

EXHIBIT Z



US010223337B2

(12) **United States Patent**
Davis

(10) **Patent No.:** **US 10,223,337 B2**
(45) **Date of Patent:** ***Mar. 5, 2019**

(54) **MARKUP LANGUAGE SYSTEM, METHOD,
AND COMPUTER PROGRAM PRODUCT**

G06F 17/21 (2006.01)

G06F 3/0484 (2013.01)

G06F 3/0482 (2013.01)

G06F 17/30 (2006.01)

(71) Applicant: **e-Numerate Solutions, Inc.**, Great Falls, VA (US)

(52) **U.S. Cl.**

CPC *G06F 17/2247* (2013.01); *G06F 3/0482*

(2013.01); *G06F 3/04842* (2013.01); *G06F*

17/218 (2013.01); *G06F 17/30011* (2013.01);

G06F 17/30014 (2013.01); *G06F 17/30882*

(2013.01)

(72) Inventor: **Russell T Davis**, Bethesda, MD (US)

(73) Assignee: **e-Numerate Solutions, Inc.**, Great Falls, VA (US)

(58) **Field of Classification Search**

CPC *G06F 17/218*; *G06F 17/2252*; *G06F*

17/30014; *G06F 17/30882*; *G06F*

17/3011; *G06F 3/0482*

See application file for complete search history.

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 31 days.

This patent is subject to a terminal disclaimer.

(56) **References Cited**

(21) Appl. No.: **14/986,601**

(22) Filed: **Dec. 31, 2015**

PUBLICATIONS

(65) **Prior Publication Data**

US 2016/0283449 A1 Sep. 29, 2016

Alan Simpson & Elizabeth Olson, Mastering Access 97 (SYBEX Inc. 1997) 975 pages.

Charles Goldfarb & Paul Prescod, The XML Handbook (Prentice Hall PTR 1998) 639 pages.

Excerpts from Microsoft Computer Dictionary (4th ed. 1999) for "macro," "code," "interpret," "markup," "markup language," "metadata," "semantics," "map," and "validation".

Related U.S. Application Data

Primary Examiner — Kyle R Stork

(60) Continuation of application No. 14/724,794, filed on May 28, 2015, now Pat. No. 9,262,384, which is a continuation-in-part of application No. 12/222,751, filed on Aug. 15, 2008, now abandoned, which is a division of application No. 09/573,778, filed on May 18, 2000, now Pat. No. 7,421,648.

(57) **ABSTRACT**

A system, method, and computer program product are provided for use in connection with at least one computer-readable Extensible Markup Language (XML)-compliant data document capable of including: a plurality offline items with a plurality of data values, and a plurality of computer-readable semantic tags that describe a semantic meaning of the data values.

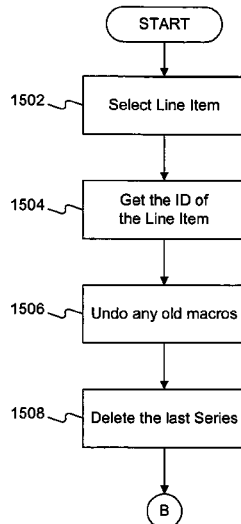
(60) Provisional application No. 60/183,152, filed on Feb. 17, 2000, provisional application No. 60/135,525, filed on May 21, 1999.

(51) **Int. Cl.**

G06F 3/00 (2006.01)

G06F 17/22 (2006.01)

