complete detail as is contained in the claim." M.P.E.P. § 2131 (citing *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226 (Fed. Cir. 1989)). In order to be anticipating, a prior art reference must be enabling so that the claimed subject matter may be made or used by one skilled in the art. Amgen *Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1354 (Fed. Cir. 2003); *Helifix, Ltd. v. Blok-Lok, Ltd.,* 208 F.3d 1339, 1346 (Fed. Cir. 2000); *Akzo N.V. v. U.S. Int'l Trade Comm'n,* 808 F.2d 1471, 1479 (Fed. Cir. 1986). Prior art is not enabling so as to be anticipating if it does not enable a person of ordinary skill in the art to carry out the invention. See *Elan Pharms., Inc. v. Mayo Found.,* 346 F.3d 1051, 1057 (Fed. Cir. 2003) (remanding the case to the district court for a determination of whether the prior art reference enabled persons of ordinary skill to make the invention without undue experimentation). To serve as an anticipating reference, the reference must enable that which it is asserted to anticipate. "A claimed invention cannot be anticipated by a prior art reference if the allegedly anticipatory disclosures cited as prior art are not enabled." *Amgen, Inc. v. Hoechst Marion Roussel, Inc.*, 314 F.3d 1313, 1354, 65 USPQ2d 1385, 1416 (Fed. Cir. 2003). *See* *Bristol-Myers Squibb v. Ben Venue Laboratories, Inc.*, 246 F.3d 1368, 1374, 58 USPQ2d 1508, 1512 (Fed. Cir. 2001) ("To anticipate the reference must also enable one of skill in the art to make and use the claimed invention."); *PPG Industries, Inc. v. Guardian Industries Corp.,* 75 F.3d

1558, 1566, 37 USPQ2d 1618, 1624 (Fed. Cir. 1996) ("To anticipate a claim, a reference must disclose every element of the challenged claim and enable one skilled in the art to make the anticipating subject matter.")

Original claims 15-19 were rejected under 35. U.S.C. § 103(a) as being unpatentable over *WEST*, further in view of The Zoom Browser by Lars Erik Holmquist (Åter till Human IT, 3/1998), (*Holmquist*). The Examiner is reminded that to successfully make a prima facie rejection under 35 USC § 103, the Examiner must show that Applicants' claimed subject matter would have been obvious to one of ordinary skill in the art pertinent to Applicants' claimed subject matter at the time it was made. See *KSR International, Co. v. Teleflex, Inc.*, 550 U.S. 398 (decided April 30, 2007). Some of the factors to consider in this analysis include the differences between the applied documents and Applicant's claimed subject matter, along with the level of skill associated with one of ordinary skill in the art pertinent to Applicant's claimed subject matter at the time it was made. See USPTO Memo entitled "Supreme Court decision on KSR Int'l. Co., v. Teleflex, Inc.," (May 3, 2007). One way in which an Examiner may establish a prima facie case of unpatentability under 35 USC § 103 would be to show that three basic criteria have been met. First, the Examiner should show that the applied documents, alone or in combination, disclose or suggest every element of Applicant's claimed subject matter. Second, the Examiner should show that there is a reasonable expectation of success from the proposed combination. Finally, the Examiner should show that there was some suggestion or motivation, either in the applied documents themselves or in the knowledge generally available to one of ordinary skill in the art pertinent to the claimed subject matter at the relevant time, to modify the document(s) or to combine document teachings. The motivation or suggestion to make the proposed combination and the reasonable expectation of success should be found in the prior art, and should not be based on Applicant's disclosure. See *In re* Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991); See

MPEP § 2142; 2143 - § 2143.03 (regarding decisions pertinent to each of these criteria).

Applicants respectfully assert that the rejection of each of the original claims was improper. Although the Applicants have amended the claims herein to more particularly recite features of their claimed inventions, such amendments are not made to overcome any of the §102 or §103 rejections referenced above. However, a discussion of the references used in the §102 or §103 rejections and discussion of the rejections themselves are presented herein to ensure that the teachings of such references as applied to the subject matter claimed herein are clarified.

<u>Discussion of *WEST*</u>

An overview of *WEST* is described in its Abstract, which states (emphasis added),

> We describe ***WEST,*** a **WE**b browser for **S**mall **T**erminals, that aims to solve some of the problems associated with accessing web pages on hand-held devices. Through a novel combination of ***text reduction*** *and* ***focus+context visualization***, users can access web pages from a very limited display environment, since the system will provide an overview of the contents of a web page *even when it is too large to be displayed in its* ***entirety***. To make maximum use of the limited resources available on a typical hand-held terminal*, much of the most demanding work is done by a proxy server*, allowing the terminal to concentrate on the task of providing responsive user interaction. The system makes use of some interaction concepts reminiscent of those defined in the Wireless Application Protocol (WAP), making it possible to utilize the techniques described here for WAP-compliant devices and services that may become available in the near future.

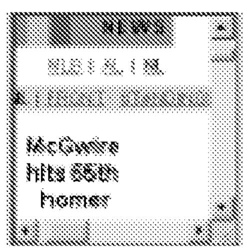
WEST's approach to the aforementioned problems is to remove content and then totally reconfigure it. The approach is directly opposite the approach used by the SoftView™ browser and as disclosed in the present application and claimed herein. As stated in the *WEST* Introduction (emphasis added), The World Wide Web (WWW) currently consists of about half a billion pages, offering users a vast range of informational resources. However, *these pages are almost exclusively* ***designed for use with desktop computers****, i.e. computers with large* **high resolution screens**, powerful processors, and an abundance of primary and secondary storage.

As further stated in the Introduction (emphasis added),

The work presented here focuses on this encounter between the WWW and mobile telephony, and more specifically on the need to provide gateways between mobile technologies and existing web resources. Although mobile terminals ***require specially designed formats*** *for optimal usability due to the constraints of the user environment*, it is not likely that all information available on the web will be ***translated into these format*** in advance. Thus, there is need for some kind of automatic on-the-fly ***transformation of existing web content to mobile formats***, in order not to shut mobile users out from the bulk of web resources.

It is clear that the *WEST* authors considered the idea of being able to zoom and pan full page views of Web pages on devices with small screen resolutions as being a bad approach. As stated in the first paragraph in the Interaction in WEST section,

To give a better idea of how the *WEST* browser works, we will now give a detailed account for how a user may interact with the system. This will take the form of a complete interaction scenario, with an illustration for each screen the user will see.



The example page viewed in a traditional browser on a 160x160 pixel display

As our example, we have used a page reporting baseball news at the Yahoo Sports site. *The page was comprised mostly of text* – 319 words, or about 1500 characters. There were 15 links to other pages, plus a banner advertisement and a search function. As the figure above will attest, viewing this page on a traditional browser on a 160x160 pixel screen ***presents serious problems***. *Only a very small part of the page would then be available at any time,* ***giving almost no clues to the size or context of the material***.

Applicants agree that viewing a typical Web page designed for the desktop using a traditional browser on a 160x160 pixel screen is problematic *if you do not provide support for true zooming and panning and maintain the visual layout of the content.* In particular, the original implementation of the ClearView™ browser was on a Palm device with a resolution of 160x160 pixels[34]. Accordingly, the approach used by the ClearView™ browser disclosed in the present application and claimed herein and the approach used by *WEST* represent two entirely different (and opposing) approaches using devices with identical screen resolutions.

Among other things, The *WEST* approach clearly would not enable a user to browse an entirety of a Web page (based on its original HTML definition, as interpreted by an HTML rendering engine), as it intentionally removes content, including both text and image content. As stated in the section entitled Pre-processing, Including Card Chunking (emphasis added),

> Proxy servers for real-time pre-processing of web information to be accessed using a mobile terminal is a proven technique used for instance in current web services for palm-sized PDAs. In *WEST*, *we made use of a **proxy server** to*:
>
> 1. *Filter and **reduce** the contents of web pages in order to adapt them to the capabilities of the mobile browser (this would mean among other things to **get rid of JavaScript, image maps, frames etc.**)*
>
> 2. Convert the reduced web page into *n* sub-pages (cards), each of which can be readily presented on a mobile-sized display (*e.g.* 160x160 pixels). Cards are interlinked to form a deck by arranging them into a suitable reading-order
>
> 3. Produce alternative renderings of these cards corresponding to different levels of detail. Typically a card can be displayed in its full size, in reduced size and minimized. *These alternative renderings **are not necessarily derived from graphical reduction** – in WEST, one alternative when reducing card size is to use automatic text summarization*

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[34] The screenshots shown in FIGs. 7A, 7B, 8A, 8B, 9A, and 9B are of Web page views rendered by a ClearView™ browser client running on a Palm IIIc emulator having a resolution of 160x160 pixels.

In addition to the foregoing deficiencies, *WEST* absolutely does not employ any page layout information in the context of any of the pending claims. Notably, the only technique disclosed for presenting images of card content is to use graphical compression (which would employ one of the bitmap downsampling techniques discussed above). As stated in the Web Page Rendering section (emphasis added),

> For the graphical presentation of the different cards, each individual card had to be rendered as if it were a web page. However, we were unable to write a full-scale web rendering engine within the constraints of this project. Instead, we used the rendering engine provided by the HotJava Web Browser [31] ***to produce an image of each card as displayed on a screen of the required size (160x160 pixels). The same images where (sic) also graphically compressed to intermediate and thumbnail size. These pre-rendered images were then used by the system for the graphical presentation.***

A bitmap image of a Web page view cannot provide any page layout information. It simply identifies the pixel color values in an XY grid, and provides no information relating to the location of objects relative to the XY grid. Moreover, any image content that is derived from a bitmap alone (*e.g.*, with bitmap interpolation), also cannot convey any page layout information.

Of course, preservation of an original page layout, using any mechanism, is not taught or suggested by *WEST*. *WEST* clearly teaches away from preserving an original page layout by "chunking" the original page content (*i.e.*, breaking it up into cards) and generating view of the card content, such as illustrate below.

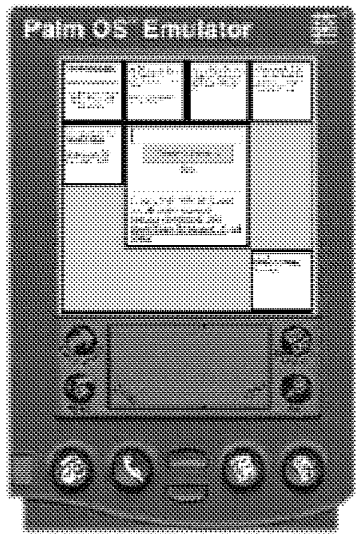


Figure 1: The WEST browser on a simulated Palm OS™ display

Each card is a bitmap image of only a portion of the original Web page content (the chunk allocated to the card), with portions of the entire original text and images not be accessible via any of the cards. By dramatic comparison, under the techniques disclosed in the present application and employed by the ClearView™/SoftView™ browsers (as exemplified by the nytimes.com Sony Clie screenshots presented above), the entire Web page content is enabled to be browsed at multiple zoom levels while preserving the original page layout and design as defined by the HTML-based Web page content (as interpreted by the rendering engine). Thus, users are enabled to browse their favorite Web pages in a familiar manner similar to how such pages are browsed via their desktop browser. Moreover, this browsing functionality is applicable to billions of Web pages available via the World Wide Web.

<u>Discussion of *Holmquist*</u>

The *Holmquist* reference discloses a technique for viewing content on a desktop computer comprising "flip zooming" and focus+context views. Rather than address viewing existing HTML-based Web pages, *Holmquist's* Zoom Browser is directed at enabling viewing of a multi-page document via, among other things, specially-coded

Web pages and a specially-configured desktop browser. In other words, one cannot choose to view an arbitrary page selected by a user from among the billions of Web pages accessible via the Internet (*i.e.*, World Wide Web), but rather the content that is to be viewed under *Holmquist* must be specifically coded to be viewed with the Zoom Browser.

In particular, *Holmquist's* technique employs Java. Java is implemented in a Web browser through use of Java applets (see discussion and Figure 10 on page 10 of *Holmquist*). Java applets are retrieved over a network from a corresponding URL. As such, there needs to be reference in each of *Holmquist's* Web page source code to identify where any Java applets would be retrieved from. Any existing Web page (which would be billions of Web pages) that doesn't have references to the Java applets used for rendering a particular page could not be implemented in a Web browser under *Holmquist*. This means *Holmquist* would be useless for browsing the World Wide Web. Of course, that is not the point of *Holmquist's* Zoom Browser – it is to be able to view the content of a multiple page document more easily, not to surf the Web.

Holmquist's Zoom Browser also has several other significant limitations that cannot be overcome in attempting to support any rejection over both the original claims and now amended claims, either as a standalone reference or in combination with one or more other references. Of significant note, the Zoom Browser could not support in-line pictures (images), or some of the basic layout features of HMTL, such as tables. As stated on page 10 (emphasis added),

> Just like any other browser, the Zoom Browser can be used to load and display documents from the World Wide Web using flip zooming. It supports ***a subset*** *of the Hypertext Markup Language (HTML)*, including hypertext links and *most basic formatting commands*. The Zoom Browser ***does not currently support in-line pictures, or some of the more advanced features of HTML, like tables***, but these could be added in the future.

The Zoom Browser also does not employ any page layout information in the context of the claims herein, which would be clearly understood by one skilled in the HTML browser arts in view of the commonly known meaning of page layout used in performing page layout operations associated with rendering HTML-based Web pages.

Claim 1, as amended, recites (emphasis added),

1. A mobile device, comprising:

a processor;

a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which *the World Wide Web* may be accessed;

a *touchscreen comprising at least a portion of a top surface of the mobile device*;

memory, operatively coupled to the processor; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

enabling a user of the mobile device to request access to ***Web pages from among billions of Web pages accessible via the World Wide Web***, each Web page including associated HTML-based Web content ***defining an original page layout and-design of content on that Web page, the content including text content and image content***;

in response to a user request to access a Web page,

retrieving, via the wireless communication device, HTML-based Web content associated with a Web page;

processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine;

employing the page layout information to generate scalable page layout information; and

employing the scalable page layout information and/or content derived therefrom to generate views of the Web page ***to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine***,

wherein in the multiple zoom levels include zoom levels that are not predefined, and the user is enabled to view the entirety of the HTML-based content of the Web page at a zoom level of at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine, and wherein there is no degradation in quality of the presentation of text content when the zoom level is increased to at least 4 times full scale.

Applicants have amended to claim 1 to clarify the intended scope of the claim. For example, as discussed above, the claim element "enabling a user of the mobile device to request access to ***Web pages from among billions of Web pages accessible via the World Wide Web***" is intended to convey that the user is enabled to access Web pages the user desires to access from among billions of Web pages accessible via the World Wide Web. At the same time, this does not mean the user is enabled to access any Web page accessible via the World Wide Web (also see discussion above concerning the intended scope of this terminology).

Notably, this claim element precludes a rejection based on a reference that employs a scheme or technique that requires pages to be specially coded to support corresponding functionality, such as that employed by *Holmquist*. Clearly there are not billions of Web pages on the World Wide Web encoded in the manner employed by *Holmquist*.

With respect to the claim element, "each Web page including associated HTML-based Web content ***defining an original page layout and design of content on that Web page, the content including text content and image content***," this means that each Web page includes at least some text content and at least one image. Of course, there are Web pages without images and there may be Web pages without text and only one or more images; however, the claimed mobile device is required to be able to browse Web pages that include both text content and image content while also meeting the limitations recited in the other elements of claim 1.

With respect to the element of ***processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine***;" this corresponds to the conventional use of generating page layout information of a HTML-based Web page by a Web browser (rendering/layout engine), as would be clearly understood by one of ordinary skill in the Web browser art.

With respect to the elements,

employing the page layout information to generate scalable page layout information; and

employing the scalable page layout information and/or content derived therefrom to generate views of the Web page ***to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine***

Generally see the discussions above.

With respect to the claimed element of

[and] wherein there is no degradation in quality of the presentation of text content when the zoom level is increased to at least 4 times full scale, Applicants respectfully asset that such a feature is clearly not taught or fairly suggested by any of the references of record, considered alone or in any combination. Notably, there would be no motivation to implement zoom levels substantially greater than full scale (such as 4x) under the techniques disclosed in the references discussed above employing rendering Web pages as bitmap content on servers and transmitting portions of the bitmap content for rendering on client devices because a) the resolution of the screens was very low (*e.g.*, 160 x 160 pixels) and b) scaled bitmap content based on a single sampled image (*i.e.*, the original bitmap content corresponding to the full scale image) results in text content that is substantially degraded. With respect to the very low image resolution, consider that for Web pages designed to be viewed on monitors with a resolution of at least 800 or 1024 pixels in width (which represented a substantial portion of the Web pages that existed in 2000-2001), the portion of the width of such Web pages that could be displayed in a single view would respectively represent 160/800 (20%) or 160/1024 (15.6%) of the Web page width. At a zoom level of 4x these portions become 5% and ~4%, respectively. Since the primary content on most Web pages comprises text content, and the general purpose of browsing such Web pages is to read the text content, it is important to maintain the clarity of text content. Being able to view text content at full scale on screens with very low resolutions facilitated this need, and there would be no motivation to substantially increase the zoom level above full scale.

With respect to the aspect of no degradation in the quality of the presented text at a zoom level of at least 4x, it is clear that schemes that generate scaled views of content by interpolation of bitmap image content at full scale (only) cannot achieve this result. Accordingly, claim 1 is clearly patentable over each of the corresponding references for at least these reasons.

In view of the arguments presented above, it is clear that claim 1 is patentable over the cited art of record, and is in condition for allowance. In addition, each of the claims that depend either directly or indirectly from claim 1 are likewise in condition for allowance for at least the reasons supporting patentability of claim 1.

While Applicants respectfully assert the rejections of several of the original claims depending either directly or indirectly from claim 1 were improper and unsupported, Applicants assert that such rejections are now moot in view of their respective clarified context in view of the amendment to claim 1. However, there are aspects of some of the rejections for which clarification is warranted.

