

METHOD AND SYSTEM FOR TRANSFERRING DATA BETWEEN OBJECTS USING REGISTERED DATA FORMATS

This application is a continuation of application Ser. No. 07/900,968, filed Jun. 17, 1992, now abandoned.

TECHNICAL FIELD

This invention relates generally to a computer method and system for registering data formats for objects and, more specifically, to a method and system for storing data formats supported by a server, retrieving data formats supported by the server, and sending data to the server and requesting the server to return data in the retrieved format.

BACKGROUND OF THE INVENTION

Current document processing computer systems allow a user to prepare compound documents. A compound document is a document that contains information in various formats. For example, a compound document may contain data in text format, chart format, numerical format, etc. FIG. 1 is an example of a compound document. In this example, the compound document 101 is generated as a report for a certain manufacturing project. The compound document 101 contains scheduling data 102, which is presented in chart format; budgeting data 103, which is presented in spreadsheet format; and explanatory data 104, which is presented in text format. In typical prior systems, a user generates the scheduling data 102 using a project management computer program and the budgeting data 103 using a spreadsheet computer program. After this data has been generated, the user creates the compound document 101, enters the explanatory data 104, and incorporates the scheduling data 102 and budgeting data 103 using a word processing computer program.

FIG. 2 shows how the scheduling data, budgeting data, and explanatory data can be incorporated into the compound document. The user generates scheduling data using the project management program 201 and then stores the data in the clipboard 203. The user generates budgeting data using the spreadsheet program 204 and then stores the data in the clipboard 203. The clipboard 203 is an area of storage (disk or memory) that is typically accessible by any program. The project management program 201 and the spreadsheet program 204 typically store the data into the clipboard in a presentation format. A presentation format is a format in which the data is easily displayed on an output device. For example, the presentation format may be a bitmap that can be displayed with a standard bitmap block transfer operation (BitBlt). The storing of data into a clipboard is referred to as "copying" to the clipboard.

After data has been copied to the clipboard 203, the user starts up the word processing program 206 to create the compound document 101. The user enters the explanatory data 104 and specifies the locations in the compound document 101 to which the scheduling data and budgeting data that are in the clipboard 203 are to be copied. The copying of data from a clipboard to a document is referred to as "pasting" from the clipboard. The word processing program 206 then copies the scheduling data 102 and the budgeting data 103 from the clipboard 203 into the compound document 101 at the specified locations. Data that is copied from the clipboard into a compound document is referred to as "embedded" data. The word processing program 206 treats the embedded data as simple bitmaps that it displays with a BitBlt operation when rendering the compound document

101 on an output device. In some prior systems, a clipboard may only be able to store data for one copy command at a time. In such a system, the scheduling data can be copied to the clipboard and then pasted into the compound document. Then, the budgeting data can be copied to the clipboard and then pasted into the compound document.

Since word processors typically process only text data, users of the word processing program can move or delete embedded data, but cannot modify embedded data, unless the data is in text format. Thus, if a user wants to modify, for example, the budgeting data 103 that is in the compound document 101, the user must start up the spreadsheet program 204, load in the budgeting data 103 from a file, make the modifications, copy the modifications to the clipboard 203, start up the word processing program 206, load in the compound document 101, and paste the modified clipboard data into the compound document 101.

Some prior systems store links to the data to be included in the compound document rather than actually embedding the data. When a word processing program pastes the data from a clipboard into a compound document, a link is stored in the compound document. The link points to the data (typically residing in a file) to be included. These prior systems typically provide links to data in a format that the word processing program recognizes or treats as presentation format. For example, when the word processing program 206 is directed by a user to paste the scheduling data and budgeting data into the compound document by linking, rather than embedding, the names of files in which the scheduling data and budgeting data reside in presentation format are inserted into the document. Several compound documents can contain links to the same data to allow one copy of the data to be shared by several compound documents.

SUMMARY OF THE INVENTION

It is an object of the present invention to provide a method and system for registering data formats for a server application.

It is another object of the present invention to provide a method and system for registering data formats that the server application can both receive and send data in.

It is another object of the present invention to provide a method and system for a client application to determine which data formats a server application supports without launching the server application.

It is another object of the present invention to provide a method and system for transferring data between a server and client application.

These and other objects, which will become apparent as the invention is more fully described below, are obtained by a method and system for transferring data between a server and client application. In a preferred embodiment, the data formats that the server application supports are stored in a persistent global registry. The client application retrieves the data formats from the persistent global registry and requests the server application to supply data in the retrieved format. The server application, upon receiving the request, supplies the data in the retrieved format.

BRIEF DESCRIPTION OF THE DRAWINGS

FIG. 1 is an example of a compound document.

FIG. 2 is a block diagram illustrating the incorporation of the scheduling data, budgeting data, and explanatory data into the compound document.