



US007450114B2

(12) **United States Patent**
Anwar

(10) **Patent No.:** **US 7,450,114 B2**
(45) **Date of Patent:** **Nov. 11, 2008**

(54) **USER INTERFACE SYSTEMS AND METHODS FOR MANIPULATING AND VIEWING DIGITAL DOCUMENTS**

5,790,114 A 8/1998 Geaghan et al.
(Continued)

(75) Inventor: **Majid Anwar**, Glasgow (GB)

FOREIGN PATENT DOCUMENTS

(73) Assignee: **Picisel (Research) Limited**, Glasgow (GB)

EP 0 438 194 A 7/1991
EP 0 465 250 1/1992
EP 0 479 496 A 4/1992
EP 0 513 584 A 11/1992
EP 529 121 A 3/1993

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 738 days.

(Continued)

(21) Appl. No.: **09/835,458**

Blumberg, et. al., "Visual Realism and Interactivity for the Internet", Proceedings of IEEE Compeon, 1997, San Jose, Feb. 23-26, 1997, Los Alamitos, IEEE Comp. Soc. Press, Feb. 1997, pp. 269-273.

(22) Filed: **Apr. 16, 2001**

(Continued)

(65) **Prior Publication Data**

US 2002/0011990 A1 Jan. 31, 2002

Primary Examiner—Sumati Lefkowitz
Assistant Examiner—Srilakshmi K Kumar
(74) *Attorney, Agent, or Firm*—Ropes & Gray LLP

(30) **Foreign Application Priority Data**

Apr. 14, 2000 (GB) 0009129.8

(57) **ABSTRACT**

(51) **Int. Cl.**
G06F 3/033 (2006.01)
G06F 3/041 (2006.01)

Systems, including handheld computing devices that include system code stored within the memory and adapted to be executed by the processor. The system code can process an input byte stream that is representative of contents to be displayed on the touch sensitive display and can generate a content document file representative of an internal representation of the content. A tool document file may also be stored in the memory and may provide an internal representation of a document providing an image that is representative of a graphical tool. Associated with a tool document can be tool code that is capable of processing the content document file to create an internal representation of the contents that presents the content in a manner that achieves a display effect associated with the tool. The device will also include parsing code that processes the content document file, the tool document file, and the processed internal representation to generate a screen document for display on the touch sensitive display in a manner that portrays the display effect.

(52) **U.S. Cl.** **345/179; 345/173; 178/18.01**
(58) **Field of Classification Search** **345/156-184; 178/18.01, 18.03, 19.01, 20.01**

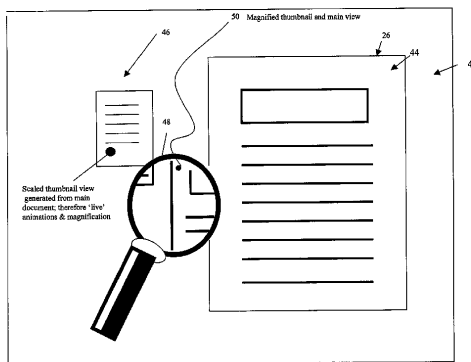
See application file for complete search history.

(56) **References Cited**

U.S. PATENT DOCUMENTS

4,839,634 A * 6/1989 More et al. 345/173
5,083,262 A 1/1992 Haff
5,369,735 A * 11/1994 Thier et al. 345/423
5,390,320 A 2/1995 Smithline
5,463,725 A * 10/1995 Henckel et al. 715/776
5,530,865 A 6/1996 Owens et al.
5,615,384 A 3/1997 Allard et al.
5,748,185 A 5/1998 Stephan et al.
5,754,348 A 5/1998 Soohoo

5 Claims, 11 Drawing Sheets



U.S. PATENT DOCUMENTS

5,810,680	A	9/1998	Lobb et al.	
5,867,166	A	2/1999	Schick et al.	
5,899,988	A	5/1999	Depledge et al.	
5,909,207	A *	6/1999	Ho	345/156
5,910,805	A	6/1999	Haschart et al.	
5,911,066	A	6/1999	Atkinson et al.	
5,945,979	A	8/1999	Rutledge et al.	
6,034,700	A	3/2000	Nickell et al.	
6,121,960	A	9/2000	Carroll et al.	
6,310,610	B1 *	10/2001	Beaton et al.	345/173
6,411,274	B2 *	6/2002	Watanabe et al.	345/684
6,466,203	B2	10/2002	Van Ee	
6,525,749	B1 *	2/2003	Moran et al.	715/863
6,663,823	B2	12/2003	Kobayashi et al.	
6,717,573	B1 *	4/2004	Shahonian et al.	345/161

FOREIGN PATENT DOCUMENTS

EP	0 650 144	A1	4/1995
EP	0 651 543		5/1995
EP	0 753 832	A	1/1997
EP	0 764 918	A	3/1997
EP	0 860 769	A	8/1998
EP	0 949 571	A2	10/1999
EP	0 980 045		2/2000
GB	2 313 277	A	11/1997

WO	WO 97/34240	9/1997
WO	WO-97/36225	10/1997
WO	WO 98/10356	3/1998
WO	WO 98 37506 A	8/1998
WO	WO-98/56151	12/1998
WO	WO 99 10840 A	3/1999
WO	WO 00 10372 A	3/2000

OTHER PUBLICATIONS

Rowe, J.H., "Metafiles and Computer Graphics", Computers and Graphics, Pergamon Press, Ltd. Oxford, Great Britain, vol. 10, No. 2, 1986, pp. 103-106.