For example, with respect to the rejection of original claim 6, the Examiner states,

Regarding Claim 6

Limitation "enabling the Web page to be displayed at different resolutions by, generating scalable content via use of the scalable page layout information; and scaling the scalable content to re-render the display in response to associated user inputs" is shown in page 2 of *West* **The West Browser** section first paragraph and page 4 **Flip Zooming in West** sections second paragraph.

As Applicants noted above, *WEST* does not employ scalable page layout information of any kind, as would be known to one of ordinary skill in the Web browser art. Moreover, also as discussed above, the only technique the *WEST* discloses that could be reasonably be interpreted as scaling anything is the generation of the card images, which are generated by (As stated in the Web Page Rendering section and quoted above, emphasis added),

> For the graphical presentation of the different cards, each individual card had to be rendered as if it were a web page. However, we were unable to write a full-scale web rendering engine within the constraints of this project. Instead, we used the rendering engine provided by the HotJava Web Browser [31] ***to produce an image of each card as displayed on a screen of the required size (160x160 pixels). The same images where (sic) also graphically compressed to***

> ***intermediate and thumbnail size. These pre-rendered images were then used by the system for the graphical presentation.***

Accordingly, since there is no use of scalable page layout information disclosed by *WEST*, the rejection of original claim 6 was improper, and the amended version of claim 6 is further patentable over *WEST*.

With respect to the rejection of original claim 7, the Examiner states,

<u>Regarding Claim 7</u>

Limitation "enabling a user to pan a display of the Web page substantially in real-time in response to a corresponding user input" is shown in page 7 of *West* **Presentation and Interaction** section first paragraph.

This cited section of *WEST* states,

Presentation and Interaction

Based on the flip zooming technique, the WEST browser presents each web page as a number of discrete objects, representing individual cards or decks of cards. The user navigates between different objects by using directional buttons or by directly choosing the object to focus upon with a pen or other pointing device. For sequential reading of a whole page, a user would generally switch to a full-screen view and then advance through the cards by pressing a designated "forward" button.

Each view in WEST only presents one level of the hierarchical structure of decks and cards that represent the web page. To move between levels, the user zooms in on the object in focus (usually by clicking or tapping with the pen on it) and will thus go one level deeper into the structure. To go up one level, the user clicks or taps on the "white space" between the objects. This navigation might also be facilitated by the use of "up" and "down" buttons, for moving up and down in the hierarchy, analogous to zooming out and zooming in.

When the user goes down one level in the hierarchy, the focus object takes over the whole screen space to show its content. If the current focus represents a single card, this card will be allowed to fill the screen completely to facilitate reading. In the case of the focus representing a deck, however, a view of all the objects in the deck is presented.

The system provides three different modes in which the material can be viewed: thumbnail, summary and link view. When switching from one view mode to another, the position of the focus in the hierarchical structure is maintained, enabling the user to navigate in a suitable view mode to locate a card, and then change to another mode (typically the thumbnail view) to actually view the card. In the prototype, the user switched between the different views by accessing a pop-up menu.

Notably, there is no mention of "panning" or scrolling in *WEST*. Applicants respectfully assert that the aforementioned technique for viewing cards does not fall within the claim scope of "pan a display of the Web page" as would be understood by someone of ordinary skill in the art. Applicants have further clarified the scope of claim 7 herein to now recite,

7. The mobile device of claim 1, wherein execution of the instructions performs further operations comprising,

for each of the multiple zoom levels, enabling the user to pan a display of the Web page ***at that zoom level*** in real-time in response to a corresponding user input.

Accordingly, the claimed invention of claim 7 requires support for panning a display of Web pages in real-time at multiple zoom levels. It is noted that the terminology "scrolling" is sometimes used to describe operations equivalent to "panning" as used in the claims herein.

With respect to the rejection of original claims 8 and 9, the Examiner states,

<u>Regarding Claim 8</u>

Limitation "enabling a user to view a column of the Web page at a higher resolution than a current resolution via a corresponding user interface input" page 4 of *West* **Flip Zooming in West** section **Interaction Example**;

Limitation "the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display" is shown in page 4 of *West* **Flip Zooming in West** section **Interaction Example**.

<u>Regarding Claim 9</u>

Limitation "tapping on the column" is shown in page 4 of *West* **Flip Zooming in West** section **Interaction Example**.

First off, it would be somewhat happenstance that any of the thumbnail size images generated by *WEST* would correspond to an entire column, and certainly such a case would not be expected for an arbitrarily selected Web page from among the billions of Web pages available via the World Wide Web. Second, the width of the column in pixels, again by chance, would need to substantially correspond to the width of a predefined bitmap image of content corresponding to the column generated at one of the predefined scale factors employed by *WEST* for generating is bitmap images. It could not be an arbitrary width, as supported by the techniques disclosed in the present application, as the bitmap images employed by *WEST* have predefined resolutions based on the predefined scale factors (*e.g.*, scale factors used in graphical compression to create the predefined intermediate and thumbnail sizes).

With respect to original claims 10-13, the Examiner based the rejections on similar rational to used in rejecting original claims 8 and 9. For similar reasons to those presented above, zooming on images and paragraphs using *WEST* would only fall within the claim scope by happenstance for particular Web pages, and such features could not be facilitated for arbitrarily selected Web pages from among billions of Web pages available via the World Wide Web. Moreover, under WEST content cannot be selected for zooming by tapping on the content when displaying a view of the Web page that occupies the full display. Rather, corresponding thumbnails are selected.

Claim 15 has been amended to now recite (emphasis added),

A mobile device, comprising:

processing means;

wireless communications means to facilitate communication with a network via which Web content may be accessed;

a display;

memory; and

storage means in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page including associated HTML-based Web content *defining an original page layout and attributes of a plurality of objects,* ***including text objects and image objects****, included in the Web page*;

retrieving, via the wireless communication means HTML-based Web content associated with the Web page;

processing the HTML-based content with a rendering engine to generate page layout information, *wherein the page layout information defines a **layout location** for each of the plurality of objects*;

for each of the plurality of objects,

storing page layout information ***including a bounding box associated with layout of the object***; and

storing information that links the object with its corresponding page layout information,

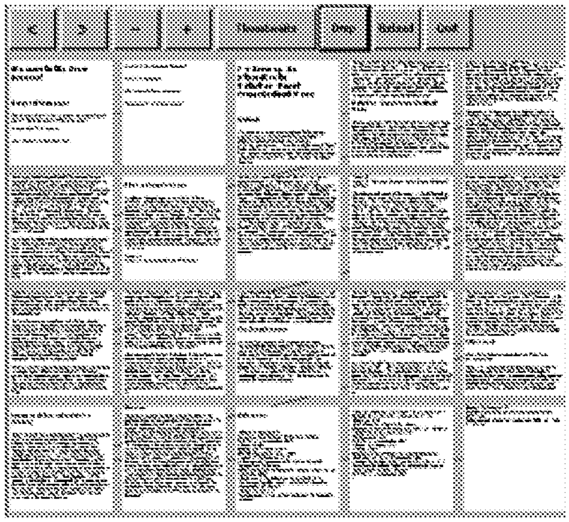
wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined; and

*scaling the page layout information to generate scaled Web page content comprising scaled objects at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor, and at least one of the scale factors **is at least 4 times full scale,** wherein full scale corresponds to the native pixel resolution of the Web page as interpreted by the rendering engine.*

Support for this amendment can generally be found in discussions in the specification with reference to FIGs. 2C, 4A-G, 5, and 6 and teachings of the present application discussed above.

The rejection of original claim 15 is substantially moot, as the elements specifically addressed by the Examiner concerning a primary datum, object datum, and object vector have been removed by amendment. However, Applicants assert that the Examiner's allegations with regard to aspects of the page layout and layout of corresponding objects being disclosed by *Holmquist* is clearly misplaced. The page layout and page layout information concerns the location of where objects are laid out on the Web page at full scale (as interpreted by the rendering engine, as discussed in detail above), and scaled page layout information concerns scaling the original page layout information (*i.e.*, the page layout information at full scale) to generate scaled Web page content, wherein scaled objects are laid out and scaled at layout locations corresponding to the scaled page layout information. For example, see discussion above on concerning scalable page layout information and scaled page layout information. Also see the graphical depictions in the Figures of various screenshots provided herein.

It is further noted that neither of *WEST* nor *Holmquist* disclose retrieving HTML-based Web content via a mobile device. Under *WEST*, the original HTML content corresponding to a Web page is retrieved by a proxy server, and reformatted by the proxy server into a structure configured to be handled by a mobile device. The mobile device receives the reformatted content from the proxy server. While embodiments of the present application employ a proxy server to perform some operations in those embodiments, at least one of the embodiments disclosed implements all of the operations on the client device (*e.g.*, a mobile device under claims 1 and 15). Moreover, under *Holmquist*, there is no mention whatsoever about using the Zoom Browser on a mobile device, and due to the various limitations of mobile devices at the priority date of U.S. Application No. 09/878,097 (June 8, 2001, to which priority in the present application is claimed) (*e.g.*, screen resolution of 160x160 under the *WEST* implementation on the Palm OS emulator), it would make no sense to even attempt to implement the Zoom Browser on a mobile device at that time. For example, the following screen shot included in *Holmquist* appears to have a resolution of at least 800 x 600 pixels, and likely has a resolution of 1024 x 768 pixels, if not higher.



In Claim 15, as amended, the Web page also includes a plurality of text objects and image objects. As discussed above, *Holmquist* specifically identifies that the implementation of the Zoom Browser could not handle in-line pictures (*i.e.*, images) - that is, image content that is defined in-line in the HTML content of a Web page that includes images.

With respect to the rejection of original claim 16, the Examiner states,

Regarding Claim 16

Limitation "generating a bounding box for each object, the bounding box representing a portion of a rendered display page occupied by the object's associated group of content" is shown in page 14 of *Holmquist* **3.3.2 Boxes around pages belongs to the document currently in focus** section;

Limitation "mapping the object vectors and associated bounding boxes to a virtual display in memory" is shown in page 14 of *Holmquist* **3.3.2 Boxes around pages belongs to the document currently in focus** and **3.3.3 Usage-dependent placement of focus pages** sections.

Elements have been added to amended claim 15 relating to generation of bounding boxes. The boxes employed by *Holmquist* have nothing to do with the bounding boxes recited in claim 15. No person of ordinary skill in the Web browser arts would consider the thumbnail images of pages in *Holmquist's* Zoom Browser to be bounding boxes within the scope of claim 15.

Clearly, claim 15 is patentable over *WEST* and *Holmquist*, considered alone or in combination. Additionally, each of claims 16-19, 21-25, and 29-31, which depend either directly or indirectly from claim 15, are likewise in condition for allowance for at least the reasons supporting patentability of claim 15.

Moreover, with further respect to claim 16, and 17, Applicants have amended these claims such that the rejection of original claims 16 and 17 are moot. While not acquiescing to the rejection of original claims 16 and 17, Applicants respectfully assert that none of the references of record, taken alone or in any combination, teach or fairly suggest "mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space." Accordingly, claim 16 and 17 are further patentable and in condition for allowance for at least these reasons.

With respect to the rejection of original claim 18, the Examiner states,

Regarding Claim 18

Limitation "scaling a scalable font to render the text content at different scale factors" is shown in page 13 of *Holmquist* **3.2 The Zoom Browser's display modes: thumbnails, summaries, and alternating** section.

Applicants respectfully note there is nothing about using a scalable font disclosed or fairly suggested by *Holmquist*. According to *Holmquist* (Section 2.1.1 The flip zoom technique, emphasis added),

> For the basic view of a document, it is split up into a number of "pages" of equal length. The pages are laid out on the display in left-to-right, top-to-bottom order. ***The pages are represented by thumbnail sketches***, which provide a context view, but are usually too small to read.

It is most likely the thumbnail sketches are conventional thumbnail images of full size pages there are obtained via bitmap image down-sampling. Moreover, when considering a combination obviousness rejection over *WEST*, it is respectfully noted that Palm OS devices during this timeframe did not support scalable fonts, but rather employed bitmap fonts. It is noted that while images of Palm device emulators are shown in Figures in the present application and herein, the ClearView™/SoftView™ browser was also implemented on Windows CE devices that employed scalable fonts, and the use of scalable fonts is specifically disclosed in the specification of the present application (see paragraph [0096]).

In support of the rejection of original claim 19, the Examiner states,

Regarding Claim 19

Limitation "generating a display list derived, at least in part, via use of the object vectors; and employing the display list to re-render the display of the Web page" is shown in page 11 of *Holmquist* **3.1 Navigating World Wide Web documents** section.

West discloses the same subject matter as claimed in the present application; however, it does not specifically spell out the "datum definition" and "object bounding box" features as claimed in claims 15-19. Nevertheless, these features are well known in the art and one application is disclosed by *Holmquist*.

Although both *West* and *Holmquist* disclose the application of "flip zooming" technology, *Holmquist* discloses the flip zooming in further details with visual aids for navigation and reading coupled with the flip zooming technology in the "The Zoom Browser." Thus, it would have been obvious to one skilled in the art at the time the present invention was made to incorporate the detailed visual aids techniques of *Holmquist* into the small terminal web browser of *West* so that the functions and applications of the *West* browser can be further advanced and more applicable to various platforms.

Applicants respectfully note that neither section 3.1 of *Holmquist* nor the foregoing statements address the use of a display list, as would be understood to one of ordinary skill in the computer graphics arts. Claim 19 has been amended to clarify the intended scope of its invention, and now recites, in part,

generating a display list for rendering corresponding content; and

employing the display list to generate scaled Web page content at the plurality of scale factors.

With respect to support for the amendment to claim 19, Applicants note that one or ordinary skill in the computer graphics arts, would understand that the terminology "display list" corresponds to a list of drawing commands or instructions for rendering corresponding graphic content. For example, as stated on a Wikipedia computer graphics page concerning display lists[35],

A **display list** (or *display file*) is a series of graphics commands that define an output image. The image is created (*rendered*) by executing the commands.

In vector-based drawing environments, such as used for Computer Aided Design (CAD), the display list is sometimes referred to as a display list of vectors[36]. For example, as stated on the computer section of your dictionary.com[37], one of the definitions for a display list is,

In computer graphics, a collection of vectors that are used to display a vector graphic image on screen. The display list is generated from the drawing database.

Having spent many years developing CAD-related software, including advanced award-winning display-list drivers for such products as AutoCAD and their own product VDraft™, Applicants use of the terminology "display list of vectors" and other references to "display list" in the present application would be expected in consideration of the terminology used by those skilled in development of CAD software at the time of the invention. Moreover, terminology relating to the use of graphics files and other references to files (*e.g.*, file manipulation) is consistent with the Wikipedia display list definition above referencing a "display file." In addition, one or ordinary skill in the graphics art would recognize that while the verbiage "file" is used, the actual display list in modern computer devices would generally be stored in memory as a data structure or

[35] http://en.wikipedia.org/wiki/Display_list

[36] As stated in paragraph [0092] of the application, "In a block 162, a display list of vectors is built. This process is well known in the CAD arts, and is enabling rapid zooming of vector-based objects."

[37] http://computer.yourdictionary.com/display-list

the like. The use of the terminology “file” goes back several decades ago when graphic computer systems had limited volatile memory (e.g., random access memory) available, and thus content corresponding to display lists were often written to and read from a file on disk rather than from memory.

Generally, the drawing commands or instructions in a display list may be in an original or processed/compiled form (*e.g.*, text, source code, object code, *etc.*), and/or may comprise a cached form. Moreover the original or processed/compiled form may include text-based content and/or binary content, and may correspond to an executable or non-executable form. In addition, it is further noted that claim 19 does not require generation of content to a screen or display, but rather the display list is employed to generate scaled Web page content.

With respect to claims 21, 23, and 25, these claims have been amended to now depend either directly or indirectly from claim 15 rather than claim 20, which has been canceled. Further arguments in support of the patentability of claim 21 are presented above for claim 8, which recites similar claim elements. Further arguments in support of the patentability of claim 23 are presented above for claim 10, which recites similar claim elements. Further arguments in support of the patentability of claim 25 are presented above for claim 12, which recites similar claim elements.

<u>Argument in support of patentability of new claims 26-35</u>

New claims 26-35 have been added by this amendment. Claims 26-28 depend from claim 1, and are patentable and in condition for allowance for at least the reasons supporting patentability of claim 1. Claims 29-31 depend from claim 16, and are patentable and in condition for allowance for at least the reasons supporting patentability of claim 16. Claim 32 depends from claim 15, and is patentable and in condition for allowance for at least the reasons supporting patentability of claim 15.

With further respect to claim 29, support for this claim is presented above in the context of employing a vector-based drawing model to layout points on a virtual coordinate space.

With further respect to claim 30, preservation of functionality defined by corresponding HTML-based content is discussed above.

With further respect to claim 31, dynamic generation of scaled Web page content to enable panning views in a fraction of a second is enabled by using the techniques disclosed in the present application, and in particular the limitation regarding "in a fraction of a second" is disclosed in paragraph [0037], as discussed above.

With further respect to claims 32 and 37, support for scaling text content using a scale factor of at least 4 times full scale is inherent to the resolution-independent characteristic of scalable vector fonts.

Claim 33 is a new method claim containing elements that are analogous to corresponding elements in mobile device claim 15. Accordingly, claim 32 is patentable and in condition for allowance for similar reasons supporting the patentability of claim 15 presented above.

Support for new dependent claims 34-36 are generally discussed above in consideration of analogous elements present in claims depending from claim 15. For example, elements of claim 35 are analogous to similar elements in claim 18, and elements in claim 36 are analogous to similar elements in claim 19. With respect to claim 33, support for the terminology "resolution-independent" can be found throughout the specification.

<u>Nonstatutory Double Patenting Rejections</u>

Claims 1-25 were rejected on the grounds of nonstatutory double patenting over claims of U.S. Patent Nos. 7,461,353 and 7,584,423, and provisionally rejected over the claims of co-pending Application Nos. 11/735,477 and 11/738,486. Applicants respectfully assert these rejections are moot in view of the claim amendments herein.

