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Davis

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(54) **CHART VIEW FOR REUSABLE DATA MARKUP LANGUAGE**

Microsoft Press Computer Dictionary, Third Edition, (C) 1997 Microsoft Press, p. 511.*

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St. Laurent, Simon, "Why XML?" (C) 1998 <http://www.simonstl.com/articles/whyxml.htm>.*

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Bruce Halberg, "Special Edition, Using Microsoft® Excel 97, Bestseller Edition," Que® Corporation (1997).

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

Elliott Rusty Harold, "XML™ Bible," IDG Books Worldwide, Inc., An International Data Group Company (1999).

David Megginson, "Structuring XML Documents," Prentice Hall PTR, Upper Saddle River, NJ (1998).

(21) Appl. No.: **09/573,413**

(22) Filed: **May 18, 2000**

* cited by examiner

Related U.S. Application Data

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

(51) **Int. Cl.**⁷ **G06F 17/00**

Primary Examiner—Heather R. Herndon

(52) **U.S. Cl.** **715/503; 715/513; 715/529**

Assistant Examiner—Adam Queler

(58) **Field of Search** **715/513, 503, 715/526, 529; 707/100**

(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner

(57) **ABSTRACT**

(56) **References Cited**

Methods and systems provide a "chart view" for a markup language referred to as Reusable Data Markup Language ("RDML"). Generally, a chart view comprises the components necessary for automatically manipulating and displaying a graphical display of numerical data contained in RDML markup documents. RDML is a markup language, such as the Hypertext Markup Language ("HTML") or the Extensible Markup Language ("XML"). Generally, RDML facilitates the browsing and manipulation of numbers, as opposed to text as in HTML, and does so by requiring attributes describing the meaning of the numbers to be attached to the numbers. Upon receiving RDML markup documents, the chart view transforms, formats, manipulates and displays data stored in the markup documents using the attributes describing the meaning of the data. The chart view uses the attributes of the numbers to, for example, facilitate the simultaneous display of different series of numbers of different types on a single chart and automatically display appropriate axis labels, axis titles, chart titles, number precision, etc. A chart view may be a component of a data viewer used to retrieve, manipulate, and view documents in the RDML format.

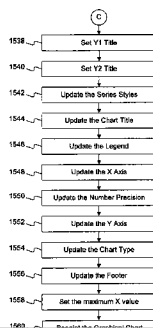
U.S. PATENT DOCUMENTS

4,674,043	A	*	6/1987	Hernandez et al.	715/503
5,423,032	A		6/1995	Byrd et al.	
5,737,592	A		4/1998	Nguyen et al.	
5,838,965	A		11/1998	Kavanagh et al.	
5,999,944	A		12/1999	Lipkin	
6,014,661	A		1/2000	Ahlberg et al.	707/3
6,026,388	A		2/2000	Liddy et al.	
6,223,189	B1	*	4/2001	Steffens et al.	715/503
6,317,750	B1		11/2001	Tortolani et al.	
6,349,307	B1		2/2002	Chen	
6,366,915	B1		4/2002	Rubert et al.	
6,370,549	B1		4/2002	Saxton	
6,460,059	B1		10/2002	Wisniewski	
6,493,717	B1		12/2002	Junkin	
6,615,258	B1		9/2003	Barry et al.	
2002/0198985	A1		12/2002	Fraenkel et al.	
2003/0167213	A1		9/2003	Jammes et al.	

OTHER PUBLICATIONS

Rienstra, Jon, "Using Excel@in Chemistry" Oct. 1995, http://www.asa3.org/chemistry/computers_in_chemistry/excel_tips.html.*

