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**Davis**

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(54) **REUSABLE MACRO MARKUP LANGUAGE**

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

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(73) Assignee: **E-Numerate Solutions, Inc.**, McLean, VA (US)

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

*Primary Examiner*—Cam Y T Truong  
(74) *Attorney, Agent, or Firm*—Finnegan, Henderson, Farabow, Garrett & Dunner, LLP

(57) **ABSTRACT**

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**Related U.S. Application Data**

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(51) **Int. Cl.**  
**G06F 17/30** (2006.01)

(52) **U.S. Cl.** ..... **707/102; 707/101; 707/3; 707/204; 715/234; 715/202**

(58) **Field of Classification Search** ..... **707/103, 707/102, 100, 3, 6, 101, 10; 345/604; 715/517, 715/500, 503, 513, 523, 50.1**

See application file for complete search history.

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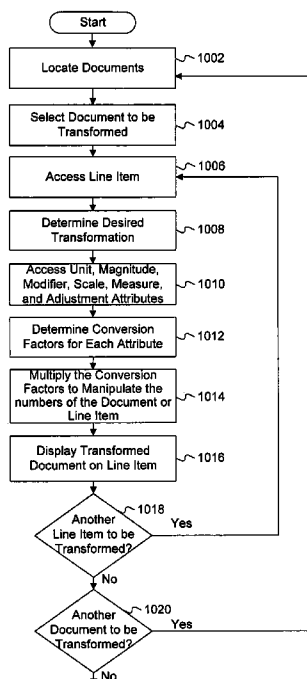
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Methods and systems in accordance with the present invention provide macros and a markup language referred to as Reusable Macro Markup Language ("RMML") which allows numerical analysis routines to be written quickly, cheaply, and in a form that is usable by a broad range of data documents in the Reusable Data Markup Language ("RDML") formatting language. RMML and RDML are markup languages, 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. RMML allows spreadsheet type macros to be posted as web documents, to be searched by search engines, to be combined into more complex programs, and to be reused with many data documents. RMML macros also provide reusable user-defined calculations for use in conjunction with RDML that automatically manipulate and display numerical data contained in RDML markup documents.

**56 Claims, 40 Drawing Sheets**



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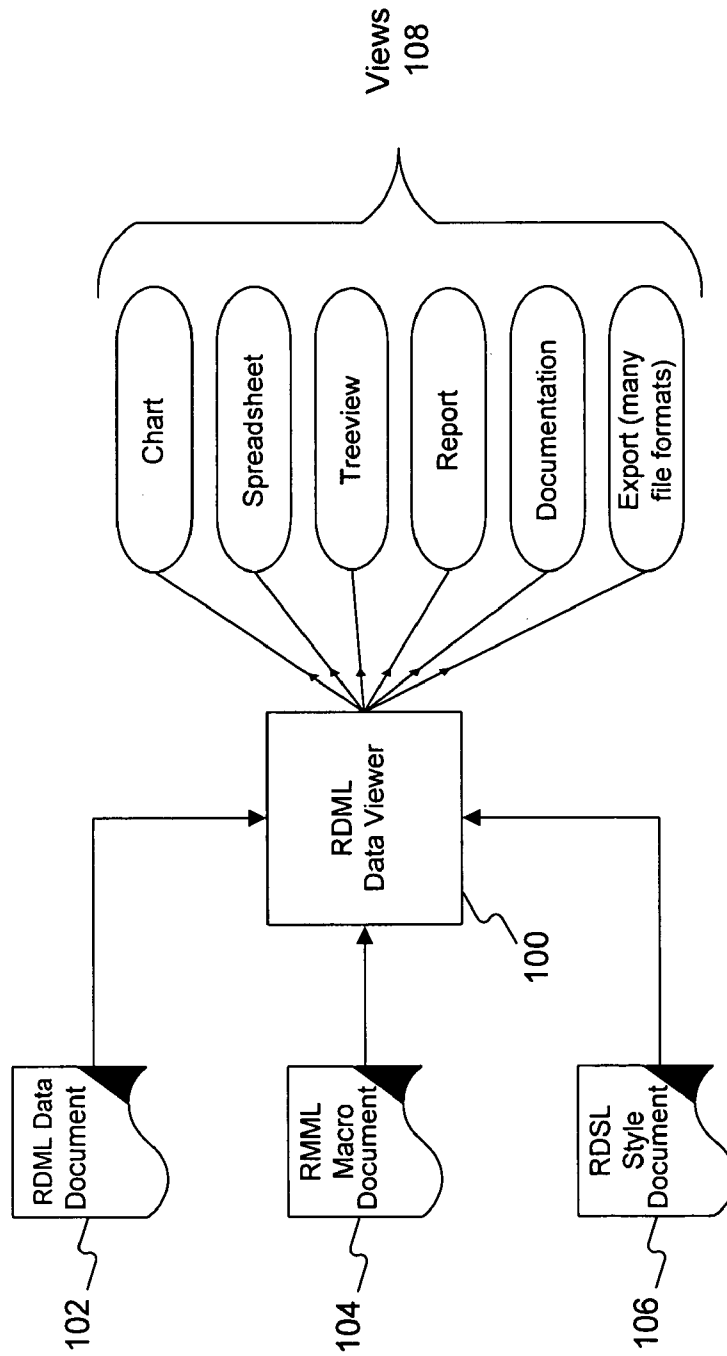


FIG. 1

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