However, Applicants would like to clarify the requirements for supporting a nonstatutory double patenting rejection, and present reasons why the amended claims are patentably distinct from each of these patents and applications.

As a preliminary note, MPEP 804 states the following with regard to obviousness-type double patenting rejections:

> Any obviousness-type double patenting rejection should make clear:
>
> (A) The differences between the inventions defined by the conflicting claims - **a claim in the patent compared to a claim in the application**; and
>
> (B) The reasons why a person of ordinary skill in the art would conclude that the invention defined in the claim at issue is anticipated by, or would have been an obvious variation of, the invention defined in a claim in the patent. (Emphasis added).

In the present office action, the Examiner has not made clear the differences between the claims of the present application and the claims of any of U.S. Patent Nos. 7,461,353 and 7,584,423 or co-pending Application Nos. 11/735,477 and 11/738,486, as there is no comparison between each of the rejected claims and claims in the patent or application for which double patenting is alleged. Although the Examiner has identified allegedly common elements claimed in the present application and these patents and co-pending applications, no information is provided as to the particular claims of these patents and applications that allegedly correspond to the claims of the present application. In particular, the Examiner states,

Double Patenting

3. Claims 1-25 are rejected on the ground of nonstatutory double patenting over claims of U. S. Patent No. 7,461,353 and claims of U. S. Patent No. 7,584,423 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patents.

The subject matter claimed in the instant application is fully disclosed in the patents and is covered by the patents since the patents and the application are claiming common subject matter, as follows: mobile device; retrieving Web contents; translating the Web contents and scaling the information layout to be displayed across the display; and, enabling zooming and panning in response to user inputs.

Furthermore, there is no apparent reason why applicant was prevented from presenting claims corresponding to those of the instant application during prosecution of the application which matured into a patent. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

4. Claims 1-25 are provisionally rejected on the ground of nonstatutory double patenting over claims of copending Application No. 11/735,477 and claims of copending Application No. 11/738,486. This is a provisional double patenting rejection since the conflicting claims have not yet been patented.

The subject matter claimed in the instant application is fully disclosed in the referenced copending applications and would be covered by any patent granted on those copending applications since the referenced copending applications and the instant application are claiming common subject matter, as follows: mobile device; retrieving Web contents; translating the Web contents and scaling the information layout to be displayed across the display; and, enabling zooming and panning in response to user inputs.

Furthermore, there is no apparent reason why applicant would be prevented from presenting claims corresponding to those of the instant application in the other copending applications. See *In re Schneller*, 397 F.2d 350, 158 USPQ 210 (CCPA 1968). See also MPEP § 804.

Notably, the Examiner has provided no basis for why one of ordinary skill in the art would conclude that the pending claims are either anticipated by the claims of these above-referenced patents and application or an obvious variation thereof. Accordingly, Applicants respectfully request the Examiner make clear the items listed in (A) and (B) as cited above with respect to each claim or withdraw the double patenting rejection of that claim. Applicants respectfully note that Examiner is required to provide the reasons supporting the rejection of each claim for which a nonstatutory double-patenting rejection is issued, not just independent claims or otherwise selected claims and generalizations being applied to other claims.

Applicants further want to point out previous restrictions concerning the claimed subject matter for this patent and related family members. As is well known, subject matter that is subject to restriction cannot later be rejected based on the grounds of nonstatutory double patenting rejection over the application/patent the subject matter was restricted from. See 35 U.S.C. § 121.

The present application was subject to restriction from Application No. 11/045,757, which issued as 7,461,353. In particular, the restriction (dated August 15, 2007) stated,

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

I. Claims 40-70, drawn to display processing, classified in class 715, subclass 526.

II. Claims 71-150, drawn to boundary processing in class 715, subclass 521.

The inventions are distinct, each from the other because of the following reasons:

Inventions, II and I are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention (I) has separate utility such as display processing; invention (II) has separately utility such as boundary processing control by tough-sensitive display and clipping portions (See MPEP § 806.05(d)).

By way of example and not limitation, each of the independent claims 40, 71, 99, and 128 pending at the time of the restriction are presented below.

40. A mobile device, comprising:

a processor,

a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which Web content may be accessed;

a display;

a memory, operatively coupled to the processor; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including, enabling a user to request access to a Web page having an original format comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving at least a portion of the HTML-based Web content associated with the Web page;

translating the at least a portion of the HTML-based Web content to produce scalable page layout information; and

employing the scalable page layout information and/or data derived therefrom to,

render at least a portion of the Web page on the display using a first scale factor; and

re-render the Web page in response to associated user inputs to enable a user to zoom in and out a display of the Web page.

while independent claim 71 recited,

71. A wireless device, comprising:

processing means,

wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed;

a display;

memory; and

storage means, in which a plurality of instructions are stored that when executed by the processing means enable the wireless device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page, the Web page including associated Web content having an original format defining an original page layout and attributes of content on the Web page;

retrieving and translating at least a portion of the Web content from its original format into scalable content that supports a scalable resolution-independent display of the content that substantially retains the original page layout and attributes of the content defined by its original format when rendered; and

employing the scalable content to render at least a portion of the Web page on the display using a first scale factor.

Independent claim 99 recited,

99. A mobile device, comprising:

a processor,

a wireless communications device, to facilitate wireless communication with a network via which Web content may be accessed;

a touch-sensitive display; and

flash memory, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving and processing the HTML-based Web content to produce scalable content; and

employing the scalable content and/or data derived therefrom to,

render the Web page on the touch-sensitive display; and

re-render the Web page in response to associated user inputs to enable the user to zoom in and out a display of the Web page.

Independent claim 128 recited,

128. A mobile device, comprising:

processing means;

wireless communications means, to facilitate wireless communication with a network via which Web content may be accessed;

a touch-sensitive display, to facilitate user input and display rendered content; and

storage means, in which a plurality of instructions are stored,

wherein, upon execution of the instructions by the processing means, the mobile device is enabled to perform operations, including,

rendering a browser interface via which a user is enabled to request access to a Web page comprising HTML-based Web content defining an original page layout of content on the Web page;

retrieving and processing at least a portion of the HTML-based Web content to produce scalable content; and

employing the scalable content and/or data derived therefrom to,

render the Web page on the touch-sensitive display; and

re-render the Web page in response to associated user inputs made via the touch-sensitive display means to enable the user to zoom in and out a display of the Web page.

The foregoing claims were restricted, based (in view of a discussion with the Examiner, Quoc A. Tran) on a differentiation between scalable page layout information (recited in claim 40) as compared to scalable content and its recited respective uses in each of independent 71, 99, and 128. It is further noted that claim 40 corresponds to original claim 1 of the present application, and was restricted out from each of claims 71-150 of the '757 application, which were elected for further prosecution. Applicants acknowledge that further claims were added to the ‘757 application, and the elements of some of the claims 71-150 were amended after the restriction; however, none of the claims in 7,461,353 include language reciting “scalable page layout information,” “scaling page layout information,” or even “page layout information.” Accordingly, in view of the previous restriction identifying scalable page layout information as being patentably distinct from scalable content and the existence of the terminology “scalable page layout information” or “scaling page layout information” in each of the independent claims of the present application, by definition of 35 U.S.C. § 121 it is not possible to support a nonstatutory double patenting rejection over any of the claims in U.S. Patent No. 7,461,353.

With respect to U.S. Patent No. 7,584,243 (which corresponds to U.S. Application No. 11/045,649), subject matter of this patent was restricted out from the original claims of 09/878,097, from which the original claims of 7,461,353 were likewise restricted (there was a three-way restriction). In particular, the subject matter of the ‘243 patent pertains to operations performed on the network side (only) in connection with a proxy server – thin client embodiment of the invention. Moreover, the claimed operations do not include any operations that are explicitly performed by the client. In stark contrast, under each of the pending claims, all of the recited operations are performed by a mobile device. Operations such as scaling page layout information or employing page layout information for any purpose is not present in any of the claims of the ‘243 patent. Accordingly, each of the pending claims is patentably distinct from each of the claims in the ‘243 patent. As an additional note, in *Boehringer Ingelheim Int’l GMBH v. Barr Labs, Inc.*, No. 2009-1032 (Fed. Cir., Jan. 25, 2010) (slip op.), the Federal circuit held that the safe harbor provision of 35 U.S.C. § 121 applies to a proper divisional of a divisional (which corresponds to the fact pattern here). The present application is a divisional of 11/735,477, which is a divisional of 09/878,097 and 11/045,649.

U.S. Application No. 11/735,477 is co-pending and has yet to be examined. Applicants acknowledge this is a provisional nonstatutory double patenting rejection. As is standard USPTO procedure, if the only remaining rejection in a first application is a provisional nonstatutory double patenting rejection over claims in a co-pending second application, and the co-pending second application has not received a notice of allowance, the first application should be issued a notice of allowability with the provisional nonstatutory double-patenting rejection removed.

U.S. Application No. 11/738,486 issued on November 9, 2010 as U.S. Patent No. 7,831,926. Applicants acknowledge that various claims in the '926 patent pertain to aspects of the generation and use of page layout information, including scalable vector-based page layout information. However, each of the pending independent claims 1, 15, and 32 include at least one claim element that is not analogous to any similar element in any of the claims of the '926 patent. In particular, claim 1 includes the claim elements,

enabling a user of the mobile device to request access to ***Web pages from among billions of Web pages accessible via the World Wide Web, each Web page*** *including associated HTML-based Web content defining an original page layout* and *design of content on that Web page, the content including text content and image content*;

...

wherein in the multiple zoom levels ***include zoom levels that are not predefined***, and the user is *enabled to view the entirety of the HTML-based content of the Web page at a zoom level of* ***at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine, and wherein there is no degradation in quality of the presentation of text content when the zoom level is increased to at least 4 times full scale***.

while each of independent claims 15 and 32 include the elements,

enabling a user of the mobile device to request access to ***Web pages from among billions of Web pages accessible via the World Wide Web, each Web page*** *including associated HTML-based Web content defining an original page layout of a plurality of objects, including text objects and image objects, included in the Web page*;

. . .

scaling page layout information to generate scaled Web page content at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor, and at least one of the scale factors is at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine.

Applicants respectfully assert that each of independent claims 1, 15, and 32 include elements that clearly make their respective claimed inventions patentably distinct over all of the claims in U.S. Patent No. 7,831,926.

The last statement the Examiner makes concerning no apparent reason why the applicant would be prevented from presenting claims corresponding to those of the instant application in the other co-pending applications is clearly in error and unsupported. As discussed above, the subject matter of the present application was restricted out from the subject matter elected to be prosecuted in U.S. Application No. 11/045,757. Also as discussed above, the subject matter of 11/045,757 was restricted out from the subject matter of U.S. Application No. 09/878,097 in a three-way restriction. Thus, there is ample evidence that an attempt was made to present this subject matter in another co-pending application, and aspects of the subject matter leading to the restrictions were not only presented in 11/045,757, they were also presented in an application as far back as in the original claims of 09/878,097 filed on June 8, 2001. But for the undue delay on the part of the USPTO in examining each of these applications and the corresponding restrictions that were issued, the subject matter of the present application could have been examined years ago. Moreover, the art unit policy of placing divisional application in the queue as if they are completely unrelated new applications and the long delays to a first examination of such divisional applications is highly prejudicial to Applicants and further exacerbated this situation.

Finally, Applicants further note that the filing of terminal disclaimers in various related (by common ancestor) applications does not provide evidence of agreement with or acquiesce to corresponding non-statutory double-patenting rejections in those applications, but rather may have been entered solely for the purpose of expediting prosecution.

Status of co-pending cases

Below is a table showing the status of co-pending applications that are related to the present application (status of present application shown in bold).

Application No.	**Filing Date**	**Relationship**	**Status**
60/211,345	06-12-2000	Provisional Application	Expired
60/217,345	07-11-2000	Provisional Application	Expired
09/828,511	04-07-2001	Original Non-provisional application	Abandoned
09/878,097	06-08-2001	Continuation-in-part of 09/828,511	7,210,099
11/045,649	01-28-2005	Divisional of 09/878,097	7,584,423
11/045,757	01-28-2005	Divisional of 09/878,097	7,461,353
11/735,477	04-15-2007	Continuation of 09/878,097	Awaiting First Action
11/735,482	04-15-2007	Continuation of 09/878,097	To be issued as 7,844,889

			on Nov. 30 2010
11/738,486	04-21-2007	Continuation of 09/878,097	7,831,926
11/738,932	04-23-2007	Continuation of 09/878,097	7,823,083
11/868,124	**10-05-2007**	**Divisional of 11/045,757**	**Non-final Action**
12/326,092	12-01-2008	Continuation of 11/045,757	Awaiting First Action
12/941,106	11-08-2010	Continuation of 11/738,486	Awaiting First Action

Status of Patent Litigation

As previously disclosed, in a complaint filed May 10, 2010, the assignee of the present application SoftView LLC has asserted one or more claims in U.S. Patent 7,461,353 (U.S. Application No. 11/045,757). The present application is a divisional of 11/045,757).

On November 10, 2010, SoftView LLC filed a motion to leave to amend its complaint so as to add U.S. Patent 7,831,926 to the complaint, along with a proposed amended complaint and brief in support of the motion to leave to amend the complaint. The '926 patent issued from U.S. Application Serial No. 11/738,486, which is a continuation U.S. Application Serial No. 09/878,097 (issued as U.S. Patent 7,210,099). 11/045,757 is a divisional of 09/878,097. A copy of this motion, along with a proposed amended complaint are provided electronically herewith and listed on the PTO Form PTO/SB/08b filed herewith.

Conclusion

In consideration of the claim amendments and remarks submitted herewith, Applicants respectfully assert that all pending claims are in condition for allowance. If, however, the Examiner believes that there are any unresolved issues requiring adverse action in any of the claims now pending in the application, it is requested that the Examiner telephone R. Alan Burnett at (425) 417-4729 or (425) 562-0923 so that appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

LAW OFFICE OF R. ALAN BURNETT, PS

Date: *November 24, 2010* */S/ R. Alan Burnett*

R. Alan Burnett
Reg. No. 46,149

4108 131st Ave SE
Bellevue, WA 98006

JULY 22, 2011
REPLY TO ACTION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Gary B. Rohrabaugh	Art Unit	:	2175
Serial No	:	11/868,124	Examiner	:	Ruay L. Ho
Filed	:	October 5, 2007	Conf. No.	:	1388
Title	:	SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

REPLY TO ACTION OF JANUARY 24, 2011

Amendments begins on page 2.

Remarks begin on page 14.

CERTIFICATE OF FILING VIA EFS-WEB
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted via electrnic filing (EFS-WEB) on July 22, 2011.

AMENDMENT

Listing of Claims:

1. (Currently Amended) A mobile device, comprising:

a processor;

a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display comprising at least a portion of a top surface of the mobile device; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

enabling a user of the mobile device to request access to Web pages from among billions of Web pages accessible via the World Wide Web, each Web page including associated HTML-based Web content defining an original page layout and design of content on that Web page, the content including text content and image content;

in response to a user request to access a Web page,

retrieving, via the wireless communication device, HTML-based Web content associated with a Web page;

processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine;

employing the page layout information to generate scalable page layout information; and employing the scalable page layout information and/or content derived therefrom to generate views of the Web page to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine,

wherein in the multiple zoom levels include zoom levels that are not predefined, and the user is enabled to view the entirety of the HTML-based content of the Web page at ~~a~~ <u>each</u> zoom level ~~of at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine~~, and wherein there is no degradation in quality of the presentation of text content when the zoom level is increased ~~to at least 4 times full scale~~.

2. (Original) The mobile device of claim 1, wherein the device comprises a mobile phone.

3. (Previously Presented) The mobile device of claim 1, wherein the device comprises a hand-held or palm-held device.

4. (Original) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

5. (Previously Presented) The mobile device of claim 1, wherein the Web page includes at least one hyperlink and comprises a first Web page, and wherein execution of the instructions performs further operations comprising:

enabling the user to select a hyperlink to a second Web page; and, in response thereto,

retrieving, via the wireless communications device, and processing HMTL-based Web content associated with the second Web page to produce additional scalable page layout information; and employing the additional scalable page layout information and/or content derived therefrom to render views of the second Web page on the display.

6. (Previously Presented; Revision Marks As Made In Amendment Of Nov. 24, 2010) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by,

generating ~~scalable~~ scaled content via use of the scalable page layout information~~; and~~ , wherein the scaled content comprises text and image content that is scaled using a plurality of scale factors.

~~scaling the scalable content to re-render the display in response to associated user inputs.~~

7. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising,

for each of the multiple zoom levels, enabling the user to pan a display of the Web page at that zoom level in real-time in response to a corresponding user input.

8. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page by tapping on the column, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

9. (Canceled)

10. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image by tapping on

the image, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

11. (Canceled)

12. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page, wherein in response thereto, the display is re-rendered such that the text content of the selected paragraph is displayed substantially across the display.

13. (Canceled)

14. (Original) The mobile device of claim 1, wherein the network comprises a mobile service provider network.

15. (Currently Amended) A mobile device, comprising:

a processor;

a wireless communications interface operatively coupled to the processor to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display disposed on a top surface of the mobile device; and

flash memory operatively coupled to the processor in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

enabling a user of the mobile device to request access to Web pages from among billions of Web pages accessible via the World Wide Web, each Web page including associated HTML-based Web content defining an original page layout a plurality of objects, including text objects and image objects, included in the Web page;

retrieving, via the wireless communication interface, HTML-based Web content associated with a Web page requested to be accessed by the user;

processing the HTML-based content with a rendering engine to generate page layout information, wherein the page layout information defines a layout location for each of the plurality of objects;

for each of the plurality of objects,

storing page layout information including content defining a bounding box associated with layout of the object; and

storing information that links the object with its corresponding page layout information,

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined; and

scaling page layout information and/or content derived therefrom to generate scaled Web page content at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor~~,~~ ~~and at least one of the scale factors is at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine~~.

16. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising:

mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space.

17. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising:

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display area associated with the first scale factor and offset;

identifying objects having at least a portion falling within the virtual display bounding box; and

rendering a view of the Web page corresponding to the zoom level and pan position on the display including the portions of said objects having at least a portion falling within the virtual display bounding box.

18. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising scaling a scalable font to render text content associated with corresponding text objects at different scale factors.

19. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising:

generating a display list for rendering corresponding content; and

employing the display list to generate scaled Web page content at the plurality of scale factors.

20. (Canceled)

21. (Previously Presented) The mobile device of claim 15,~~-~~wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image by tapping on the image, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

22. (Canceled)

23. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page by tapping on the column, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

24. (Canceled)

25. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page by tapping on the paragraph, wherein in response thereto, the display is re-rendered such that the text content of the selected paragraph is displayed substantially across the display.

26. (Canceled)

27. (Currently Amended) The mobile device of claim 1, wherein the ~~processing means~~ the mobile device includes at least one of a special purpose processor or programmed logic circuitry.

28. (Previously Presented) The mobile device of claim 1, wherein the storage means comprises flash memory.

29. (Previously Presented) The mobile device of claim 16, wherein the object datums are mapped to the virtual display area using point vectors identifying respective point locations of the object datums on a two-dimensional coordinate system associated with the virtual display area.

30. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising enabling the user to browse an entirety of the Web page at a plurality of zoom levels, wherein the original page layout as interpreted by the rendering engine is preserved at each zoom level, and functionality defined by correspond HTML-based content is preserved for multiple zoom levels.

31. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising:

in response to a user input to pan a current view of the Web page to a new view of the Web page,

dynamically generating scaled Web page content in a fraction of a second.

32. (Canceled)

33. (Currently Amended) A method, comprising:

enabling a user of a mobile device to access Web pages from among billions of Web pages accessible via the World Wide Web, each Web page including associated HTML-based Web content defining an original page layout of a plurality of objects, including text objects and image objects, included in the Web page;

in response to a request to access a user-selected Web page, retrieving, via the mobile device, HTML-based Web content associated with the Web page;

processing the HTML-based content with a rendering engine to generate page layout information, wherein the page layout information defines a layout location for each of the plurality of objects;

for each of the plurality of objects,

storing page layout information including content defining a bounding box associated with layout of the object; and

storing information that links the object with its corresponding page layout information,

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined; and

scaling page layout information and/or content derived therefrom to generate scaled Web page content at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor~~, and at least one of the scale factors is at least 4 times full scale, wherein full scale corresponds to a native pixel resolution of the Web page as interpreted by the rendering engine~~.

34. (Previously Presented) The method of claim 33, further comprising mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space.

35. (Previously Presented) The method of claim 33, further comprising scaling a scalable font to render text content associated with corresponding text objects at different scale factors.

36. (Previously Presented) The method of claim 33, wherein execution of the instructions performs further operations comprising:

generating a display list for rendering corresponding content; and

employing the display list to generate scaled Web page content at the plurality of scale factors.

37. (Canceled)

38. (New) A wireless handheld device, comprising:

a processor;

a communications device operatively coupled to the processor, to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display comprising at least a portion of a top surface of the mobile device; and

a storage device, operatively coupled to the processor, in which a plurality of instructions are stored which, when executed by the processor, enable the wireless handheld device to perform operations including

retrieving, in response to a user request to access a Web page, HTML-based Web content associated with a Web page, processing the HTML-based Web content to generate a first page layout of content on the Web page as interpreted by a rendering engine at a first scale at a resolution at which the content was designed to be displayed, and

generating views of the Web page which display the HTML-based Web content according to the first page layout to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels, wherein when the zoom level is greater than the first scale, each view of the Web page comprises a magnified view of the Web page that appears as a magnification of a corresponding portion of the Web page displayed according to the first page layout as interpreted by the rendering engine at the first scale.

39. (New) The wireless handheld device of claim 38, wherein the HTML-based Web content is designed to be viewed on a desktop browser and wherein each magnified view appears as an enlarged view of a corresponding portion of the Web page as it is designed to appear on the desktop browser.

40. (New) The wireless handheld device of claim 38, wherein the HTML-based Web content is designed for display on a desktop computer with a target resolution.

41. (New) The wireless handheld device of claim 40, wherein the first page layout corresponds to the manner in which the HTML-based Web content is displayed at the target resolution.

42. (New) The wireless handheld device of claim 38, wherein the HTML-based Web content is designed for display on a desktop computer with a minimum resolution.

43. (New) The wireless handheld device of claim 42, wherein the first page layout corresponds to the manner in which the HTML-based Web content is displayed at the target resolution.

44. (New) The wireless handheld device of claim 38, wherein the HTML-based Web content is designed for display on a desktop computer with a resolution of 1024 pixels in width.

45. (New) The wireless handheld device of claim 38, wherein the magnification of the corresponding portion of the Web page occurs without degradation of the appearance of the HTML-based Web content.

46. (New) The wireless handheld device of claim 38, wherein the touchscreen display has a viewable width and each of the magnified views spans the viewable width.

47. (New) The wireless handheld device of claim 38, wherein a magnified view includes an input box.

48. (New) The wireless handheld device of claim 38, wherein a magnified view includes an input button.

49. (New) The wireless handheld device of claim 38, wherein a magnified view includes an advertisement banner.

REMARKS

Claims 1-8, 10, 12, 14-19, 21, 23, and 25-37 were pending as of January 24, 2011, the date of the Office Action. Claims 26, 32, and 37 have been canceled. Claims 1, 15, 27 and 33 have been amended. These claim amendments reflect an effort to advance the prosecution of this application in light of the comments set forth in the Office Action. The amendments do not signify agreement with any position set forth in the Office Action or any concession as to an issue implicated thereby. No new matter has been added via these amendments.

Interview Summary

A telephonic interview was held on June 22, 2011. Examiner Ruay Ho, Greg Gardella and Jay Chung participated. No exhibits or demonstration were shown. The Applicants presented the arguments set forth more fully herein, in particular the written description associated with the "original page layout" recitation of claim 1 and the reasons why the West reference fails to meet the claim language. No specific amendment was proposed. No agreement was reached.

Specification Objection

The Office Action objected to the previous amendment to the specification, noting that the previous response did not include a "no new matter" statement. *(Office Action at 2)* The amendments made to the specification are in fact fully supported by the application as filed. The amendment to the specification merely notes that blocks 106, 108 and 110 in 2A perform operations analogous to those operations set forth in blocks 117, 119, and 121 in FIGURE 2C. A skilled artisan would readily understand from the application as filed that referenced blocks in Fig. 2C perform operations parallel to those in the referenced blocks of Fig. 2A, albeit on the client side. This comports with the substance of the amendment. Accordingly, no new matter is introduced by the amendment. Applicants respectfully request withdrawal of the objection to the amendatory language.

Double Patenting

Applicants submit herewith a terminal disclaimer to address the double patenting rejection over United States Patent No. 7,831,926. Applicants respectfully request withdrawal of the double patenting rejection.

Claim Objections

The Office Action objected to claim 6, citing "substantial amendments made to claim 6 with a status 'original.'" Appropriate correction has been made as noted in the listing of claims. Further, the Office Action objected to claim 26 "as being of improper dependent form for failing to further limit the subject matter of a previous claim." Claim 26 has been canceled. Applicants respectfully request withdrawal of the claim objections.

Claim Rejections – 35 U.S.C. § 112

The Office Action rejected claims 1-8, 10, 12, 14-19, 21, 23, and 25-37 under 35 U.S.C. § 112, first paragraph, stating certain claim language is not disclosed in the originally filed specification. *(Office Action at 4)* Although Applicants respectfully disagree with the rejections, claims 1, 15, and 33 have been amended to omit the language identified in the rejections. Further, claims 32 and 37 have been canceled. Applicants request withdrawal of rejections based on 35 U.S.C. § 112.

Claim Rejections – 35 U.S.C. § 102

In the Office Action, claims 1-8, 10, 12, 14, and 26-28 were rejected as being anticipated by West: A Web Browser for Small Terminals by Staffan Bjork et al. (Viktoria Institute, Goteborg, Sweden, 1999) ("West").

As an initial matter, Applicants traverse the assertion in the Office Action to the effect that the "limitation 'preserving the original page layout' is not disclosed in the originally filed Specification." *(Office Action at 13)* On the contrary, the specification explains that "[m]uch of the Internet content has been designed for display on desktop computers with a single target resolution.... This gives [the content providers] the ability to control the look and feel of their Web sites." *(Application at p. 4)* The specification further states that a "Web page [is] rendered by the client such that the rendered display of the Web page substantially retains an original page layout defined by the original format." *(Application at p. 5)* The specification further explains that "[b]y working tightly with a server-side content translator, web content and functionality can be passed seamlessly to the end user platform without any degradation in the look or feel of the output." *(Application at p. 10)* The application teaches that such an approach enables content to be scaled without degradation of its look or feel:

> For example, [the system] enables normal desktop displays to be effective for individuals with visual impairment, or content designed for 640X480 standard PC monitors to be shown without degradation ...

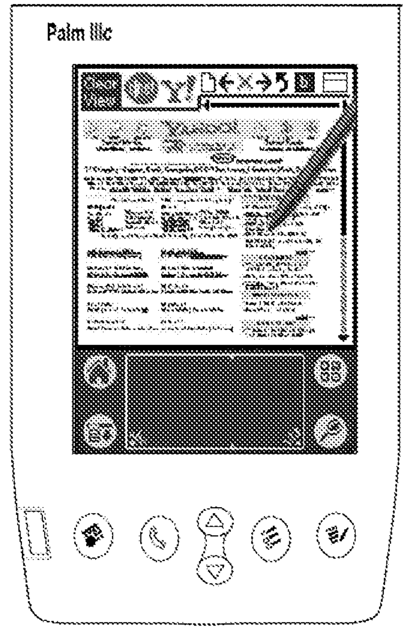
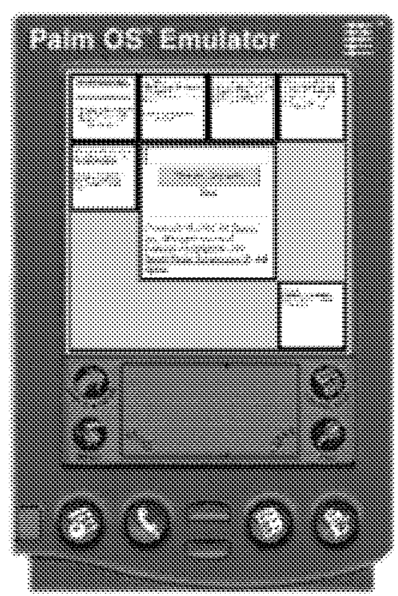


FIG. 7A

(Application at p. 11) Figure 7A of the application provides a further example of preservation of the original page layout. *See also* Figs. 8A, 9A.

West's system plainly does not preserve an original page layout as recited in the claim and as depicted above. Rather than preserving the original page layout, West's system "[c]onvert[s] the reduced web page into n **sub-pages (cards)**. ... Cards are inter-linked to form a deck by arranging them into a suitable reading-order." (West at p. 15) Several "display modes" are available in West: **"Thumbnail view," "Keyword view," "Link view," and "Pure text view."** *(West at p. 5)* None of these views have the "original page layout." *(West p. 11-15, Fig. 1)* All of the West views have a look and feel which is substantially altered relative to the page layout specified in the HTML data. None of the views have the appearance and arrangement specified in the HTML data. Rather, the West views each have a substantially modified page layout that is unique to the West



browser. Accordingly, West cannot be fairly said to preserve an original page layout as recited in the claims.

Applicants respectfully submit that independent claims 1, 15, and 33 are patentable over West. Dependent claims 2-8, 10, 12, 14, 16-19, 21, 23, 25, 27-31, and 34-36 are patentable for at least the same reasons as claims 1, 15, and 33 and for the additional inventive combinations recited therein.

<u>Claim Rejections – 35 U.S.C. § 103</u>

In the Office Action, claims 15-19, 21, 23, 25, and 29-37 were rejected as obvious over West: A Web Browser for Small Terminals by Staffan Bjork et al. (Viktoria Institute, Goteborg, Sweden, 1999) ("West") in view of The Zoom Browser by Lars Erik Holmquist (Ater till Human IT, 3/1998) ("Holmquist").

The Office Action relies on West as meeting the aforementioned "original page layout limitation." As discussed in the previous section, West fails to meet this limitation and the rejection should be withdrawn for that reason.

For the sake of completeness, Applicants note that Holmquist likewise fails to teach a mobile device that shows a Web page at multiple zoom levels while preserving the original page layout as recited in the claims. Holmquist discloses a browser with "focus + context visualization method" using technique called "flip-zooming." *(Holmquist at 1 & 2.1.1)* The "Zoom Browser" of Holmquist "makes a whole document available at a glance." *(Holmquist at 3.4.1)* As shown at right, the Holmquist main views and thumbnails do not have a layout and appearance that corresponds to the original page layout. Rather, like West, the Holmquist browser displays the items in a format that is substantially different than that specified by the HTML data.

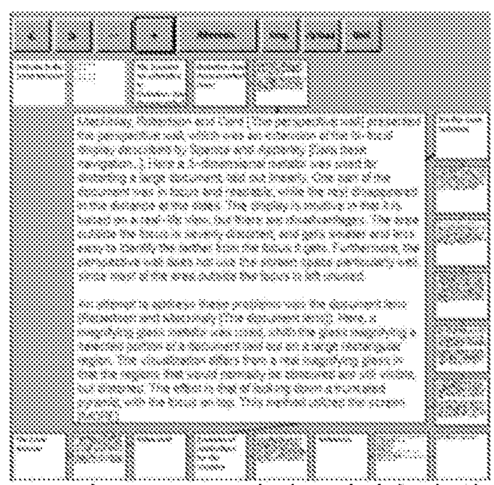


Fig 13. The Zoom Browser, displaying both thumbnails and summaries.

Holmquist does mention, with respect to the display of an array of thumbnails, that the "pages that are not in focus become miniaturized versions of how they would ordinarily look (Figure 11)." *(Holmquist at 3.2)* However, the miniaturized versions do not have the appearance specified in the HTML data. Rather, they have an appearance which has some of the formatting specified in the HTML data but the thumbnails do not have an appearance and layout that corresponds substantially to the page layout specified in the HTML data.

Accordingly, Applicants respectfully submits that independent claims 1, 15, and 33 are patentable over the combination of West and Holmquist. Dependent claims 2-8, 10, 12, 14, 16-19, 21, 23, 25, 27-31, and 34-36 are patentable for at least the same reasons as claims 1, 15, and 33 and for the additional inventive combinations recited therein.

New claims

Claims 38-49 have been added. Support for these claims can be found throughout the application as filed, including but not limited to paragraphs 7, 27-29, 37, 38, 52, 56, 71-73, 90, 99-100, 102 and 105 as well as Figures 7A, 7B, 8A and 8B. No new matter has been added. Favorable consideration of these new claims is hereby requested.

Request for Reconsideration

Each of the pending claims defines patentable subject matter over the cited prior art. Furthermore, each of the pending claims is believed to be in form for allowance.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. Applicants hereby specifically reserve the right to prosecute claims of different or broader scope in a continuation or divisional application. Applicants note that any claim amendments made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art or for patentability or narrowing the claims. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicants' position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such amendments. It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not signify concession of unpatentability of the claim prior to its amendment.

If necessary, please apply any charges or credits to deposit account 09-0946.

Respectfully submitted,

Date: July 22, 2011

/Greg H. Gardella/
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AUGUST 8, 2011
ORDER GRANTING INTER PARTES REEXAMINATION

UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
95/000,634	05/20/2011	7,461,353	18157.0045.353	8853

29000 7590 08/08/2011

IRELL & MANELLA LLP
1800 AVENUE OF THE STARS
SUITE 900
LOS ANGELES, CA 90067

EXAMINER	
STEELMAN, MARY J	

ART UNIT	PAPER NUMBER
3992	

MAIL DATE	DELIVERY MODE
08/08/2011	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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THIRD PARTY REQUESTER'S CORRESPONDENCE ADDRESS
NOVAK DRUCE & QUIGG, LLP
(NDQ REEXAMINATION GROUP)
1000 LOUISIANA ST., FIFTY-THIRD FLOOR
HOUSTON, TX 77002

Date:
MAILED
AUG 08 2011
CENTRAL REEXAMINATION UNIT

Transmittal of Communication to Third Party Requester
Inter Partes Reexamination

REEXAMINATION CONTROL NO. : 95000634
PATENT NO. : 7461353
TECHNOLOGY CENTER :.3999
ART UNIT : 3992

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above identified Reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the inter partes reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an ex parte reexamination has been merged with the inter partes reexamination, no responsive submission by any ex parte third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the Central Reexamination Unit at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

PTOL-2070(Rev.07-04)

ORDER GRANTING/DENYING REQUEST FOR INTER PARTES REEXAMINATION	Control No. 95/000,634	Patent Under Reexamination 7,461,353	
	Examiner MARY STEELMAN	Art Unit 3992	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

The request for *inter partes* reexamination has been considered. Identification of the claims, the references relied on, and the rationale supporting the determination are attached.

Attachment(s): ☒ PTO-892 ☒ PTO/SB/08 ☐Other: _____

1. ☒ The request for *inter partes* reexamination is GRANTED.

   ☐ An Office action is attached with this order.

   ☒ An Office action will follow in due course.

2. ☐ The request for *inter partes* reexamination is DENIED.

This decision is not appealable. 35 U.S.C. 312(c). Requester may seek review of a denial by petition to the Director of the USPTO within ONE MONTH from the mailing date hereof. 37 CFR 1.927. EXTENSIONS OF TIME ONLY UNDER 37 CFR 1.183. In due course, a refund under 37 CFR 1.26(c) will be made to requester.

All correspondence relating to this *inter partes* reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of this Order.

Transmittal of Communication to Third Party Requester Inter Partes Reexamination	Control No.	Patent Under Reexamination
	95/000,634	7,461,353
	Examiner	Art Unit
	MARY STEELMAN	3992

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address. --

Enclosed is a copy of the latest communication from the United States Patent and Trademark Office in the above-identified reexamination proceeding. 37 CFR 1.903.

