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[54] METHOD AND APPARATUS FOR ENCODING DATA TO BE SELF-DESCRIBING BY STORING TAG RECORDS DESCRIBING SAID DATA TERMINATED BY A SELF-REFERENTIAL RECORD

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### Related U.S. Application Data

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[58] Field of Search ..... 395/704, 612, 395/613, 615

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### [57] ABSTRACT

A computer-implemented method and apparatus in a computer system of processing data generated by a first application program in a second application program during runtime. During runtime, the first application program generates a record including a plurality of fields, wherein at least one of the plurality of fields contains data generated by the first application program. Other of the plurality of fields containing descriptive information regarding the data. The record also includes a reference (e.g. a pointer, relative or absolute) to a tag record. The tag record describes the plurality of fields contained in the record. The tag record further recursively references a plurality of tag records each referencing an associated tag record identifying fields in a referred-to tag record. This continues, recursively, until ultimately, a root record is referenced including a self-referential tag identifying the fields in the root record. The second application program then receives the record, and references the tag record and each of the plurality of tag records, recursively, until reaching the root record in order to identify the data by referencing the plurality of fields in each of the tag records. In this manner, the data contained in the record is thus self-describing. The second application program then manipulates the data according to the identification of the data specified by the record, the tag record and each of the plurality of tag records.

24 Claims, 7 Drawing Sheets