10 Claims, 40 Drawing Sheets



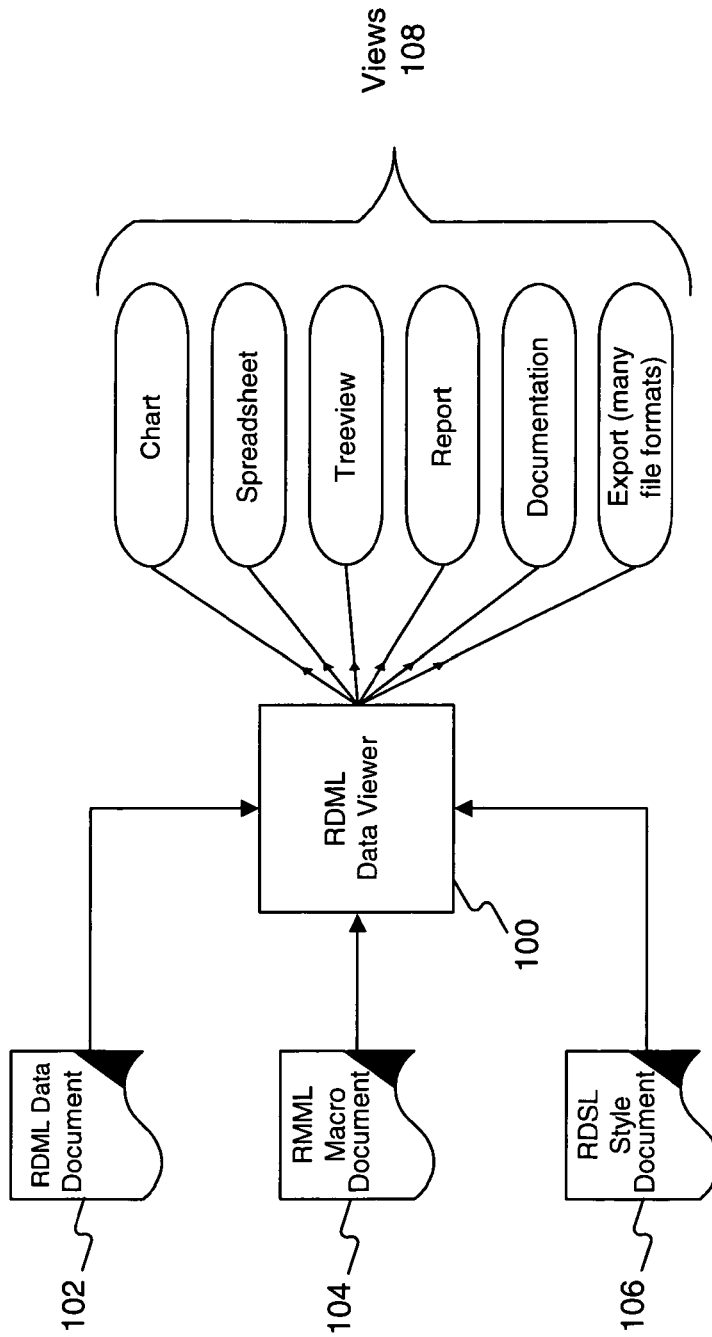


FIG. 1

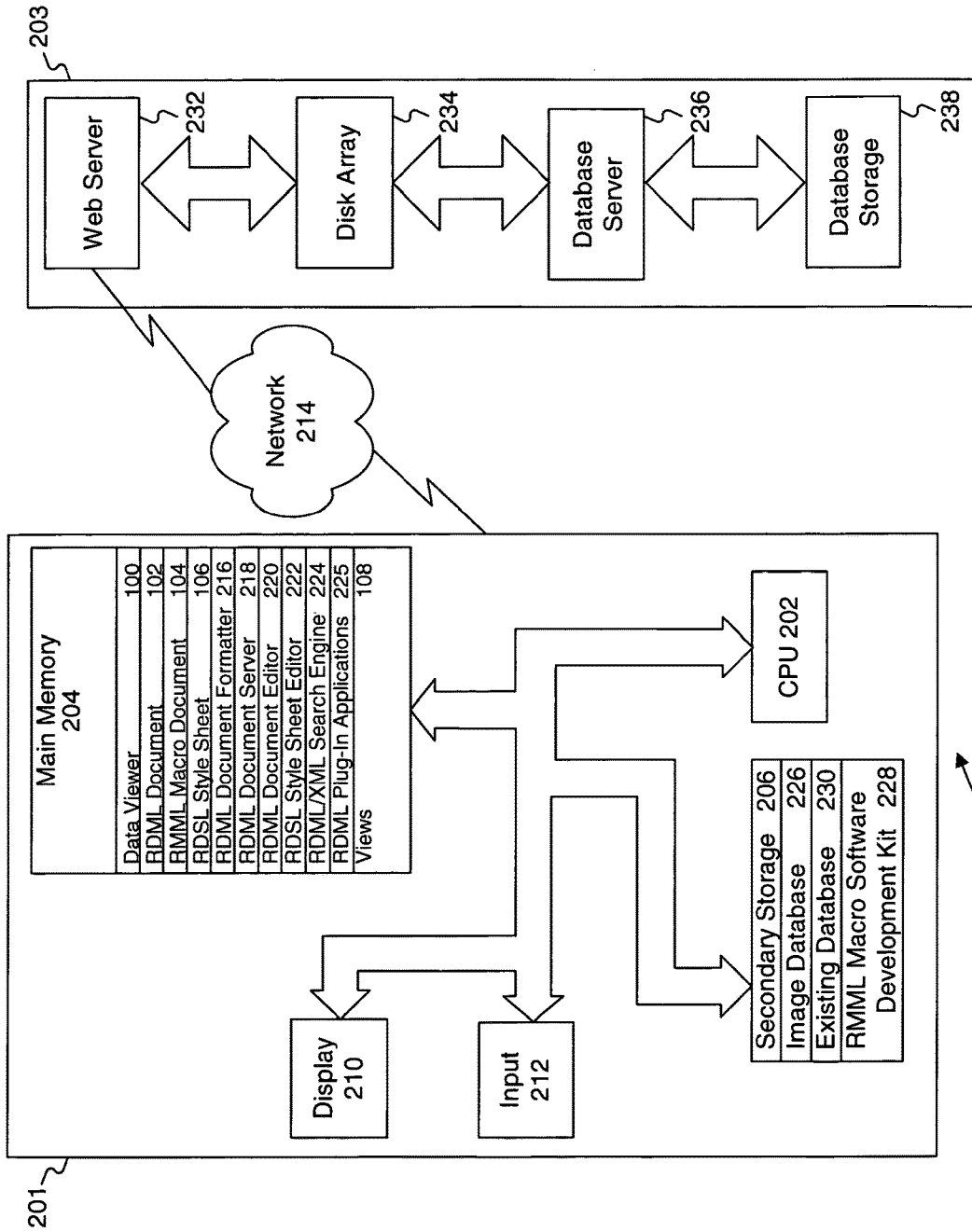