Prior to the filing of a Notice of Appeal, each time the patent owner responds to this communication, the third party requester of the *inter partes* reexamination may once file written comments within a period of 30 days from the date of service of the patent owner's response. This 30-day time period is statutory (35 U.S.C. 314(b)(2)), and, as such, it cannot be extended. See also 37 CFR 1.947.

If an *ex parte* reexamination has been merged with the *inter partes* reexamination, no responsive submission by any *ex parte* third party requester is permitted.

All correspondence relating to this inter partes reexamination proceeding should be directed to the **Central Reexamination Unit** at the mail, FAX, or hand-carry addresses given at the end of the communication enclosed with this transmittal.

INTER PARTES REEXAMINATION

A substantial new question of patentability ("SNQ") affecting claims 1-319 of USPN 7,461,353 B2 to Rohrabaugh et al. is raised by the inter partes reexamination request filed 05/20/2011. The real party in interest making this request is Apple, Inc. An Office action on the merits will follow in due course.

Extensions of Time

Extensions of time under 37 CFR 1.136(a) will not be permitted in these proceedings because the provisions of 37 CFR 1.136 apply only to "an applicant" and not to parties in a reexamination proceeding. Additionally, 35 U.S.C. 314(c) requires that inter partes reexamination proceedings "will be conducted with special dispatch" (37 CFR 1.937). Patent Owner extensions of time in inter partes reexamination proceedings are provided for in 37 CFR 1.956. Extensions of time are not available for third party requester comments, because a comment period of 30 days from service of patent owner's response is set by statute. 35 U.S.C. 314(b)(3).

Notification of Other Proceedings

The patent owner is reminded of the continuing responsibility under 37 CFR 1.985(a) to apprise the Office of any litigation activity, or other concurrent proceeding, involving the patent under reexamination throughout the course of this reexamination proceeding. The third party requester is also reminded of the ability to similarly apprise the Office of any such activity or proceeding throughout the course of this reexamination proceeding. See MPEP §2686 and 2686.04.

References Cited in Request

Bederson, Benjamin B. and James D. Hollan, Pad++: A Zoomable Graphical Interface System, CHI '95 Mosaic of Creativity, May 1995 ("**Bederson-1**")

Bederson, Benjamin B. and George W. Furnas, Space-Scale Diagrams: Understanding Multiscale Interfaces, CHI '95 Proceedings, 1995 ("**Bederson-2**")

Bederson, Benjamin B., et al, A Zooming Web Browser, SPIE, Vol. 2667, 260-271, May 1996 ("**Bederson-3**")

Bederson, Ben and Jon Meyer, Implementing a Zooming User Interface: Experience Building Pad + +, Software-Practice and Experience, Vol. 28 (1), 1101-1135, August 1998 ("**Bederson-4**")

Bederson, Benjamin B., et al., Pad++: A Zoomable Graphical Sketchpad for Exploring Alternate Interface Physics, Journal of Visual Languages and Computing, Vol. 7, 3-31, 1996 ("**Bederson-5**")

The five Bederson prior art citations above are combined and referred to as "**Pad++**." Each of the Pad++ references was published between 1995 and 1998 and each qualify as prior art under 35 U.S.C. §102(b) to the '353 Patent.

The Pad++ references (combination of five references) were not applied by the Examiner during the prosecution of the '353 Patent. Bederson-5 and Bederson-3 were noted on an IDS, but never applied in a rejection during prosecution of the '353 Patent. Bederson-1 was used in an obvious rejection of the parent application ('097). Bederson-5 and Bederson-3 were discussed during prosecution of the published parent application (09/878,097, which issued as USPN 7,210,099). To the extent that any teachings of Pad++ were previously considered, the combination of the 5 Bederson prior art presents the teachings in a new light.

Japanese Application Publication No, H10-326169 to Hara , et al. (**JP 169**) was published on December 8, 1998 and qualifies as a 102(b) prior art reference. JP 169 was not applied during the prosecution of the '353 Patent. An English translation is included. All citations map to the English translation provided.

Nokia Unveils World's First All-In-One Communicator for the Americas, Nokia Press Release, September 19, 1996 ("**Nokia**") Nokia qualifies as prior art to the '353 Patent under 35 U.S.C. §102(b). Nokia was not previously cited or considered by the Examiner in the prosecution of the '353 Patent. Nokia discloses a mobile phone enabled to access the Internet and to make voice calls.

3Com Announces the Palm VII Connected Organizer, the First Handheld Solution for Out-of-the-box Wireless Internet Access, Palm TM press release, December 2, 1998 ("**Palm**")

The Palm press release qualifies as prior art to the '353 Patent under 35 U.S.C. §102(b). Palm was not previously cited or considered by the Examiner in the prosecution of the '353 Patent. Palm discloses a personal digital assistant (PDA) devices including a touch screen that is enabled to access the internet and transmit electronic mail.

Robles, Emilo, and Jeni Johnston, Apple Outlines Plethora of Newton Wireless Communications Solutions at MessagePad 120 Launch, published January 30, 1995 ("**Newton**") Newton qualifies as prior art to the '353 Patent under 35 U.S.C. §102(b). Newton was not cited or considered by the Examiner in the prosecution of the '353 Patent. Newton discloses (pp. 2-3) a palm-held or hand-held PDA which can be configured to operate as a mobile phone.

Locatio Beginner's Guide was published July 30, 1999 (including English translation thereof) ("**Locatio**") All citations map to the English translation provided.

It is not clear to Examiner what is meant by the following statement, as there appears to be no explanation in section IV(E): (Request, p. 23, paragraph in middle of page) "The Locatio Beginner's Guide ("Locatio") was published on July 30, 1999, and is therefore prior art to the '353 Patent under 35 U.S.C. §102(a) are with respect to claims 2, 30-51, and 35 U.S.C. §102(b) art with respect to claim 53 (as will be explained in section IV(E), below)."

Regarding the suggestion of an SNQ raised over the combination of Pad++ and Locatio (Request, p. 23) or the combination of JP 169 and Locatio (Request, p. 26), Examiner notes that it may inferred that Requester intended to assert that Locatio qualifies as a 102(a) prior art reference with respect to claims 30, 32, 37, 81, 82, 107, 108, 144, 150, 205, 206, 245, 247, 253, 305, and 306 of the '353 Patent. Examiner believes that a typo in Request at p. 26 fails to note the JP 169 / Locatio proposed SNQ includes claim 37. Locatio was not cited or considered by the Examiner in the prosecution of the '353 Patent. Locatio discloses (English Translation, Chapter 3, p. 65) "PDAs that can be used as telephones .... If the old style was to have a cellphone or a PHS phone and a PDA as two separate devices, the Locatio (COM) style is to have all in one, which is easier." Locatio further recites (p. 48) that "[y]ou can connect to the Internet and browse webpages [with Locatio]" and (p. 61) "operations of Locatio are performed using the touch pen and the multimedia controller."

Bray, Tim, "XML Support in IE5," <http://www.xml.com/pub/a/1999/O3/ie5/first-x.html>, published March 18, 1999 ("**Bray**"). Bray qualifies as prior art to the '353 Patent under 35 U.S.C. §102(b). Bray was not cited or considered by the Examiner in the prosecution of the '353 Patent. Bray discloses (p. 1) that XML and/or Cascading Style Sheets (CSS) can be delivered over the Web. Bray further recites (p. 4) that Web browsers can retrieve and work with XML and/or CSS.

Fox, Armondo, et al., "Experience with Top Gun Wingman: A Proxy-Based Graphical Web Browser for the 3Com PalmPilot", published June 22, 1998 ("**Fox**"). Fox qualifies as prior art to the '353 Patent under 35 U.S.C. §102(b). Fox was not cited or considered by the Examiner in the prosecution of the '353 Patent. Fox (2.4) describes a Wingman browser (e.g., a proxy-based graphical Web browser) for a 3Com PalmPilot PDA that "allows users to zoom in on scaled-down images."

Prosecution History

USPN 7,461,353 B2 to Rohrabaugh et al. (Application no. 11/045,757; file date January 28, 2005; issue date December 2, 2008) is a division of Application No. 09/878,097 (file date June 8, 2001; now USPN 7,201,099) which is a continuation in part of Application No. 09/828,511 (file date April, 7, 2001, now abandoned).

As noted throughout the Request, Requester has recited such examples as "cited in an IDS during prosecution of the '486 Application for the '353 Patent" ('486 may be in reference to Application 11/738486 which issued as USPN 7,831,926, currently requested for reexamination as 95/000635). Examiner considers this to be a typo, as Application 11/045757 ('757) issued as USPN 7,461,353 ('353).

Prosecution History of Parent Application 09/878,097 (now USPN 7,210,099)

The family of Patent Applications and Patents issued related to the parent patent '099 is as follows:

09/878097, filed 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein
is a continuation in part of 09/828511, filed 04/07/2001, now abandoned
claims priority from Provisional Application 60/211019, filed 06/12/2000

claims priority from Provisional Application 60/217345, filed 07/11/2000.

Child Data of Application '097 / U.S. Patent '099

11/045649, filed on 01/28/2005 ,now USPN 7,584,423 and having 1 RCE-type filing therein, is a division of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

11/045757, filed on 01/28/2005, now USPN 7,461,353 is a division of 09/878097, filed on 06/08/2001 ,now USPN 7,210,099 and having 1 RCE-type filing therein

11/735477, filed on 04/15/2007 is a continuation of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

11/735477, filed on 04/15/2007 is a division of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

11/735482, filed on 04/15/2007, now USPN 7,844,889 is a continuation of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

11/735482, filed on 04/15/2007, now USPN 7,844,889 is a division of 09/878097, filed on 06/08/2001 ,now USPN 7,210,099 and having 1 RCE-type filing therein

11/738486, filed on 04/21/2007, now USPN 7,831,926 is a continuation of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

11/738932, filed on 04/23/2007, now USPN 7,823,083 is a continuation of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein

12/941106, filed on 11/08/2010 is a division of 09/878097, filed on 06/08/2001, now USPN 7,210,099 and having 1 RCE-type filing therein.

Notably, **USPN 7,831,926** is also requested for inter partes reexamination (95/000635).

Regarding the prosecution of parent application, 09/878097, Examiner rejected (Non Final Office Action 01/12/2006, p. 4) claims as unpatentable over *Blumberg* in view of *Bederson.* [Referenced in the current reexam, 95/000634, as Bederson-1.]

(Request, p. 16), "Also as discussed, the Applicants, in a communication dated April 10, 2006 [Note this statement is in reference to parent application 09 / 878097, Applicant Remarks received 04/13/2010], attempted to overcome the Examiner's rejection of the pending claims over Blumberg in light of Bederson-1 by submitting additional references relating to Pad++ and characterizing these references and the Pad++ system generally."

Applicant's remarks (parent application, 90/878097, Remarks 04/13/2006, p. 8, 10) supported the independent claim language: "...receiving, at the client device, vector-formatted Web content comprising a machine-readable scalable vector representation of the Web content that provides a scalable resolution-independent display of the Web content that substantially retains an original page layout and attributes of the Web content corresponding to an appearance of the Web page when it is rendered at its predetermined resolution; and rendering the vector-formatted Web content on the client device such that it is displayed to have a different resolution than the predetermined resolution. (Emphasis added)"

Applicant argued (parent application, 90/878097, Remarks 04/13/2006, p. 10): With respect to claim 15, the neither [sic] *Blumberg* or *Bederson* teach or suggest the operations of "receiving, at the client device, vector-formatted Web content comprising a machine-readable scalable vector representation of the Web content that provides a scalable resolution-independent display of the Web content that substantially retains an original page layout and attributes of the Web content corresponding to an appearance of the Web page when it is rendered at its predetermined resolution," or "rendering the vector-formatted Web content on the client device such that it is displayed to have a different resolution than the predetermined resolution."

Applicant summarized (parent application, 90/878,097, Remarks 04/13/2006, pp. 13-16) the Pad++ invention citing to *Pad++: A Zoommable Graphical Sketchpad For Exploring Alternative Interface Physics,* by Benjamin B. Bederson et al. [Noted in Reexamination 95/000634 as Bederson-5.]:

> As described in the "2: Description" section of the Pad++ reference,
>
> Pad++ ***is a general-purpose substrate for creating and interacting with structured information based on a zoomable interface.*** It adds scale as a first class parameter to all items, as well as various mechanisms for navigating through a multiscale space. It has several efficiency mechanisms which help maintain interactive frame-rates with large and complicated graphical scenes."
>
> "While Pad++ is not an application itself, it directly supports creation and manipulation of multiscale graphical objects, and navigation through spaces of these objects. ***It is implemented as a widget in Tcl/Tk*** [25] (described in a later section) which provides an ***interpreted scripting language for creating zoomable applications.*** The standard objects that Pad++ supports are colored text, graphics, images, portals, and hypertext markup language (HTML). Standard input widgets (buttons, sliders, etc.) are supplied as extensions." (Emphasis added)

Applicants comments on MSML (which Requester disagrees): (parent application, 90/878,097, Remarks 04/13/2006, pp. 15-16), "Details of how a Web browser based on Pad++ works are disclosed in A *Zooming Web Browser,* Benjamin B. Bederson et al. (attached with the

Supplemental IDS filed concurrently herewith). [Noted in Reexamination 95/000634 as Bederson-3.] It is apparent from this document, that the HTML documents (i.e., Web content) that Pad++ operates on are conventional HTML documents (e.g., documents available via typical Web sites) with an extension to HTML called *Multi-Scale Markup Language* (MSML), which allows Pad++ objects to be added to HTML documents so they can be made accessible to the Pad++-based browser. Importantly, this augmented Web content clearly does not comprise vector-formatted Web content, but rather objects written in the Tcl scripting language. Zooming functionality is enabled via the Pad++ browser through use of the Tk API, which is employed for generating user interfaces employing Pad++ objects defined in the Tcl scripts. This leads to two serious deficiencies overcome by embodiments of the present invention: 1) the Pad++ scheme requires more Web content data to be transferred rather than less (e.g., embodiments of the present invention may typically reduce the size of the Web content from 20-80+% (see paragraph [0039] of the present application); and 2) the size and complexity of the client is increased - the Pad++ client must include a Tcl interpreter and a Tk toolkit by definition of the operation of the Tcl/Tk scripting language. Both of these aspects of Pad++ clearly teach away from the present invention." "The multi-scale aspect of MSML does not imply scaling in the conventional sense. Rather, MSML enables different graphics (objects) to be associated with a common object, wherein a selected graphic from among the different graphics is displayed depending on the context of a current view. For example, Figures 5-7 and the accompanying text in the *A Zooming Web Browser* reference show that as a user selects to zoom in on an object (in this case, the New Mexico map), different graphic objects are used at each zoom level, rather than scaling a common graphic object. This supports semantic zooming, as described in the Pad++ reference.

As stated on page 2, 4th paragraph, "We use what we call portals to simulate lenses, and a notion we call *semantic zooming* to scale data in non-geometric ways." (Emphasis in original text.) As further stated in the first paragraph under the Semantic Zooming section header on page 8, "When zoomed out, instead of simply seeing a scaled down version of the object, it is potentially more effective to see *a different representation* of it." (Emphasis added.) (Underlining emphasis added)"

Prosecution History of 11/045,757 (USPN 7,461,353)

An application (Application No. 11/045, 757) for a patent was received 01/28/2005, that included 16 claims. '757 is a divisional of parent Application 09/878,097 (issued as USPN 7,210,099) and incorporates by reference Provisional Applications 60/217,345 & 60/211,019, and Application 09/828,511.

Applicant (03/31/2007) amended the Specification, original claims and added claims 17-39. IDS received 05/06/2007 included the Bederson-3 and Bederson-5 documents. Applicants (06/06/2007) replaced the Abstract, amended the Specification, cancelled claims 1-39 and added new claims 40-141. The amended Specification added the following paragraph, noting continuations of the '097 application:

> "The present application is also related to U.S. Application No. 11/735,477 filed on April 15, 2007, US Application No. 11/735,482 filed on April 15, 2007, U.S. Application Serial No. 11/738,486 filed on April 21, 2007, and U.S. Application No. 11/738,932 filed on April 23, 2007, each of which are continuations of U.S. Application No. 09/878,097, now U.S. Patent No. 7,210,099."

Applicants amended/added (07/19/2007 & 08/31/2007) claims and responded to a requirement for restriction election (08/15/2007) electing, without traverse, claims 71-150 and new claims 151-179. A "Terminal Disclaimer" for copending patent application number 09/878,097 was filed on 06/08/2008 and approved on 06/30/2008. In response to persuasive Applicant's arguments (05/20/2008), a Notice of Allowance was issued (08/08/2008) for claims 71-92; 94-242; 244-335; 337-389 and 391-393 (renumbered as claims 1-319).

Examiner recited (Notice of Allowance 08/08/2008, pp. 3-4):

> "Interpreting the claims in light of the specification, Examiner finds the claimed invention is patentably distinct from the prior art of record, *Chithambaram* et al. US006674445B1 -Provisional No.60/159,069 filed 10/12/1999, in view of Roy et al. US006642925B2 -Continuation of No.08/757,706 filed 10/30/1996, further in view of *Blumberg* US006886034B2 -Continuation of No.09/267,951 filed 03/11/1999, which set forth in the previous rejection mailed on 10/23/2007."
>
> "Under the broadest reasonable interpretation of the claimed limitation consistence with the Applicant's Specification, the prior art of record fail to teach all of the Applicant's claimed limitations. The claimed invention advantageously provides a finer level of detail when displaying HTML Web pages, designed for desktop computers, on a "small-screen" device, such as a cell phone and/or a PDA. In particular, the claimed invention takes HTML-based Web content in its original format (which defines the page layout, functionality and design of the web page) and *translates* the HTML-based Web content into "scalable content" that supports a scalable, resolution-independent representation of the HTML-based Web content. In other words, **the claimed invention *converts* an HTML web page into a "vector graphics" web page** and displays the web page on a PDA. **When viewing the "vector graphics" web page on the PDA, the user may zoom** in and *out* of the displayed web page, in order to increase/decrease the size of the web page components that are displayed on the PDA. Additionally, the claimed invention preserves the functionality of the original HTML web page after it has been ***translated* into a "vector graphics"** web page and displayed on the PDA. See Applicant's Remarks on Pages 91-94 of the Response dated 05/20/2008. See also independent claims 71, 99, 128, 143, 174, 180, 211,244, 265,271,303, 337 and 359." "The Examiner asserts that the claims overcome the prior art of record when the limitations are read in combination with the respective claimed limitations in their entirety."