Anon., "Electronic Magnifying Glasses," IBM Technical Disclosure Bulletin, vol. 37, No. 3, 353-54 (Mar. 1994).

Bohmer, S. et al., "Word fur Windows 6.0", 1994, pp. 38-43, BHV-Verlag, Korschbroich, Germany.

Office Action dated Jan. 23, 2008 U.S. Appl. No. 10/853,495.

Final Office Action dated Feb. 27, 2008 for U.S. Appl. No. 10/813,285.

Preece et al. "Human Computer Interaction," pp. 211-236 and 714-715, ISBN 0-201-62769-8, Addison Wesley (1994).

Kramer, A. "Classifying Two Dimensional Gestures in Interactive Systems," Proc. Of Intl. Gesture Workshop, 9/17-19/97, published as Lecture Notes In Artificial Intelligence vol. No. 1371, pp. 37-48, ISBN 3-540-64424-5, Springer-Verlag (1998).

* cited by examiner

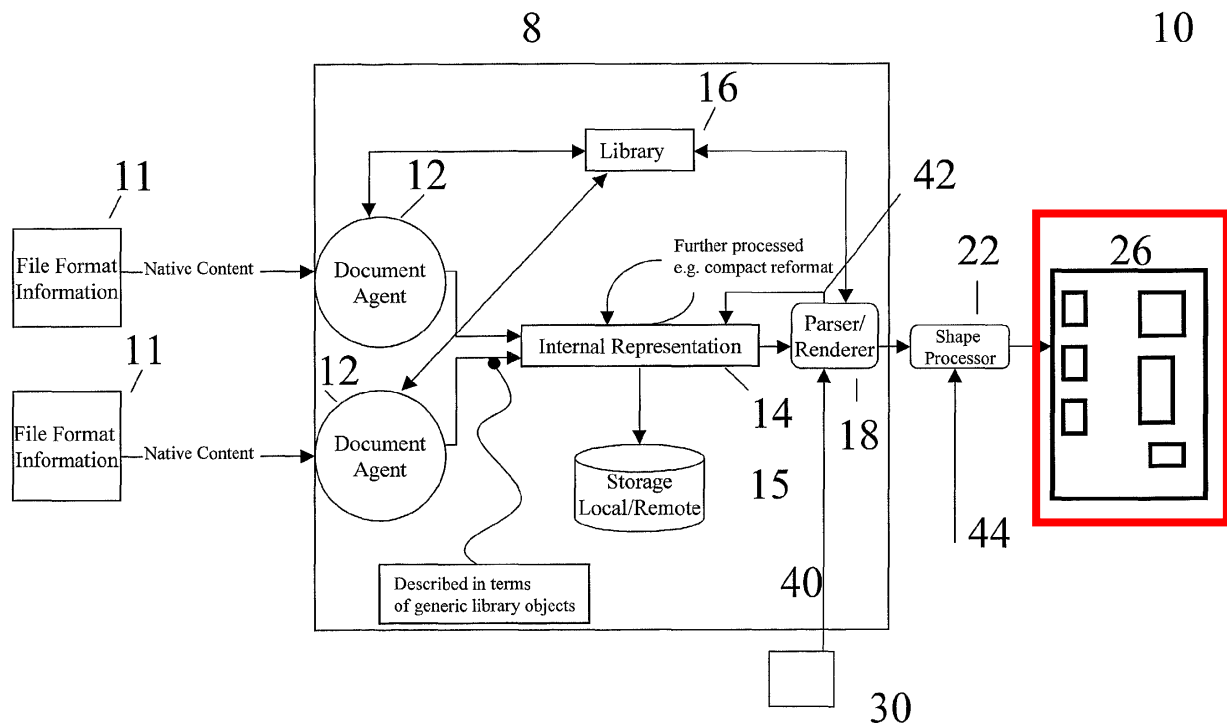
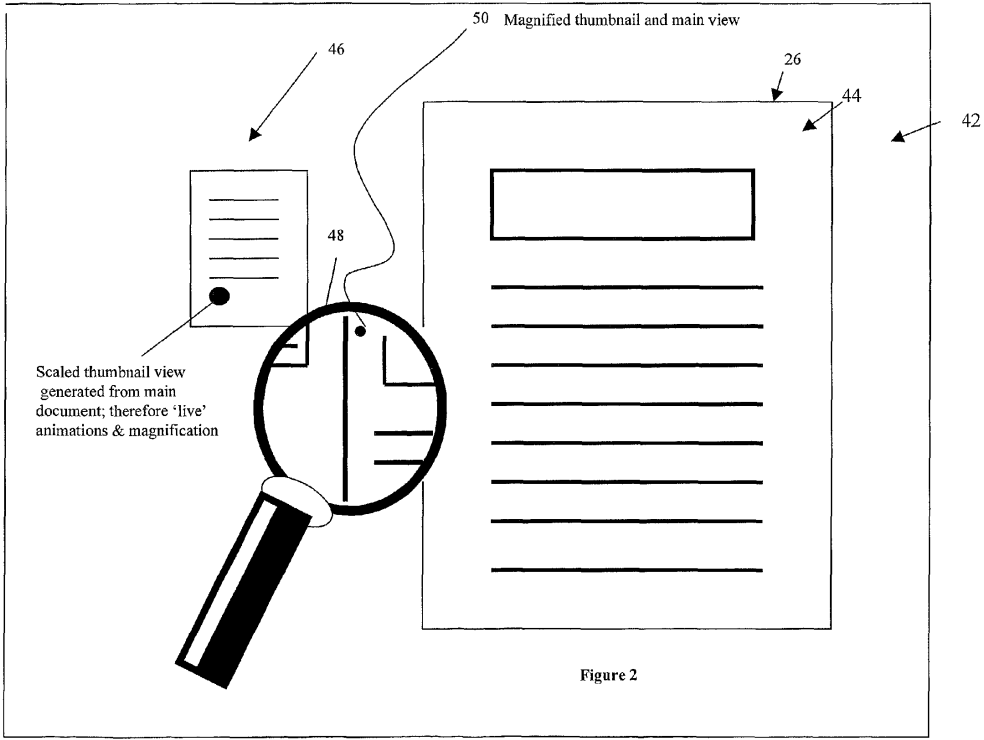


