

(12) United States Patent **Davis**

(10) **Patent No.:** (45) Date of Patent:

US 7,421,648 B1

Sep. 2, 2008

(54) REUSABLE DATA MARKUP LANGUAGE

Inventor: Russell T. Davis, Bethesda, MD (US)

Assignee: e-Numerate Solutions, Inc., McLean,

VA (US)

(*) Notice: Subject to any disclaimer, the term of this

patent is extended or adjusted under 35

U.S.C. 154(b) by 0 days.

Appl. No.: 09/573,778

(22) Filed: May 18, 2000

Related U.S. Application Data

Provisional application No. 60/183,152, filed on Feb. 17, 2000, provisional application No. 60/135,525, filed on May 21, 1999.

(51) Int. Cl. G06F 15/00 (2006.01)G06F 17/00 (2006.01)

U.S. Cl. 715/234; 715/205; 705/1; (52)

705/14: 717/106

Field of Classification Search 715/517, 715/501.1, 513, 205, 234; 717/108, 106; 707/5-6; 705/1, 14

See application file for complete search history.

(56)References Cited

U.S. PATENT DOCUMENTS

4,674,043 A	6/1987	Hernandez et al.
5,276,776 A	1/1994	Grady et al.
5,339,392 A	8/1994	Risberg et al.
5,423,032 A	6/1995	Byrd et al.
5,603,021 A	2/1997	Spencer et al.
5,737,592 A	4/1998	Nguyen et al.
5,754,939 A	5/1998	Herz et al.
5,822,587 A	* 10/1998	McDonald et al 717/108

5,838,906	Α	*	11/1998	Doyle et al 709/202
5,838,965	Α		11/1998	Kavanagh et al.
5,894,311	Α		4/1999	Jackson
5,913,214	Α		6/1999	Madnick et al.
5,917,485	Α		6/1999	Spellman et al.
5,920,828	Α		7/1999	Norris et al.
5,948,113	Α		9/1999	Johnson et al.
5,950,196	A	*		Pyreddy et al 707/5
5,956,737	Α	*	9/1999	King et al 715/517
5,974,413	Α	*	10/1999	Beauregard et al 707/6
5,999,944	Α		12/1999	Lipkin
6,014,661	A		1/2000	Ahlberg et al 707/3

(Continued)

OTHER PUBLICATIONS

Suzuki et al., Managing the software design documents with XML, ACM Proceedings of the 16th annual international conference on Computer documentation, Sep. 1998. pp. 127-136.*

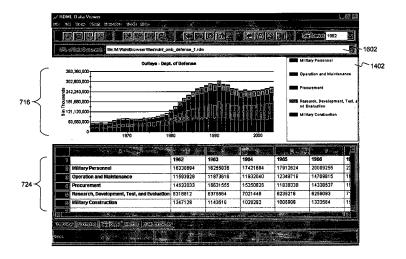
(Continued)

Primary Examiner—William L Bashore (74) Attorney, Agent, or Firm—Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

ABSTRACT

Methods and systems provide a computer markup language, referred to as Reusable Data Markup Language ("RDML"), and a data viewer for retrieving, manipulating and viewing documents and files in the RDML format that may be stored locally or over a network (e.g., the Internet). Generally, RDML permits the browsing and manipulation of numbers, as opposed to text and images like in HTML, and does so by including attributes describing the meaning of the numbers to be attached to the numbers. Documents compliant with the markup language encapsulate machine-readable documentation with numbers and data, and permit the data viewer to act as a combination web browser and spreadsheet to automatically read, interpret and manipulate the numbers and data.