As noted in Request (05/20/2011, pp. 14-15), "...when the Examiner allowed the claims of the '353 Patent, his reasons for allowance stated--consistent with both the scope of the disclosure and the Applicants' arguments distinguishing the cited Pad++ references in the published '097 application--that their broadest reasonable scope was confined to *"resolution-independent vector display* of Internet content (emphasis added)."

An Issue fee payment for Application '757 was received on 08/08/2008. With regards to the prosecution of 11,045,757 (USPN 7,461,353), Applicant did not dispute Examiner's conclusion of the '757 Reasons for Allowance. Contrary to Third Party Requester's presumption (See Request p. 15, footnotes 9 & 10), Applicants <u>did not</u> file Comments on Reasons for Allowance. There was no document entered July 9, 2010 related to the '353 patent (or the '757 application). Any Comments on the Reasons for Allowance would have been required to be submitted on or before the receipt of Issue Fee.

However, in subsequent related division / continuation applications, Applicant did dispute the scope of claim limitations given by Examiner in Reasons for Allowance, asserting that the plain language of the claims may suggest a broader interpretation claims than the Examiner appreciated when allowing them, arguing that claims lacking such explicit limitations *were not* limited to a *"resolution-independent"* or *"vector-based"* implementation (emphasis added).

Application 11/045,757 (USPN 7,461,353) issued A Certificate of Correction (requested 03/28/2009) on 04/21/2009, making edits to claims 69, 185, and 216.

<u>**Claim Terms and other Meaningful Citations**</u>

aspect ratio (21: 1-13) different scaling factors applied to the X and Y axis so as to change the aspect ratio of the display – used to adjust to better fit

vector (FIG. 4C) directional data structure stores X & Y values from known datum (primary datum) to object bounding box (object datum) vector between these points is generated for each object (17: 65-67) Evidence supporting the definition of the term 'vector' is provided by Examiner from the Microsoft Computer Dictionary, Fifth Edition.

datum point defined for page / "page datum" and bounding box for each object (17:45-64), relative to a consistent point of reference

scaling vector causes new datum (new starting point-19: 57-20:10) for each object's bounding box relative to rendered page datum (i.e., to use starting point datum of frame, use **offset** relative to page datum to scale vectors) "This produces a new datum for each object's bounding box that is relative to rendered page datum, which remains fixed." (20:7-9), "This foregoing process establishes a starting point (the new datum) for where the content in each object's bounding box will be rendered."

scaled / zoomed (2: 24-25), zoom size (19: 25) magnification

pan /offset (19: 24) i.e., "offset (pan) values..." offset information relative to a known datum will be stored (18: 14-16)

offsets in X and Y (delta X, delta Y) are applied to the starting point of each of the vectors. The vectors are then scaled by a scale factor SF This produces a new datum for each object's bounding box that is relative to rendered page datum 262 which remains fixed. (19:57-63; 18: 45 & FIG 4G)

bounding box (FIG. 4C; 16: 32-35) defined by HTML translator, defines an outlined shape within which the content (text or graphic image) will appear

generate "**scalable vector representation of the original page content"** (17: 44-45); after **vectors and bounding boxes are offset and scaled**, then content falling within display limit bounding box is retrieved for rendering (20: 18-22) DO NOT retrieve content if vector endpoint would appear off of display (18: 30)

logical groupings (16: 23-32) – related content found within pairs of tags

scalable resolution independent representation - allows scaling/zooming and panned (2: 24-25) presumed by Examiner to also mean "**scalable content that is resolution independent**", where the term 'resolution' is in reference to the given display size and "**resolution-independent**' means the retrieved and translated web content may be rendered on a user's display of any size.

scalable vector representation, FIG. 5, "**vectorized content**" is generated (6: 61-67) HTML translator translates HTML, XML, and cascaded style sheet (CSS) layout content into a scalable vector representation, such as SVF "content is translated into a scalable vector representation (e.g., [for example] **SVF, also referred to herein as "vectorized content"**)..." (8: 58-67), generated by an HTML translator (12: 12-13) (18: 67) See inventive concept at 17: 44-45. Translation of HTML into **scalable vector representation (vectorized content)** at server by server side content translator (6: 6-7) OR (FIG. 1C) at client

"**vector representation data**" vectorized HTML content and compressed bitmap content (19: 15-16)

client can display/render using various **user-selectable scaled/zoomed resolutions and pan/offsets** (9: 9-11) (10: 21-32) (15: 43-18: 46)

display lists improve rendering speed (3: 35)

SVF (Simple Vector Format) can describe web content, "considered" by W3C as a standard for vector content (4: 43-63)

See attached definition of "**vector**." Microsoft Computer Dictionary, Fifth Edition (published 05/01/2002), p. 690, "In computer graphics, a line drawn in a certain direction from a starting point to and endpoint, both of whose locations are identified by the computer using x-y-coordinates on a grid. Vectors are used in the output of some graphics programs instead of groups of dots (on paper) or pixels (on screen)...In data structures, a one-dimensional array-a set of items arranged in a single column or row. See also array, matrix."

Third Party Requester's Proposed Grounds of Rejections based on the Pad++ References

Third Party Requester has proposed the following grounds of rejection:

A. Claims 1-29, 31, 33-36, 38-64, 67-80, 83-104, 109-143, 145-149, 151-180, 183-202, 205, 207-244, 246, 248-252, 254-280, 283-302, and 307-319 of the '353 Patent are rendered obvious by the Pad++ References in view of Common Knowledge of One of Ordinary Skill in the Art. (Request pp. 19 & 30)

B. Claims 30, 32, 37, 81, 82, 107, 108, 144, 150, 205, 206, 245, 247, 253, 305, and 306 of the '353 Patent are obvious in view of the Pad ++ References in view of Nokia and further in view of Palm. (Request pp. 21-22, 60) (Request, p. 21), "The Pad++ in view of Nokia and Palm disclose certain limitations of the claims of the '926 [Examiner presumes '926 is a typo and should be '353] Patent.

C. Claims 30, 32, 37, 81, 82, 107, 108, 144, 150, 205, 206, 245, 247, 253, 305, and 306 of the '353 Patent are obvious in view of the Pad++ References in view of Newton. (Request pp. 22-23, 61)

D. Claims 30, 32, 37, 81, 82, 107, 108, 144, 150, 205, 206, 245, 247, 253, 305, 306 of the '353 Patent are obvious in view of the Pad ++ References in view of Locatio. (Request pp. 23-24, 62) (Request, p. 23), "Pad++ in view of Locatio discloses certain limitations of the claims of the '926 Patent." [Examiner presumes typo here (Request, p. 23). Sentence should reference the '353 Patent].

E. Claims 65, 66, 105, 106, 181, 182, 203, 204, 281, 282, 303, and 304 of the '353 Patent are obvious in view of the Pad++ References in view of Bray. (Request pp. 24-25, 63) [Noting the inconsistencies at Request page iv and p. 24 & 63, Examiner assumes that claims 65 and 66 are intended to be included in this proposed rejection.]

Proposed SNQs

SNQ #1 – Requester proposes an SNQ as to claims 1-319 of USPN 7,461,353 B2 to Rohrabaugh et al., raised by the combination of Pad++ references (and in combination with secondary references as noted above).

Support for SNQ based on the Pad++ references:

Requester addressed four key points to support the use of the five combined Pad++ references:

(i) (Request 09/20/2011, pp. 15-16), "In particular, under the Applicants' asserted position that many claims of the '353 Patent should not be limited in scope to a "**resolution-independent**," "**vector**"-based implementation, the cited Pad++ references cannot be distinguished from the claims of the '353 Patent on even the bases [sic] the Applicants themselves set forth during prosecution of the published '097 application. Thus, the cited Pad++ references alone present a substantial new question of patentability, at least as to the '353 Patent claims lacking explicit "resolution-independent" and/or "vector" limitations, specifically claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282, and 284-319."

[**Examiner disagrees with Requester. The list of claim numbers** lacking "resolution-independent" and / or "vector" limitations are claims 36-42, 44-57, 62-83, 85-111,149-155, 157-173, 178-182, 184-208, 252-258, 260-273, 278-282, 284-310, and 317-319, i.e., claim 1 recites "resolution-independent representation".]

(ii) (Request 05/20/2011, pp. 16-18), Prior Applicant comments (in the prosecution of parent application '097, 04/13/2006) on the Pad++ arguments were mischaracterized. Requester asserts that Pad++ is able to present Web pages written in standard HTML and able to conventionally zoom Web pages.

(iii) (Request, pp. 17-18), The use of MSML-based objects to embed special Pad++ content within Web pages, is unrelated to the presentation, zooming, or panning of Web pages written in standard HTML.

(iv) (Request, pp. 18-19), Arguments presented related to MSML and "semantic zooming" ("Semantic zooming" refers to the ability to change the appearance of a displayed object (rather than simply scaling the object) when the user zooms in or out far enough. Bederson-3 at 262.) are irrelevant. "...the Pad++ browser supports conventional, or "geometric," scaling of Web pages, in addition to semantic zooming." (Bederson-3 at 262.)

(Request, pp. 19-20), "The Pad++ references are published technical articles pertaining to the Pad++ product that provides "a graphical interface system based on zooming, as an alternative to traditional window and icon-based approaches." Bederson-1, Abstract. Pad++ provides a Web browser that is designed to operate on a wide range of platforms, including Personal Digital Assistants ("PDAs"). Pad++ allows a user to zoom in and out of Web pages in real time while preserving such Web pages' original layout, design and functionality, *e.g.*, Bederson-3 at pp. 5, 11-12. The Pad++ references further describe: Translation of standard HTML into Pad++ objects that comprise "scalable" and "vector"-based content and/or page layout information (see e.g., Bederson-2 at 3-4); Vector-based layout of the elements of an HTML-based Web page comprising resolution-independent coordinates relative to a fixed datum point (see e.g., Bederson-4 at 1129-1132); Zooming and panning of Web pages in real time by multiplying these coordinates by a scale factor and applying an offset (see e.g., Bederson-5 at 7 and Bederson-4 at 1129- 1132); and preserving the layout, design and functionality of the Web pages when scaled, zoomed and panned (see e.g., Bederson-4 at 1128-1129)."

Requester asserts (Request 05/20/2011, pp. 17 & 20) that the Pad++ references teach a zooming Web browser in which the original page layout, functionality, and design defined by the

HTML-based Web content [are preserved]..., wherein preservation of the functionality defined by the HTML-based Web content includes preservation of hyperlink functionality.

Examiner agrees that the Pad++ References **do raise an SNQ** as to claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent. The references provide new technical teachings (features related to zooming and panning of web content, fitting Web content to display screens at various resolutions, not limited to vector embodiments) of limitations not present during the original examination that would have been important to a reasonable examiner in considering the patentability of the claims. Given the above noted teachings, along with the mapping of the references to the claims as provided in the body of the Request, sufficient evidence is provided such than an SNQ is raised by the proposal. The teachings of the combination of Pad++ References are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination, and the same question was not the subject of a final holding of invalidity in the Federal Courts.

The combinations of Pad++ references **do not raise an SNQ** related to claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent (all claims with "vector" limitations).

Pad++ teaches (p. 1129) a "view" that specifies the visible portion of a surface with a point and a magnification (scale or zoom). "The point specifies the portion of the surface that will appear at the center of the view." Pad++ does disclose (p. 1132) the view and object coordinates (inferred relative to a primary datum of (0,0)). Pad++ does disclose coordinate transformations, noting the "each view has an offset and magnification, which are stored as a triplet (xview, yview, zoom). Every object has a position and a scale (xoffset, yoffset, scale). To apply a coordinate transformation from object to screen coordinates, we start by applying the transform for the current view..." The transform algorithm at p. 1132, zoom * (xoffset-xview), relies on an (X,Y) value relating the object (object datum) and an (X,Y) value representing the center of a panned view. While the xoffset may be relative to an inferred primary datum (0,0), there is no disclosed vector generated from a primary datum to an object datum. The references do not provide new technical teachings of "vector" related limitations that would have been important to a reasonable examiner in considering the patentability of the claims.

The combinations of Pad++ References do not raise an SNQ based on the lack of obvious teaching of the following "vector" related limitations:

(similar limitations found in claims 5, 23, 24, 58, 122, 138, 174, 220, 239 and 274) "generating a vector from the primary datum to the object datum for the object; and creating a reference that links the object to the vector that is generated."

(similar limitations found in claims 23, 137, and 238) "generating a vector-based display list associated with the scalable content..."

(similar limitations found in claims 26, 60, 140, 176, 241, and 276) "mapping the object vectors and associated bounding boxes..."

(similar limitations found in claims 33, 43, 84, 147, 156, 183, 248, 259, and 283) "vector based content..." or "scalable vector based content..."

Claims dependent upon the above noted limitations will not be reexamined.

Re. Ground #1:

Requester's proposed combinations of prior art based on Pad++ References **do not raise an SNQ** as related to claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent. The **Order is denied** for reexamination of claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent, based on the Pad++ references.

Requester's proposed combinations of prior art based on Pad++ **do raise an SNQ** (features related to zooming and panning of web content, fitting Web content to display screens at various resolutions, not limited to "vector" embodiments) as related to claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent. An **Order is granted** on the reexamination of claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent, with respect to the Pad++ reference combinations.

Third Party Requester's Proposed Grounds of Rejections based on the JP 169 Reference

Third Party Requester has proposed the following grounds of rejection:

F. Claims 1-10, 15-21, 23-28, 31, 33-36, 38-47, 51-55, 57-63, 67-80, 83-87, 92-103, 109-127, 131-135, 137-142, 145-149, 151-160, 165-171, 173-179, 183-185, 190-201, 205, 207-225, 230-236, 238-243, 246, 248-252, 254-263, 267-271, 273-279, 283-285, 290-302, and 307-316 of the '353 Patent are rendered obvious by the JP 169 reference in view of common knowledge of one of ordinary skill in the art. (Request, p. 65)

G. Claims 30, 32, 37, 81, 82, 107, 08, 144, 150, 205, 206, 245,247, 253, 305, 306 of the '353 Patent are rendered obvious by the JP 169 reference in view of Locatio. (Request, p. 88)

H. Claims 105, 106, 181, 182, 203,204, 281,282, 303, and 304 of the '353 Patent are rendered obvious by the JP 169 reference in view of Bray. (Request, p. 89)

I. Claims 11-14, 22, 29, 48-50, 56, 64, 104, 128-130, 136, 143, 161-164, 172, 180, 186-189, 202, 226-229, 237, 244, 264-266, 272, 280, 286-289, 302 and 317-319 of the '353 Patent are rendered obvious by the JP 169 reference in view of knowledge of one of ordinary skill in the art and in further view of the Pad++ References. (Request, p. 90)

J. Claims 11-14, 48-50, 128-130, 161-164, 186-189, 226-229, 264-266, 286- 289, and 317-319 of the '353 Patent are rendered obvious by the JP 169 reference in view of knowledge of one of ordinary skill in the art and in further view of the Fox. (Request, p. 98)

SNQ #2 – Requester has proposed an SNQ as to claims 1-319 of USPN 7,461,353 B2 to Rohrabaugh et al., raised by the obvious teachings of JP 169 (and in combination with secondary references as noted above).

Support for SNQ

Ground #2: JP 169 discloses that "[i]n WWW browsers, the machine on the information provider side is not matched to the machine on the information receiver side .... the display size of the displayed data is changed in accordance with the resolution of the display screen... if, for example, the image data is low-resolution, it is still possible to display with a size that matches the display screen." JP 169 at ¶¶ [0099]-[0100]. JP 169 discloses that WWW content can include clickable data (hyperlinks) associated with a linked destination. JP 169 further discloses that "the clickable control table 36 is stored in the RAM 12, as illustrated in FIG. 9 (c). This clickable control table 36 stores the [S]HAPE of the clickable region, the coordinate values thereof, and information indicating the link destination." JP 169 at ¶ [0066]. Therefore, JP 169 discloses a zooming (pan and zoom) Web browser in which the "original page layout, functionality, and design defined by the HTML-based Web content [are preserved]..., wherein preservation of the functionality defined by the HTML-based Web content includes preservation of hyperlink functionality.

Examiner agrees that JP 169 **raises an SNQ** to claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent. JP 169 provides obvious new technical teachings of limitations not present during the original examination that would have been important to a reasonable examiner in considering the patentability of the claims (features related to zooming and panning of web content, fitting Web content to display screens at various resolutions, not limited to "vector" embodiments). Given the above noted teachings, along with the mapping of the references to the claims as provided in the body of the Request, sufficient evidence is provided such than an SNQ is raised (on the claims noted above) by the proposal. The teachings of JP 169 are not cumulative to any written discussion on the record of the teachings of the prior art, were not previously considered nor addressed during a prior examination, and the same question was not the subject of a final holding of invalidity in the Federal Courts.

An **SNQ is not raised** related to claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent ("vector" related claims).

JP 169 discloses zooming features (magnification) and broadly discloses panning ([0092], "corrects the coordinate values within the clickable control table 36 based on the magnification stored in the magnification parameter table...a shift is produced in the coordinate locations for the clickable data..."). Although new coordinate values (new (X,Y) values) are suggested, in no way does JP 169 define a "primary datum", an "object datum", and generating a vector from the primary datum to the object datum for the object; creating a reference that links the object to the vector that is generated. While it could be inferred that (0,0) reads on a primary datum, and a given pair of values (X,Y) read on an object datum, there is no teaching of generating a vector. Requester's proposed citation (Request, p. 72) references magnification (a new height and new width) to fit the resolution of the display screen.

