[0012] In accordance with other aspects of the present invention, the application is a third party application such as a virus scan application or a replicator-type application that creates redundant copies of data objects for back-up or performance purposes. Additionally, the version-specific property of the present invention may comprise meta information, version information and mask information. The version information relates to the version of the object itself or of the application used to create the version-specific property and the mask information relates to a policy or definition of the predetermined events that may invalidate the version specific property. In yet other embodiments, the version-specific property may further comprise a digital signature or other security information to either prevent unauthorized access to the property or the data object, or to provide a validating element for other applications in determining whether the data object has been corrupted.

[0013] In accordance with still other aspects of the present invention, the version specific property may be invalidated based on predetermined events such as modification of the data within the object, the metadata associated with the object or when other version-specific properties change. The invalidation act may be a deletion or truncation of the version specific property, or any other method of indicating that the version-specific property is invalid.

[0014] In accordance with another aspect, the present invention relates to an object format having a version-specific property. The version-specific property has a meta information section, a version information section for storing information related to the version of the application that created the property, and a mask information section for storing information related to predetermined events which cause the invalidation of the property. Additionally, the invention relates to a system providing the protocol for creating and maintaining such version-specific properties.

[0015] The invention may be implemented as a computer process, a computing system or as an article of manufacture such as a computer program product. The computer program product may be a computer storage medium readable by a computer system and encoding a computer program of instructions for executing a computer process. The computer program product may also be a propagated signal on a carrier readable by a computing system and encoding a computer program of instructions for executing a computer process.

[0016] A more complete appreciation of the present invention and its improvements can be obtained by reference to the accompanying drawings, which are briefly summarized below, to the following detailed description of presently preferred embodiments of the invention, and to the appended claims.

BRIEF DESCRIPTION OF THE DRAWINGS

[0017] **FIG. 1** is a functional diagram of a computer system that may incorporate aspects of the present invention.

[0018] **FIG. 2** is a block diagram illustrating software components of the present invention.

[0019] **FIG. 3** is a functional diagram illustrating the components of a resource according to the present invention.

[0020] **FIG. 4** is a flow diagram illustrating the functional characteristics of an embodiment of the present invention.

DETAILED DESCRIPTION OF THE INVENTION

[0021] The present invention relates to a data object model that provides for the creation of version-specific properties or properties that define or provide meta information about a data object. The version-specific properties are similar to other data object properties in that they may be stored in association with a data object, whether through a meta information identification pointer or by storing the information in a resident manner with the data object itself. However, the version-specific properties have relatively different features from existing meta information properties, including the ability to store version-specific information related to the application that created the version-specific property. Moreover, the version-specific property is automatically updated upon the occurrence of a predetermined event. Indeed, information related to which events cause invalidation may also be stored as part of the version-specific property.

[0022] **FIG. 1** illustrates an example of a suitable computing system environment **100** in which the present invention may be implemented. The computing system environment **100** is only one example of a suitable computing environment and is not intended to suggest any limitation as to the scope of use or functionality of the invention. Neither should the computing environment **100** be interpreted as having any dependency or requirement relating to any one or combination of components illustrated in the exemplary operating environment **100**.

[0023] In addition to the environment **100** shown in **FIG. 1**, the invention may be operational with numerous other general purpose or special purpose computing system environments or configurations. Examples of well known computing system, environments, and/or configuration that may be suitable for use with the invention include, but ate not limited to, personal computers, server computers, hand-held or laptop devices, multiprocessor systems, microprocessor-based systems, set top boxes, programmable consumer electronics, network PCs, minicomputers, mainframe computers, distributed computing environments that include any of the above systems or devices, and the like.

[0024] Moreover, the present invention may be described in the general context of computer-executable instructions, such as program modules, being executed by a computer. Generally, program modules include routines, programs, objects, components, data structures, etc. that perform particular tasks or implement particular abstract data types. The invention may also be practiced in distributed computing environments where tasks are performed by remote processing devices that are linked through a communications network. In a distributed computing environment, program modules may be located in both local and remote computer storage media including memory storage devices.

[0025] With reference to **FIG. 1**, an exemplary system for implementing the invention includes a general purpose computing device in the form of a computer **102**. Components of computer **102** may include, but are not limited to, a processing unit **104**, a system memory **106**, and a system bus **108** that couples various system components including