4 Claims, 40 Drawing Sheets

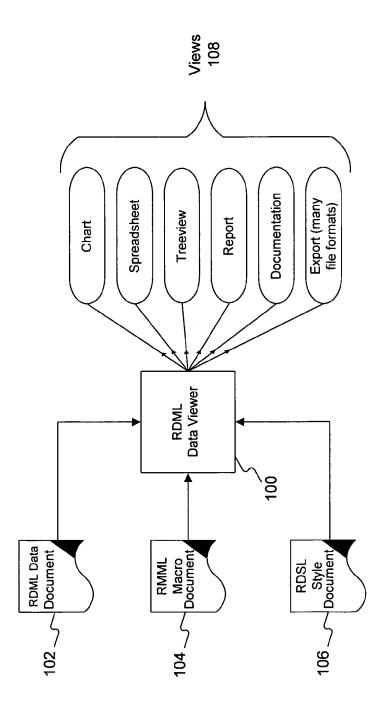


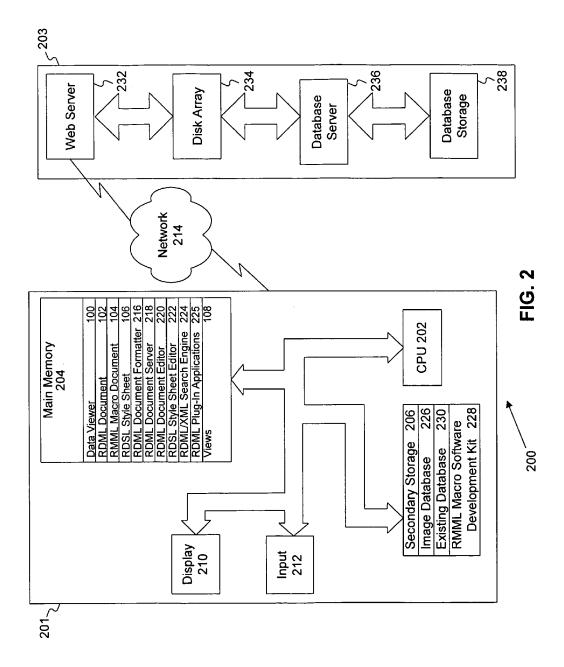


U.S. PATENT DOCUMENTS	2005/0182709 A1 8/2005 Belcsak et al. 2005/0198042 A1 9/2005 Dayis
6,026,388 A 2/2000 Liddy et al.	2005/0198042 A1 9/2005 Davis
6,026,397 A 2/2000 Sheppard	OTHER PUBLICATIONS
6,034,676 A 3/2000 Egan et al.	I.C. (C. E. I. D.) CACCA A C. I.A. (I.C. I.
6,058,385 A 5/2000 Koza et al.	Information on Exchange Rates of Africa, Asia, and Australasia, web
6,065,026 A 5/2000 Cornelia et al.	site: http://eh.net/hmit/exchangerates/infoafr.htm , pp. 1-3, 2002
6,092,036 A 7/2000 Hamann	by EH.NET, downloaded Oct. 19, 2006.* Order of magnitude (online Wikipedia article), http://en.wikipedia .
6,097,888 A 8/2000 Simonyi	org/wiki/Orders_of_magnitude>, 2006 Wikimedia Foundation,
6,108,662 A 8/2000 Hoskins et al.	Inc., pp. 1-4, downloaded Oct. 19, 2006.*
6,121,924 A 9/2000 Meek et al.	Bruce Halberg, "Special Edition, Using Microsoft® Excel 97,
6,134,563 A 10/2000 Clancey et al.	Bestseller Edition," Que® Corporation (1997).
6,160,549 A 12/2000 Touma et al.	Elliotte Rusty Harold, "XML TM Bible," IDG Books Worldwide, Inc.,
6,167,409 A 12/2000 DeRose et al.	An International Data Group Company (1999).
6,173,284 B1 1/2001 Brown	David Megginson, "Structuring XML Documents," Prentice Hall
6,195,676 B1 2/2001 Spix et al.	PTR, Upper Saddle River, NJ (1998).
6,199,046 B1 * 3/2001 Heinzle et al 705/1	Bruce Hallberg et al., "Special Edition, Using Microsoft® Excell 97,
6,199,080 B1 3/2001 Nielsen	Bestseller Edition," Que® Corporation (1997).
6,223,189 B1 4/2001 Steffens et al.	Elliotte Rusty Harold, "XML TM Bible," IDG Books Worldwide, Inc.,
6,240,407 B1 5/2001 Chang et al.	An International Data Group Company (1999).
6,243,698 B1 6/2001 Powers et al.	David Megginson, "Structuring XML Documents," Prentice Hall
6,256,030 B1 7/2001 Berry et al.	PTR, Upper Saddle River, NJ (1998).
6,314,562 B1 11/2001 Biggerstaff	Extensible Business Reporting Language (XBRL) 2.0 Specification,
6,317,750 B1 11/2001 Tortolani et al.	(Dec. 14, 2001), Editors: Luther Hampton, e-Numerate; David vun
6,349,307 B1 2/2002 Chen	Kannon, KPMG LLP; pp. 1-42.
6,351,755 B1 2/2002 Najork et al.	Microsoft Press Computer Dictionary, Third Edition, Microsoft
6,356,920 B1 3/2002 Vandersluis	Press, p. 511 (1997) (3 pages).
6,366,915 B1 4/2002 Rubert et al.	Online Ohio CPA Newsletter, A Monthly Electronic Publication of
6,370,537 B1 4/2002 Gilbert et al. 6,370,549 B1 4/2002 Saxton	the Ohio Society of Certified Public Accountants; Aug. 2000, vol. 1,
	No. 14 (7 pages).
6,373,504 B1 4/2002 Nielsen	Tools [online], extensible Business Reporting Language, [retrieved
6,374,274 B1 4/2002 Myers et al. 6,418,433 B1 7/2002 Chakrabarti et al.	on Aug. 13, 2002]. Retrieved from the Internet <url: http:="" td="" www.<=""></url:>
6,418,433 B1 7/2002 Chakrabarti et al. 6,421,656 B1 7/2002 Cheng et al.	xbrl.org/Tools.htm> (5 pages).
6,421,822 B1 7/2002 Cheng et al.	XBRL Essentials, (A nontechnical introduction to the extensible
6,446,048 B1 * 9/2002 Wells et al	Business Reporting Language, the digital language of business), Jan.
6,460,059 B1 10/2002 Wisniewski	2001, Charles Hoffman, CPA; Carolyn Strand, PhD, CPA, (AICPA),
6,470,349 B1 10/2002 Heninger et al.	pp. 1-17.
6,493,717 B1 12/2002 Junkin	XBRL Home Page [online], extensible Business Reporting Lan-
6,505,246 B1 1/2003 Land et al.	guage, [retrieved on Aug. 13, 2002]. Retrieved from the Internet
6,507,856 B1 1/2003 Chen et al.	<url: http:="" www.xbrl.org=""> (3 pages).</url:>
6,581,068 B1 6/2003 Bensousan et al.	XBRL Technical Specification [online], extensible Business Report-
6,591,272 B1 7/2003 Williams	ing Language, [retrieved on Aug. 13, 2002]. Retrieved from the
6,594,653 B2 7/2003 Colby et al.	Internet <url: 2001="" default.htm="" http:="" tr="" www.xbrl.org="">(1 page).</url:>
6,615,258 B1 9/2003 Barry et al.	The XML Cover Pages, Extensible Business Reporting Language
6,629,094 B1 9/2003 Colby et al.	(XBRL), (1994-2002), Robin Cover, pp. 1-18.
6,635,089 B1 10/2003 Burkett et al.	Berkley et al., The Road to Better Business Information Making a
6,667,747 B1 12/2003 Spellman et al.	Case for XBRL, Winter 2000, Microsoft, pp. 1-13.
6,721,736 B1 4/2004 Krug et al.	Blattner, Special Edition Using Microsoft Excel (R), May 3, 1999 (C)
6,745,384 B1 6/2004 Biggerstaff	Que Corporation "Adding a Secondary Axis to the Chart" (3 pages).
6,886,005 B2 4/2005 Davis	Gilster, Paul, Finding It On The Internet: The Internet Navigator's
6,912,293 B1 6/2005 Korobkin	Guide to Search Tools & Techniques, 2 nd edition (1996) (3 pages).
6,920,608 B1 7/2005 Davis	Hamscher et al., Extensible Business Reporting language (XBRL)
2001/0018687 A1 8/2001 Gonzalez et al.	Specification, Jul. 31, 2000, XBRL Organization, pp. 1-27.
2001/0020237 A1 9/2001 Yarnall et al.	Charles Hoffman and Carolyn Strand, "XBRL Essentials, A Non- technical Introduction to eXtensible Business Reporting Language
2001/0049687 A1 12/2001 Russell	
2002/0023141 A1 2/2002 Yen et al.	(XBRL), the Digital Language of Business Reporting," pp. 1-148
2002/0052954 A1 5/2002 Polizzi et al.	(2001). Jon Rienstra, "Using Excel® in Chemistry," http://www.asa3.org/
2002/0091696 A1 7/2002 Craft et al.	chemistry/computers_in_ chemistry/excel_tips.html (1995) (4
2002/0198985 A1 12/2002 Fraenkel et al.	• • • - • • • • • • • • • • • • • •
2003/0041077 A1 2/2003 Davis	pages). Simon St. Laurent, "Why XML?," http://www.simonstl.com/ar-
2003/0078883 A1* 4/2003 Stewart et al	ticles/whyxml.htm (1998) (5 pages).
2003/0167213 A1 9/2003 Jammes et al.	deles whymin hun (1990) (3 pages).
2005/0086126 A1 4/2005 Davis	* cited by examiner