6 Claims, 40 Drawing Sheets



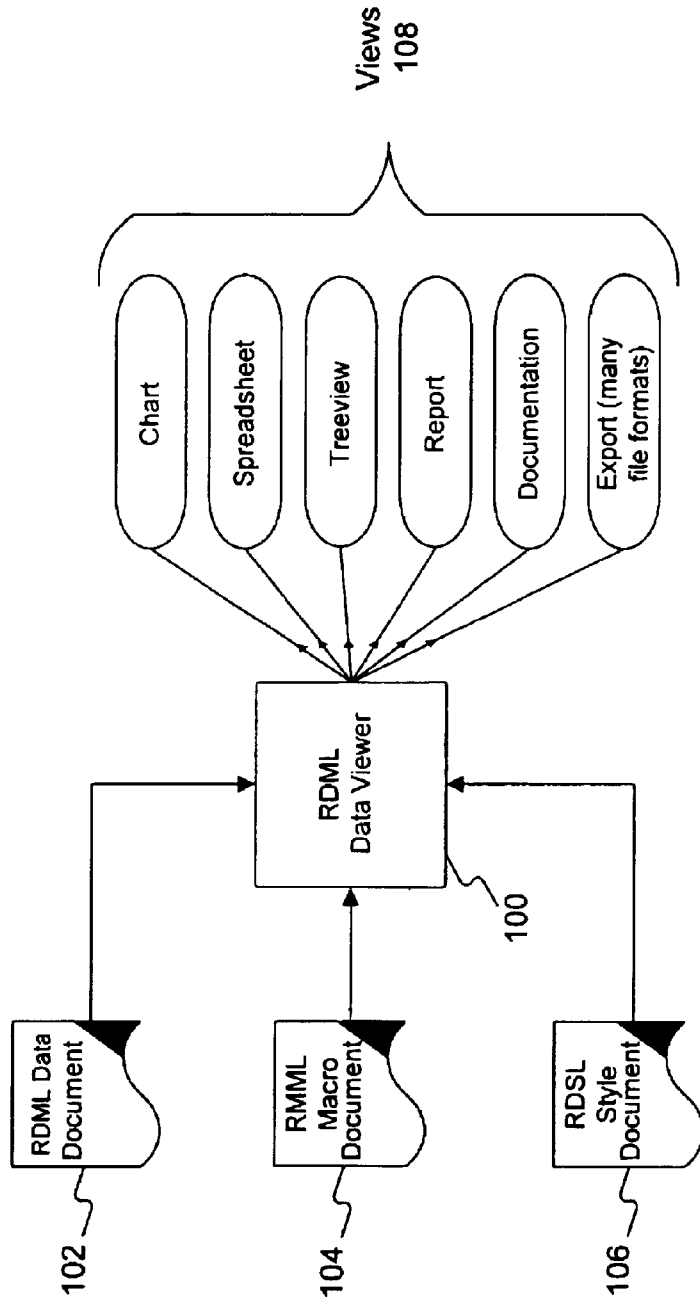
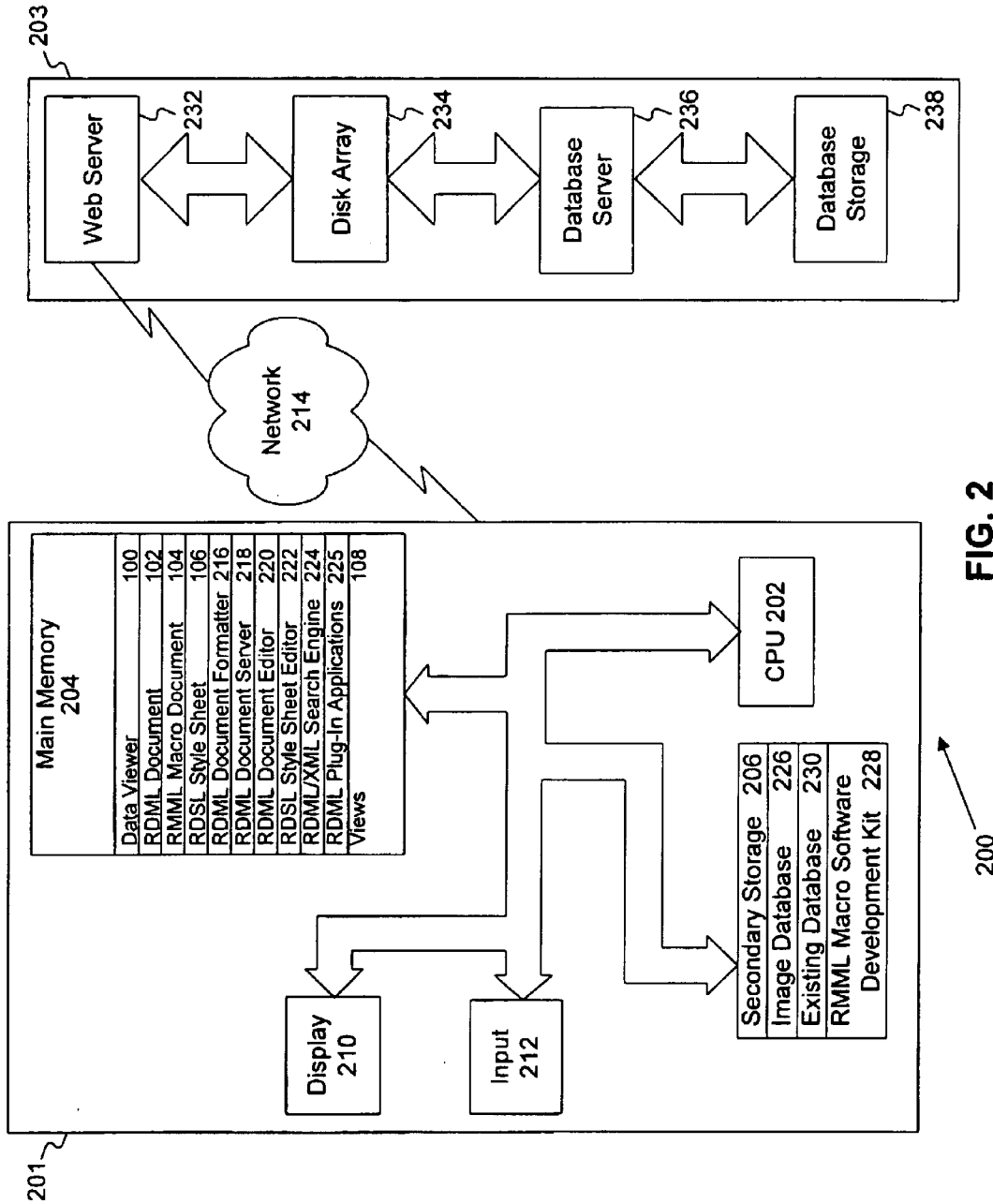