JP 169 does not teach the following "vector" related limitations:

(similar limitations found in claims 5, 23, 24, 58, 122, 138, 174, 220, 239 and 274) "generating a vector from the primary datum to the object datum for the object; and creating a reference that links the object to the vector that is generated."

(similar limitations found in claims 23, 137, and 238) "generating a vector-based display list associated with the scalable content..."

(similar limitations found in claims 26, 60, 140, 176, 241, and 276) "mapping the object vectors and associated bounding boxes..."

(similar limitations found in claims 33, 43, 84, 147, 156, 183, 248, 259, and 283) "vector based content..." or "scalable vector based content..."

Claims dependent upon the above noted limitations will not be reexamined.

Re. Ground #2:

Requester's proposed combinations of prior art based on JP 169 **do not raise an SNQ** related to claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent. **An Order** to reexamine claims 5, 23-27, 33, 43, 58-61, 84, 122, 137-141, 147, 156, 174-177, 183, 220, 238-242, 248, 259, 274-277, and 283 of the '353 patent based on the JP 169 reference **is denied**.

Requester's proposed combinations of prior art based on JP 169 **do raise an SNQ related to** (features related to zooming and panning of web content, fitting Web content to display screens at various resolutions, not limited to "vector" embodiments) claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent. An **Order is granted** on the reexamination of claims 1-4, 6-22, 28-32, 34-42, 44-57, 62-83, 85-121, 123-136, 142-146, 148-155, 157-173, 178-182, 184-219, 221-237, 243-247, 249-258, 260-273, 278-282 and 284-319 of the '353 patent with respect to JP 169.

Conclusion

Service of Papers

Any paper filed with the USPTO, i.e., any submission made, by either the Patent Owner or the Third Party Requester must be served on every other party in the reexamination proceeding, including any other third party requester that is part of the proceeding due to merger of the reexamination proceedings. As proof of service, the party submitting the paper to the Office must attach a Certificate of Service to the paper, which sets forth the name and address of the party served and the method of service. Papers filed without the required Certificate of Service may be denied consideration. 37 CFR 1.903; MPEP 2666.06.

Amendment in Inter Partes Reexamination Proceedings

Any proposed amendment to the specification and/or claims in this reexamination proceeding must comply with 37 CFR 1.530(d)-(j), must be formally presented pursuant to 37

CFR 1.52(a) and (b), and must contain any fees required by 37 CFR 1.20(c). Amendments in an inter partes reexamination proceeding are made in the same manner that amendments in an ex parte reexamination are made. MPEP 2666.01. See MPEP 2250 for guidance as to the manner of making amendments in a reexamination proceeding.

Requirements of responses, written comments, and briefs in inter partes reexamination are found in 37 CFR 1.943.

Submissions

In order to ensure full consideration of any amendments, affidavits or declarations, or other documents as evidence or patentability, such documents must be submitted in response to this Office action. Submissions after the next Office action, which is intended to be an Action Closing Prosecution (ACP), will be governed by 37 CFR 1.116(b) and (d), which will be strictly enforced.

All correspondence relating to this inter partes reexamination proceeding should be directed:

By EFS: Registered users may submit via the electronic filing system EFS-Web, at https://sportal.uspto.gov/authenticate/authenticateuserlocalepf.html.

By Mail to: Mail Stop Inter Partes Reexam
Attn: Central Reexamination Unit
Commissioner for Patents
United States Patent & Trademark Office

P.O. Box 1450
Alexandria, VA 22313-1450

By FAX to: (571) 273-9900
Central Reexamination Unit

By Hand: Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner, or as to the status of this proceeding, should be directed to the Central Reexamination Unit at telephone number (571) 272-7705.

/Mary Steelman/

Primary Examiner, Reexamination Specialist

Central Reexamination Unit 3992

(571) 272-3704

Conferees:

FD

ADK

APRIL 3, 2012 RESPONSE TO OFFICE ACTION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant	:	Gary B. Rohrabaugh	Art Unit	:	2175
Serial No	:	11/868,124	Examiner	:	Ruay L. Ho
Filed	:	October 5, 2007	Conf. No.	:	1388
Title	:	SCALABLE DISPLAY OF INTERNET CONTENT ON MOBILE DEVICES			

Mail Stop Amendment
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

RESPONSE TO OFFICE ACTION OF OCTOBER 13, 2011

Amendments begins on page 2.

Remarks begin on page 14.

CERTIFICATE OF FILING VIA EFS-WEB
I hereby certify that this paper (along with any referred to as being attached or enclosed) is being transmitted via electronic filing (EFS-WEB) on April 3, 2012. /Susan M. Langworthy/

AMENDMENT

Listing of Claims:

1. (Currently Amended) A mobile device, comprising:

a processor;

a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display comprising at least a portion of a top surface of the mobile device; and

storage means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

enabling a user of the mobile device to request access to Web pages ~~from among billions of Web pages accessible via the World Wide Web~~, each Web page including associated HTML-based Web content defining an original page layout and design of content on that Web page, the content including text content and image content;

in response to a user request to access a Web page,

retrieving, via the wireless communication device, HTML-based Web content associated with a Web page;

processing, the HTML-based Web content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine;

employing the page layout information to generate scalable page layout information; and employing the scalable page layout information and/or content derived therefrom to generate views of the Web page to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine,

wherein in the multiple zoom levels include zoom levels that are not predefined, and the user is enabled to view the entirety of the HTML-based content of the Web page at each zoom level, and wherein there is no degradation in quality of the presentation of text content when the zoom level is increased.

2. (Original) The mobile device of claim 1, wherein the device comprises a mobile phone.

3. (Previously Presented) The mobile device of claim 1, wherein the device comprises a hand-held or palm-held device.

4. (Original) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input.

5. (Previously Presented) The mobile device of claim 1, wherein the Web page includes at least one hyperlink and comprises a first Web page, and wherein execution of the instructions performs further operations comprising:

enabling the user to select a hyperlink to a second Web page; and, in response thereto,

retrieving, via the wireless communications device, and processing HMTL-based Web content associated with the second Web page to produce additional scalable page layout information; and

employing the additional scalable page layout information and/or content derived therefrom to render views of the second Web page on the display.

6. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling the Web page to be displayed at different resolutions by,

generating scaled content via use of the scalable page layout information, wherein the scaled content comprises text and image content that is scaled using a plurality of scale factors.

7. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising,

for each of the multiple zoom levels, enabling the user to pan a display of the Web page at that zoom level in real-time in response to a corresponding user input.

8. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web page by tapping on the column, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

9. (Canceled)

10. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image by tapping on the image, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

11. (Canceled)

12. (Previously Presented) The mobile device of claim 1, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web

page, wherein in response thereto, the display is re-rendered such that the text content of the selected paragraph is displayed substantially across the display.

13. (Canceled)

14. (Original) The mobile device of claim 1, wherein the network comprises a mobile service provider network.

15. (Currently Amended) A mobile device, comprising:

a processor;

a wireless communications interface operatively coupled to the processor to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display disposed on a top surface of the mobile device; and

flash memory operatively coupled to the processor in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations including,

enabling a user of the mobile device to request access to Web pages ~~from among billions of Web pages accessible via the World Wide Web~~, each Web page including associated HTML-based Web content defining an original page layout a plurality of objects, including text objects and image objects, included in the Web page;

retrieving, via the wireless communication interface, HTML-based Web content associated with a Web page requested to be accessed by the user;

processing the HTML-based content with a rendering engine to generate page layout information, wherein the page layout information defines a layout location for each of the plurality of objects;

for each of the plurality of objects,

storing page layout information including content defining a bounding box associated with layout of the object; and

storing information that links the object with its corresponding page layout information,

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined; and

scaling page layout information and/or content derived therefrom to generate scaled Web page content at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor.

16. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising:

mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space.

17. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising:

determining a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user;

determining a virtual display bounding box for the virtual display area associated with the first scale factor and offset;

identifying objects having at least a portion falling within the virtual display bounding box; and

rendering a view of the Web page corresponding to the zoom level and pan position on the display including the portions of said objects having at least a portion falling within the virtual display bounding box.

18. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising scaling a scalable font to render text content associated with corresponding text objects at different scale factors.

19. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising:

generating a display list for rendering corresponding content; and

employing the display list to generate scaled Web page content at the plurality of scale factors.

20. (Canceled)

21. (Previously Presented) The mobile device of claim 15,-wherein execution of the instructions performs further operations comprising enabling a user to zoom on an image by tapping on the image, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display.

22. (Canceled)

23. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a column of the Web

page by tapping on the column, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display.

24. (Canceled)

25. (Previously Presented) The mobile device of claim 15, wherein execution of the instructions performs further operations comprising enabling a user to zoom on a paragraph of the Web page by tapping on the paragraph, wherein in response thereto, the display is re-rendered such that the text content of the selected paragraph is displayed substantially across the display.

26. (Canceled)

27. (Previously Presented) The mobile device of claim 1, wherein the mobile device includes at least one of a special purpose processor or programmed logic circuitry.

28. (Previously Presented) The mobile device of claim 1, wherein the storage means comprises flash memory.

29. (Previously Presented) The mobile device of claim 16, wherein the object datums are mapped to the virtual display area using point vectors identifying respective point locations of the object datums on a two-dimensional coordinate system associated with the virtual display area.

30. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising enabling the user to browse an entirety of the Web page at a plurality of zoom levels, wherein the original page layout as interpreted by the

rendering engine is preserved at each zoom level, and functionality defined by correspond HTML-based content is preserved for multiple zoom levels.

31. (Previously Presented) The mobile device of claim 16, wherein execution of the instructions performs further operations comprising:

in response to a user input to pan a current view of the Web page to a new view of the Web page,

dynamically generating scaled Web page content in a fraction of a second.

32. (Canceled)

33. (Currently Amended) A method, comprising:

enabling a user of a mobile device to access Web pages~~ from among billions of Web pages accessible via the World Wide Web~~, each Web page including associated HTML-based Web content defining an original page layout of a plurality of objects, including text objects and image objects, included in the Web page;

in response to a request to access a user-selected Web page,

retrieving, via the mobile device, HTML-based Web content associated with the Web page;

processing the HTML-based content with a rendering engine to generate page layout information, wherein the page layout information defines a layout location for each of the plurality of objects;

for each of the plurality of objects,

storing page layout information including content defining a bounding box associated with layout of the object; and

storing information that links the object with its corresponding page layout information,

wherein the page layout information further includes information from which a page layout location of each of the bounding boxes can be determined; and

scaling page layout information and/or content derived therefrom to generate scaled Web page content at a plurality of scale factors, wherein the original page layout of the objects as interpreted by the rendering engine is preserved at each scale factor.

34. (Previously Presented) The method of claim 33, further comprising mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space.

35. (Previously Presented) The method of claim 33, further comprising scaling a scalable font to render text content associated with corresponding text objects at different scale factors.

36. (Previously Presented) The method of claim 33, wherein execution of the instructions performs further operations comprising:

generating a display list for rendering corresponding content; and

employing the display list to generate scaled Web page content at the plurality of scale factors.

37. (Canceled)

38. (Currently Amended) A wireless handheld device, comprising:

a processor;

a communications device operatively coupled to the processor, to facilitate communication with a network via which the World Wide Web may be accessed;

a touchscreen display comprising at least a portion of a top surface of the mobile device; and

a storage device, operatively coupled to the processor, in which a plurality of instructions are stored which, when executed by the processor, enable the wireless handheld device to perform operations including

retrieving, in response to a user request to access a Web page, HTML-based Web content associated with a Web page <u>which defines an original page layout of a plurality of objects, including text objects and image objects</u>,

processing the HTML-based Web content to generate a first page layout of content on the Web page as interpreted by a rendering engine at a first scale at a resolution at which the content was designed to be displayed, and

generating views of the Web page which display the HTML-based Web content according to the first page layout to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels, wherein when the zoom level is greater than the first scale, each view of the Web page comprises a magnified view of the Web page that <u>preserves the original page layout and</u> appears as a magnification of a corresponding portion of the Web page displayed according to the first page layout as interpreted by the rendering engine at the first scale.

39. (Canceled)

40. (Currently Amended) The wireless handheld device of claim 38, wherein the wireless handheld device is capable of generating views of the-HTML-based Web content ~~is designed for display on a desktop computer with~~ that has a target resolution.

41. (Currently Amended) The wireless handheld device of claim 40, wherein the wireless handheld device is capable of generating views of the HTML-based Web content with the first page layout that corresponds to the manner in which the HTML-based Web content is displayed at the target resolution.

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (Previously Presented) The wireless handheld device of claim 38, wherein the magnification of the corresponding portion of the Web page occurs without degradation of the appearance of the HTML-based Web content.

46. (Previously Presented) The wireless handheld device of claim 38, wherein the touchscreen display has a viewable width and each of the magnified views spans the viewable width.

47. (Currently Amended) The wireless handheld device of claim 38, wherein the wireless handheld device is capable of generating a magnified view that includes an input box.

48. (Currently Amended) The wireless handheld device of claim 38, wherein the wireless handheld device is capable of generating a magnified view that includes a ~~an input~~ button.

49. (Currently Amended) The wireless handheld device of claim 38, wherein the wireless handheld device is capable of generating a magnified view that includes an advertisement banner.

REMARKS

Claims 1-8, 10, 12, 14-19, 21, 23, 25, 27-31, 33-36, and 38-49 were pending as of October 13, 2011, the date of the Office Action. Claims 39 and 42-44 have been canceled. Claims 1, 15, 33, 38, 40, 41, and 47-49 have been amended. These claim amendments reflect an effort to advance the prosecution of this application in light of the comments set forth in the Office Action. The amendments do not signify agreement with any position set forth in the Office Action or any concession as to an issue implicated thereby. No new matter has been added via these amendments.

Examiner Interview

The undersigned attorney would like to thank the Examiner for conducting a telephonic interview on March 16, 2012. The undersigned attorney discussed West: A Web Browser for Small Terminals by Staffan Bjork et al. (Viktoria Institute, Goteborg, Sweden, 1999) ("West"), and explained to the Examiner why West failed to disclose, teach or suggest the limitations of the independent claims of the present application including the limitation in claim 1 "employing the scalable page layout information . . . while preserving the original page layout and design of the HTML-based content." In particular, the undersigned noted that West is fundamentally different from the claims of the present invention because West explicitly teaches changing the layout and content of the original web page through, for example, chunking, text reduction, and link extraction, as shown in Figure 1 of West. The undersigned further pointed out that as a result, West clearly does not "preserv[e] the original page layout and design of the HTML-based content." The Examiner stated the she would consider the arguments and would perform a further search.

On March 20, 2012, the Examiner issued an Applicant-Initiated Interview Summary Form in which the Examiner stated:

> Applicant focused on one particular feature of the present invention which was that the present invention was able to display an entire web page in HTML format on a small screen: the cited West reference. to the contrary. can only display a broken web page in HTML format because the small screen simply

cannot accommodate the whole page: accordingly. further search and research is needed to look into said feature in West and other prior art.

To clarify to the Examiner, at the telephonic conference, the undersigned focused on the fact that West does not *preserve* the original page layout and design of the HTML-based web page, and teaches a completely different technique for presenting web content on a small screen.

<u>Claim Rejections – 35 U.S.C. § 112</u>

The Office Action rejected claims 39-44 and 47-49 under 35 U.S.C. § 112 as being indefinite. The Examiner argued that the claims recited "either Web content or Web page design ... a desktop computer and its resolution." Although the applicants disagree, claims 39 and 42-44 have been canceled, and claims 40, 41, and 47-49 have been amended to facilitate the prosecution. Specifically, reference to "desktop computer" has been removed, and the claims recite a wireless handheld device that is capable of operating on the specified Web content. Withdrawal of the rejection is respectfully requested.

<u>Claim Rejections – 35 U.S.C. § 102</u>

The Office Action rejected claims 1-8, 10, 12, 14, 27-28, and 38-49 under 35 U.S.C. § 102 as anticipated by West: A Web Browser for Small Terminals by Staffan Bjork et al. (Viktoria Institute, Goteborg, Sweden, 1999) ("West"). Claim 1 recites, among other limitations "employing the scalable page layout information and/or content derived therefrom to generate views of the Web page to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine." The Examiner argues that "preserving or preservation" feature is "anticipated by [West] because the 'zooming' does not change the structure of the browsed Web page, only the size of it." Office Action at 12. The Applicants respectfully disagree with the Examiner's interpretation of "preserving or preservation . . .," and disagree that West teaches these limitations in the claims.

The teaching of West is fundamentally different from the present invention. In West, the authors recognized that most web pages are designed for desktop computers with powerful processing power, and that there was a need to subdivide an existing web page to display parts of the page on smaller hand-held terminals with limited resources. West, at Abstract, §§ 1, 2. West thus recognized that "there is a need for some kind of automatic on-the-fly ***transformation*** of existing web content to mobile users." West, at § 1 (Emphasis added). In West, the "***original web-pages*** were compressed both in terms of their linguistic content by means of text reduction, and in terms of their visual presentation, and were then presented to the user by means of focus+context visualization." *Id.* (Emphasis added). To accomplish this, West taught using a proxy server to ***change*** the layout of the original web page through "***chunking***," "***text reduction***," and "link extraction":

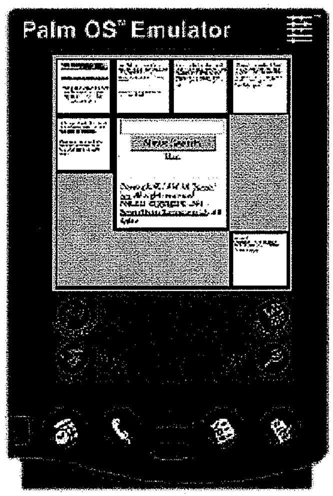
> The proxy processing was comprised of several stages:
>
> - A *chunking stage*, where an HTML page was divided into a number of smaller pages, or *cards*, which were then collected into groupings, or *decks*
> - *A text reduction stage*, where a set of keywords summarizing each card were extracted from the text
> - A *link extraction stage*, where all the hyper-links on each card were extracted

Id. at § 2. West further explains this "transform" process:

> In WEST, we made use of a proxy server to:
>
> - Filter and reduce the contents of web pages ... [which] would mean among other things to ***get rid of JavaScript, image maps, frames*** etc.[]
> - Convert the reduced web page into n ***sub-pages (cards)*** ...