Sep. 2, 2008







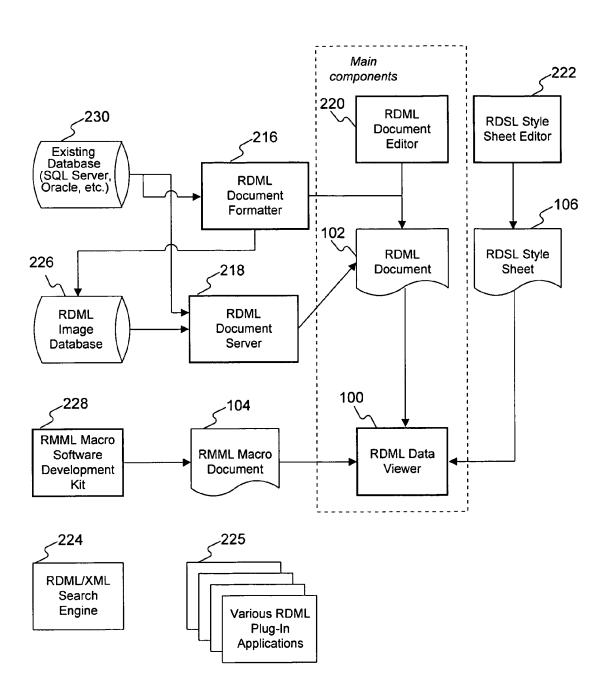


FIG. 3



DOCKET A L A R M

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.