Figure 1



Scaled thumbnail view generated from main document; therefore 'live' animations & magnification

Figure 2

Interaction still possible
in thumbnail, main view,
and magnification

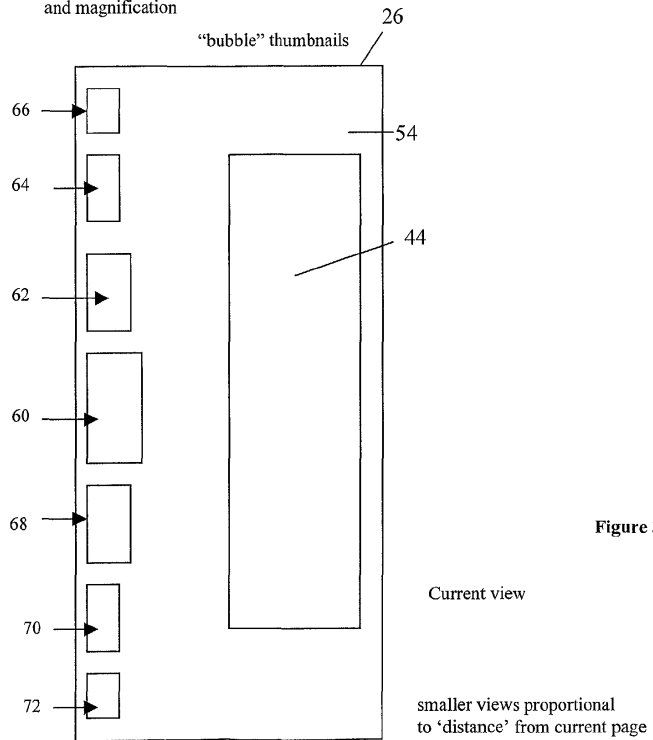


Figure 3

Explore Litigation Insights

Docket Alarm provides insights to develop a more informed litigation strategy and the peace of mind of knowing you're on top of things.

Real-Time Litigation Alerts



Keep your litigation team up-to-date with **real-time alerts** and advanced team management tools built for the enterprise, all while greatly reducing PACER spend.

Our comprehensive service means we can handle Federal, State, and Administrative courts across the country.

Advanced Docket Research



With over 230 million records, Docket Alarm's cloud-native docket research platform finds what other services can't. Coverage includes Federal, State, plus PTAB, TTAB, ITC and NLRB decisions, all in one place.

Identify arguments that have been successful in the past with full text, pinpoint searching. Link to case law cited within any court document via Fastcase.

Analytics At Your Fingertips



Learn what happened the last time a particular judge, opposing counsel or company faced cases similar to yours.

Advanced out-of-the-box PTAB and TTAB analytics are always at your fingertips.

API

Docket Alarm offers a powerful API (application programming interface) to developers that want to integrate case filings into their apps.

LAW FIRMS

Build custom dashboards for your attorneys and clients with live data direct from the court.

Automate many repetitive legal tasks like conflict checks, document management, and marketing.

FINANCIAL INSTITUTIONS

Litigation and bankruptcy checks for companies and debtors.

E-DISCOVERY AND LEGAL VENDORS

Sync your system to PACER to automate legal marketing.