Id., at § 5.1 (emphasis added).

In the West system, original page layout information such as "image maps" and "frames" defined by the HTML content are expressly deleted. *Id.* Also, the Web pages are converted into multi-page "cards." In other words, the layout of what is viewed in the West system is completely reconstructed. Figure 1 of West, reproduced below, shown an example of a transformed web page.



Id., at § 1. As can be seen in Figure 1, the "cards" do not represent the ***original*** page layout defined in the HTML code. Viewing these multi-page "cards" in the West system is not viewing the HTML-based content while "preserving the original page layout" of the HTML-based content as claimed. *See* cl. 1, 15, 33, and 38. The motivation behind the West device appears to have been premised on West's assumption that the original page layout as defined in the HTML code is not suitable for viewing on a portable device. *See* West at § 2. Indeed, West teaches away from preserving the original page layout by cutting up the original web page, "stripping away" information, and performing various data reduction operations as explained above. *See id.*

The Examiner appears to also rely on the concept of flip-zooming in West as disclosing the "preserving the original layout and design..." limitation. *See* Office Action, at 5. But flip zooming is a technique in West that allows a user to navigate through the transformed "cards" on the browser, e.g., by allowing the user to view the "cards" as thumbnails and zooming in on a particular "card." West, at §§ 4.1, 4.2. Flip zooming, however, ***does not relate to the original web page***, but rather to the transformed and altered content shown in Figure 1 above. The thumbnail "cards" do not have the original layout as defined by the HTML code. Zooming in on these "cards" would not show the content with the original page layout as defined by the HTML code.

An HTML-based Web content typically comprises Hyper Text Markup Language, as well as graphic files (e.g. GIF, JPEG). (Application at 0006) As explained in the Application:

> HTML is a standardized language that describes the layout of content on a web page, and attributes of that content. This layout and attribute information is ***defined by sets of tags contained in HTML code*** corresponding to the page. ***The tags define various HTML layout and display information, including tables, paragraph boundaries, graphic image positions and bounding box sizes, typeface styles, sizes, and colors, borders, and other presentation attributes.***

(Application at 0052, emphasis added)

The Applicants' claims recite processing the HTML-based Web content to generate information that can be used to zoom and/or scale the Web page "while preserving the original page layout and design of the HTML-based content." *See* Cl. 1. For example, if a particular Web page specifies that there are 20 image objects located in places as specified in the HTML language, the Applicants' claimed invention takes that into account and preserves how the images look and where on the Web page the images are located. The Application Figure 7A, reproduced below, shows a Web page on a mobile device that preserves the ***original page layout*** of an HTML-based content as defined by the HTML code.

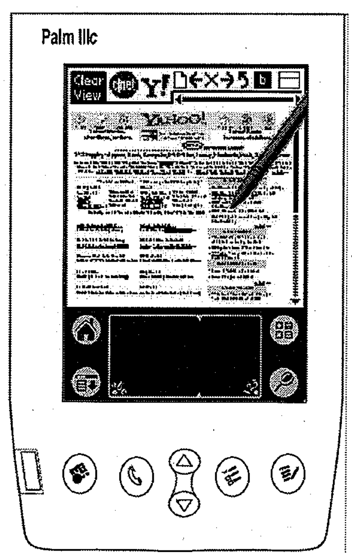


FIG. 7A

Figure 7A; *see also* Figs. 8A, 9A.

Accordingly, the Applicants respectfully submit that the independent claims 1, 15, 33, and 38 are patentable over West. Dependent claims 2-8, 10, 12, 14, 16-19, 21, 23, 25, 27-31, 34-36, and 40-49 are patentable for at least the same reasons as the independent claims and for the additional inventive combinations recited therein.

Claim Rejections – 35 U.S.C. § 103

The Office Action rejected claims 15-19, 21, 23, 25, and 29-37 as obvious over West: A Web Browser for Small Terminals by Staffan Bjork et al. (Viktoria Institute, Goteborg, Sweden, 1999) ("West") in view of The Zoom Browser by Lars Erik Holmquist (Ater till Human IT, 3/1998) ("Holmquist"). As the Examiner states, "Holmquist is not cited for the 'preserving original page layout.'" Office Action, at 12. Therefore, Holmquist similarly does not teach "preserving the original page layout" of the HTML-based content. Because neither West[1] nor Holmquist teaches this limitation, the Applicants respectfully submit that the pending claims are patentable over the combination.

Co-Pending Matters

The following related patent applications are pending concurrently with this application: 11/735,477; 12/941,106; 12/955,487. In the '477 application, an advisory action was mailed on February 9, 2012. In the '487 application, an office action was mailed on January 5, 2012. Moreover, related U.S. Patent No. 8,145,995 issued on March 27, 2012.

In addition, the following patent reexamination proceedings are currently pending: Reexamination Control Nos. 95/000,634 and 95/000,635. These reexaminations involve patents related to the instant application.

[1] Please refer to the section above for discussions relating to West.

Request for Reconsideration

Each of the pending claims defines patentable subject matter over the cited prior art. Furthermore, each of the pending claims is believed to be in form for allowance.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. Applicants hereby specifically reserve the right to prosecute claims of different or broader scope in a continuation or divisional application. Applicants note that any claim amendments made herein are made solely for the purposes of more clearly and particularly describing and claiming the invention, and not for purposes of overcoming art or for patentability or narrowing the claims. The Examiner should infer no (i) adoption of a position with respect to patentability, (ii) change in the Applicants' position with respect to any claim or subject matter of the invention, or (iii) acquiescence in any way to any position taken by the Examiner, based on such amendments. It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not signify concession of unpatentability of the claim prior to its amendment.

If necessary, please apply any charges or credits to deposit account 09-0946.

Respectfully submitted,

Date: April 3, 2012

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APRIL 18, 2012
OFFICE ACTION

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EXAMINER	
HO, RUAY L	
ART UNIT	**PAPER NUMBER**
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MAIL DATE	DELIVERY MODE
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	11/868,124	ROHRABAUGH ET AL.	
	Examiner	**Art Unit**	
	RUAY HO	2175	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *03 April 2012*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on _____; the restriction requirement and election have been incorporated into this action.

4)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

5)☒ Claim(s) *1-49* is/are pending in the application.

5a) Of the above claim(s) *9,11,13,20,22,24,26,32,37,39 and 42-44* is/are withdrawn from consideration.

6)☐ Claim(s) _____ is/are allowed.

7)☒ Claim(s) *1-8,10,12,14-19,21,23,25,27-31,33-36,38,40-41 and 45-49* is/are rejected.

8)☐ Claim(s) _____ is/are objected to.

9)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

10)☐ The specification is objected to by the Examiner.

11)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

12)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Amendment

1. According to paper filed April 03, 2012, claims 1-49 are pending. Claims 1, 15, 33, 38, 40-41, and 47-49 are amended, and claims 9, 11, 13, 20, 22, 24, 26, 32, 37, 39, and 42-44 are canceled.

2. In view of paper filed April 03, 2012, claim rejections under 35 U.S.C. §112, second paragraph, are withdrawn.

Response to Arguments

3. Applicants' arguments filed April 03, 2012 have been fully considered but they are not persuasive.

As indicated in the present Amendment, the key issue in applicants' arguments is that ***does West preserve the original page layout or not?***

Applicants present reasonable and logical arguments in the present Amendment and during the telephonic interview dated March 16, 2012 as well. However, after careful reconsideration, search, and research, pending claims are not patentable over the cited prior art for the following reasons:

West is silent on preserving original web page layout

West discusses text reduction and focus+context visualization to solve some of the problems associated with accessing web pages on hand-held devices. (*West* abstract) Although West mentions web page display "even when it is too large to be displayed in its entirety," it never explicitly spells out that the entire web page cannot be viewed with zoom out technology.

Particularly, what is the definition of "preserving" the entirety of a web page? One may argue that zoom-out sacrifices the font size and inevitably destroys the "entirety" of a web page. Accordingly, it is reasonable to conclude that viewing the web page with zoom-out technology destroys the "entirety" to a degree but also "preserve" the entirety to a degree. Said conclusion is exactly the definition of the "preserving" page layout provided in the present application specification. The Brief Summary Of The Invention reads "the scalable content enables the Web page to be rendered by the client such that the rendered display of the Web page ***substantially*** *retains an original page layout* defined by the original format, which supporting scaling and panning of the Web page." Apparently, the original page layout is not 100% preserved, including the font size.

Holmquist discloses preserving original page layout

In page 11 second paragraph of *Holmquist*, lines 3-5 disclose *"[t]his means that the Zoom Browser can be used for unusual but useful tasks such as downloading and* ***displaying the content of an entire web site****.*" Said Zoom Browser is known in 1998 *Holmquist* publication; hence, it is reasonable to believe *West* focuses on problems in addition to the Zoom Browser solution, not incapable of utilizing it. Nevertheless, lack of specific spelling in *West*, *Holmquist* is cited for the "preserving original web page layout" limitation in the present Office action for applicants' review.

In view of the rationale set forth above, applicants fail to overcome the cited prior art. Request of withdrawal of claim rejections under 35 U.S.C. §102(a) and 35 U.S.C. §103(a) is denied.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. §103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. §103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. §102(e), (f) or (g) prior art under 35 U.S.C. §103(a).

6. Claims 1-8, 10, 12, 14, 15-19, 21, 23, 25, 27-31, 33-36, 38, 40-41, and 45-49 are rejected under 35 U.S.C. §103(a) as being unpatentable over West: A Web Browser for Small Terminals by Staffan Björk et al. (Viktoria Institute, Göteborg, Sweden, 1999), hereinafter *West*, and further in view of The Zoom Browser by Lars Erik Holmquist (Åter till Human IT, 3/1998), hereinafter *Holmquist*.

<u>Claim 1</u>

"**a processor**; a wireless communications device operatively coupled to the processor, to facilitate communication with a network via which the World Wide Web may be accessed" p.1 of *West* <u>Introduction</u> 2nd paragraph and Figure 1;

"**a touchscreen** display comprising at least a portion of a top surface of the mobile device" p.1 of *West* <u>Introduction</u> 1st paragraph and Figure 1;

"**storage** means, operatively coupled to the processor, in which a plurality of instructions are stored that when executed by the processor enable the mobile device to perform operations" p.1 of *West* <u>Introduction</u> 1st paragraph and Figure 1;

"**enabling** a user of the mobile device to request access to Web pages, each Web page including associated HTML-based Web content defining an original page layout and design of content on that Web page, the content including text content and image content" p.2 of *West* <u>The West Browser</u> 2nd paragraph and page 3 of *West* **Proxy Systems** section second paragraph & *Holmquist* p.11 ¶2 lines 3-5;

"**in response** to a user request to access a Web page, retrieving, via the wireless communication device, HTML-based Web content associated with a Web page" p.2 of *West* <u>The West Browser</u> 2nd paragraph;

"**processing**, the HTML-based content with a rendering engine to generate page layout information corresponding to the original page layout of content on the Web page as interpreted by the rendering engine" p.2 of *West* <u>The West Browser</u> 2nd paragraph;

"**employing** the scalable page layout information to generate scalable page layout information; and employing the scalable page layout information and/or content derived therefrom to generate views of the Web page to enable the user to browse an entirety of the HTML-based content of the Web page at multiple zoom levels while preserving the original page layout and design of the HTML-based content as interpreted by the rendering engine, wherein in the multiple zoom levels include zoom levels that are not predefined, and the user is enabled to view the entirety of the HTML-based content of the Web page at each zoom level, and wherein there is no degradation in quality of the presentation of text content when the zoom level is increased" p.4 of *West* Flip Zooming in West 1st paragraph and p.7 of *West* Presentation and Interaction 1st paragraph.

Although *West* and *Holmquist* both disclose the same subject matter as claimed in the present application, *West* did not specifically spell out the "defining an original page layout" feature as claimed in said limitation. However, it is disclosed by *Holmquist* in page 11 paragraph 2 lines 3-5. Hence, it would have been obvious to one skilled in the art at the time the present invention was made to incorporate said feature of *Holmquist* into the A Web Browser For Small Terminals of *West* so that its functions and applications can be advanced and more marketable.

Claim 2

"the device comprises a mobile phone" p.1 of *West* Introduction 2nd paragraph.

Claim 3

"a hand-held or palm-held device" p.1 of *West* Introduction 2nd paragraph.

Claim 4

"enabling the user to zoom in on a user-selectable portion of a display of the Web page in response to a corresponding user interface input" p.4 of *West* Flip Zooming in West

1st paragraph.

Claim 5

Claim 5 is rejected for rationale given for claim 1.

Claim 6

"enabling the Web page to be displayed at different resolutions by, generating scaled content via use of the scalable page layout information, wherein the scaled content comprises text and image content that is scaled using a plurality of scale factors" p.2 of *West* The West Browser first paragraph and p.4 Flip Zooming in West 2nd paragraph.

Claim 7

"for each of the multiple zoom levels, enabling the user to pan a display of the Web page at that zoom level in real-time in response to a corresponding user input" p.7 of *West* Presentation and Interaction 1st paragraph.

Claim 8

"enabling a user to zoom on a column of the Web page by tapping on the column, wherein in response thereto, the display is re-rendered such that content corresponding to the selected column is displayed substantially across the display" *West* p.4 Flip Zooming in West *Interaction Example* & *West* p.7 Presentation and Interaction 1st paragraph.

Claim 10

"enabling a user to zoom on an image by tapping on the image, wherein in response thereto, the display is re-rendered such that the image is displayed substantially across the display" p.4 of *West* Viewing Web Pages on Small Screens 2nd paragraph and

Interaction in West section and p.7 of *West* Presentation and Interaction 1st paragraph.

Claim 12

Claim 12 is rejected for the similar rationale given for claim 8.

Claim 14

"a mobile service provider network" p.1 of *West* Introduction 2nd paragraph.

Claim 15

"storing page layout information including content defining a bounding box associated with layout of the object; and storing information that links the object with its corresponding page layout information" p.14 of *Holmquist* 4.3.1 Lines connecting pages belonging to the same document.

Claim 15 is also rejected for the rationale given for claims 1 and 28.

Claim 16

"mapping the page layout information to a virtual display area comprising a resolution-independent coordinate space, the page layout information that is mapped including an object datum for each object corresponding to where the content for that object is located on a representation of the Web page laid out on the resolution-independent coordinate space" p.14 of *Holmquist* 3.3.2 Boxes around pages belongs to the document currently in focus and 3.3.3 Usage-dependent placement of focus pages.

Claim 17

"**determining** a first scale factor and offset in response to one or more corresponding user inputs defining a user-selectable zoom level and pan corresponding to a rendered display of the Web page desired by a user" p.12 of *Holmquist* 3.2 The Zoom Browser's display modes: thumbnails, summaries, and alternating;

"**determining** a virtual display bounding box for the virtual display associated with the first scale factor and offset" p.14 of *Holmquist* 3.3.2 Boxes around pages belongs to the document currently in focus;

"identifying objects having at least a portion falling within the virtual display bounding box; and rendering a view of the Web page corresponding to the zoom level and pan position on the display including the portions of said objects having at least a portion falling within the virtual display bounding box" p.14 of *Holmquist* 3.3.2 Boxes around pages belongs to the document currently in focus and p.12 3.2 The Zoom Browser's display modes: thumbnails, summaries, and alternating.

Claim 18

"scaling a scalable font to render text content associated with corresponding text objects at different scale factors" p.13 of *Holmquist* 3.2 The Zoom Browser's display modes: thumbnails, summaries, and alternating.

Claim 19

"generating a display list for rendering corresponding content; and employing the display list to generate scaled Web page content at the plurality of scale factors" p.11 of *Holmquist* 3.1 Navigating World Wide Web documents and p.12 3.2 The Zoom Browser's display modes: thumbnails, summaries, and alternating.

Claims 21&23

Claims 21 and 23 are rejected for the similar rationale given for claims 8, 10, and 15.

<u>Claim 25</u>

Claim 25 is rejected for the similar rationale given for claims 8 and 15.

<u>Claim 27</u>

Claim 27 is rejected for the similar rationale given for claim 1.

The “special purpose” is construed as the claimed features of the present application.

<u>Claim 28</u>

“the storage means comprises flash memory” p.1 of *West* <u>Introduction</u> 1^{st} paragraph.

<u>Claim 29</u>

Claim 29 is rejected for the similar rationale given for claim 16.

<u>Claim 30</u>

Claim 30 is rejected for the similar rationale given for claims 4 and 15.

<u>Claim 31</u>

Claim 31 is rejected for the similar rationale given for claims 7 and 15.

<u>Claim 33</u>

Claim 33 is rejected for the similar rationale given for claims 1 and 15.

<u>Claim 34</u>

Claim 34 is rejected for the similar rationale given for claims 16 and 17.

<u>Claim 35</u>

Claim 35 is rejected for the similar rationale given for claim 18.

<u>Claim 36</u>

Claim 36 is rejected for the similar rationale given for claims 7 and 15.

<u>Claims 38, 40-41, 45-49</u>

Claims 38, 40-41, and 45-49 are rejected for similar rationale given for claims 1-7.

Conclusion

7. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

8. Applicants are advised that any information arising from the ongoing litigation between the assignee of the present application and defendants Apple Inc. and AT&T Mobility LLC which may raise a question material to the examination of the present application must be brought to the attention of the Office.

9. The prior art made of record and not relied upon is considered pertinent to applicants' disclosure. Citations are exemplary. Applicants are advised to review the

applied references in their entirety before filing a response to the present Office action.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to RUAY HO whose telephone number is (571)272-6088; RightFax number is (571) 273-6088. The examiner can normally be reached on Monday-Friday (9 AM - 5 PM EST).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Bashore can be reached on (571) 272-4088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/RUAY HO/
Primary Examiner, Art Unit 2175