FIG. 1



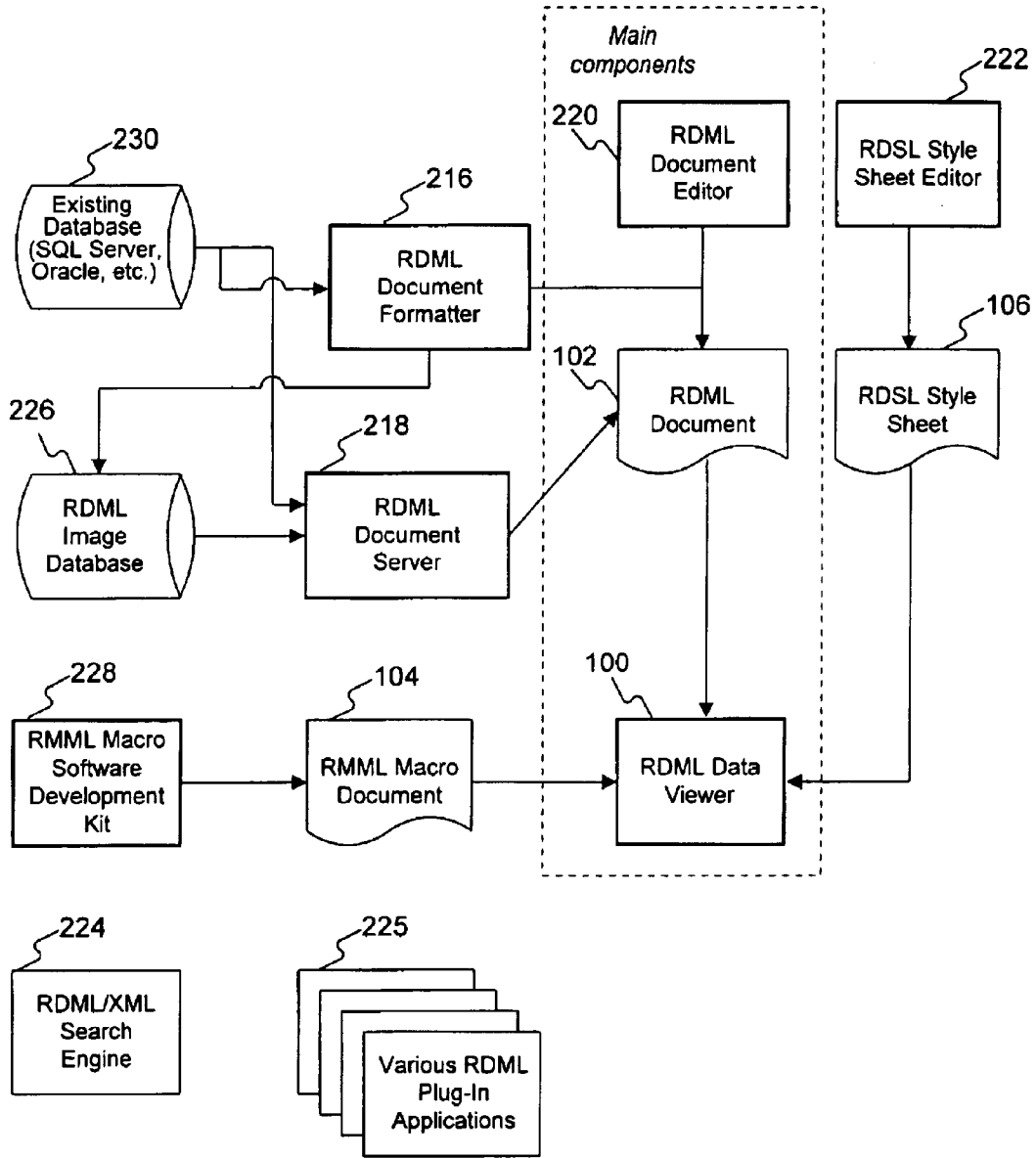


FIG. 3

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