FIG. 2

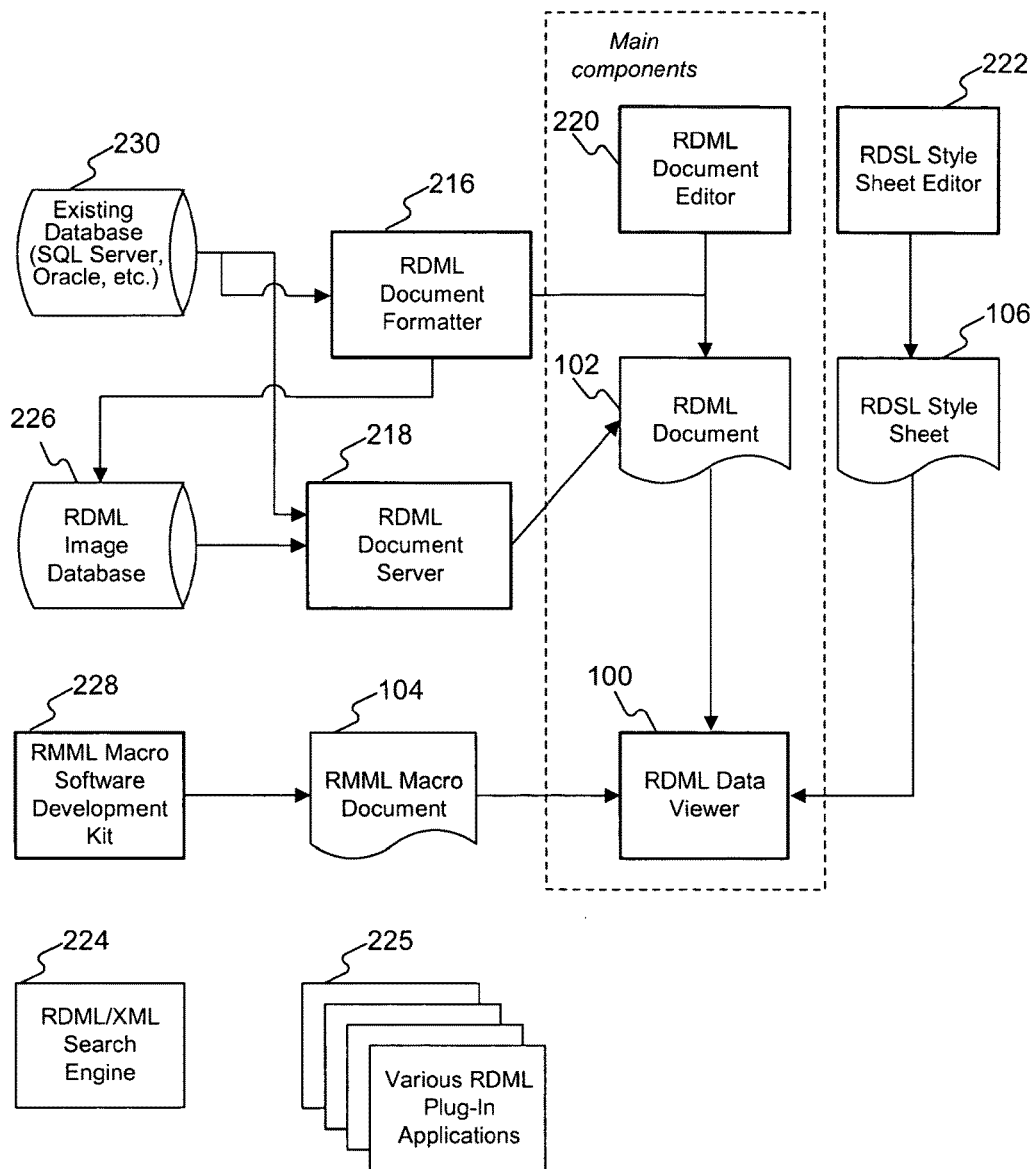


FIG. 3

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.