

extended portion may be one or more objects, properties, formulas, or any other component or feature of the self-describing file that the application does not natively support. In embodiments, the one or more extension elements may provide information to the application performing the method **400** to properly preserve content of the self-describing file, even if the application does not support or understand the content. For example, the information received at operation **404** may contain a function or formula that the application may use to derive a value for a property, even if the application does not natively support the property.

Flow continues to operation **406** where the application modifies a portion of the self-describing file. For example, the application may modify the file content of a first property based upon user input, such as, for example, the user changing the shading value of a shape. In other embodiments, the application may perform the modification automatically or in response to an instruction received from another application.

In embodiments, the value of a second property may be dependent upon the value of a first property. However, a less featured application modifying the first property may not natively support the second property, may not natively understand the relationship between the first and second property, or may not natively know the formula or function used to recalculate the second value. However, because the application received information indicating the relationship between the properties at operation **404** (e.g., a formula used to calculate the second property), the application is capable of properly recalculating the second value if necessary.

Flow continues to operation **408** where the application recalculates the value of the second property based upon the modification to the first property. The application may use the information received at operation **404** to recalculate the value of the second property. For example, the information may include a formula for determining the value of the second property based upon the first value. At operation **408**, the application may use the formula to recalculate a value for the second property. As such, the application performing the method **400** is capable of properly preserving file content, even if the file content is unknown or unsupported by the application, using the information received at operation **404**. As such, the information in one or more extensions associated with the self-describing file provides an application with the ability to modify both native and extended portions of the file content, thereby providing application with the ability to support extended functionality in addition to the application's native functionality.

Upon recalculating the value, flow continues to operation **410** where the application writes the modified first property and the recalculated second property to the self-describing file. In embodiments, the application may store the modified self-describing file in computer storage media, such as the computer storage media described in FIG. 5 at operation **410**.

While embodiments of the method **400** are described with respect to modifying a first property value and recalculating a property value, one of skill in the art will appreciate that the method may be extended to receive modifications and perform recalculations on more properties. Additionally, while the method **400** is described as receiving modifications to and recalculating the values of properties, the method may be employed to preserve any type of file content such as, but not limited to, objects, sections, templates, etc. Furthermore, while the method **300** describes a discrete number of steps occurring in a particular order, one of skill in the art will appreciate that the method **300** may be performed in a different order or with more or fewer steps.

With reference to FIG. 5, an embodiment of a computing environment for implementing the various embodiments described herein includes a computer system, such as computer system **500**. Any and all components of the described embodiments may execute as or on a client computer system, a server computer system, a combination of client and server computer systems, a handheld device, a tablet computing device, and other possible computing environments or systems described herein. As such, a basic computer system applicable to all these environments is described hereinafter.

In its most basic configuration, computer system **500** comprises at least one processing unit or processor **504** and system memory **505**. The most basic configuration of the computer system **500** is illustrated in FIG. 5 by dashed line **502**. In some embodiments, one or more components of the described system are loaded into system memory **505** and executed by the processing unit **504** from system memory **506**. Depending on the exact configuration and type of computer system **500**, system memory **506** may be volatile (such as RAM), non-volatile (such as ROM, flash memory, etc.), or some combination of the two.

Additionally, computer system **500** may also have additional features/functionality. For example, computer system **500** includes additional storage media **508**, such as removable and/or non-removable storage, including, but not limited to, magnetic or optical disks or tape. In some embodiments, software or executable code and any data used for the described system is permanently stored in storage media **508**. Storage media **508** includes volatile and non-volatile, removable and non-removable media implemented in any method or technology for storage of information such as computer readable instructions, data structures, program modules, or other data. In embodiments, the disclosed self-describing files and the instructions to perform the methods of generating self-describing files and preserving unknown content are stored in storage media **508**.

System memory **506** and storage media **508** are examples of computer storage media. Computer storage media includes, but is not limited to, RAM, ROM, EEPROM, flash memory or other memory technology, CD-ROM, digital versatile disks ("DVD") or other optical storage, magnetic cassettes, magnetic tape, magnetic disk storage, other magnetic storage devices, or any other medium which is used to store the desired information and which is accessed by computer system **500** and processor **504**. Any such computer storage media may be part of computer system **500**. In embodiments, system memory **506** and/or storage media **508** stores data used to perform the methods and/or form the system(s) disclosed herein, such as, creating a self-describing file and preserving unknown file content. In embodiments, system memory **506** stores information such as a self-describing file **514** and instructions **516** for performing a method of preserving unknown file content as discussed with respect to FIGS. 1 and 4. Although not shown in FIG. 5, instructions to perform a method of generating a self-describing file and recalculating the values of contents in a self-describing file as discussed with respect to FIGS. 2 and 3 may also be stored in system memory **506**.

Computer system **500** may also contain communications connection(s) **510** that allow the device to communicate with other devices. In embodiments, communications connection(s) **510** may be used to transmit and receive messages between sender devices, intermediary devices, and recipient devices. Communication connection(s) **510** is an example of communication media. Communication media may embody a modulated data signal, such as a carrier wave or other transport mechanism and includes any information delivery