

[0080] FIG. 7 is a flow chart depicting a method 700 for loading and saving an original data file according to the present invention, where the active version has an additional object property that is not included in a previous version. In step 710 of method 700, a default value for a new property is defined in an OPL for the active version of the application program. The process proceeds to step 725 where the original data file is loaded without changes. After the original data file has been modified, it is saved in step 730. Accordingly, the new property is saved for use with the active and future versions of the application program. Previous versions will simply ignore the new property. In step 740, the high version watermark is updated to the active version.

[0081] FIG. 8 is a flow chart depicting a method 800 for loading and saving an original data file according to the present invention, where the active version has deleted an object property that was used in a previous version. In step 820, the deleted property is ignored when the original data file is loaded in the active version. When a modified version of the original data file is saved in step 830, the file is saved with the deleted property available to older versions. While the active version did not use the deleted property, the deleted property is returned to the saved file for use by previous versions. The deleted property can be returned to the saved file by leaving the deleted property in the original data file, i.e., by not writing the deleted property out of the file. Alternatively, the deleted property can be returned to the saved file by propagating the deleted property (from the original data file) back into the saved file. Because the deleted property is known to the active version, the value of the deleted property can be derived from other property values, or a default value representing the deleted property can be generated, to allow the deleted property to be returned to the file. In step 840, the high version watermark can be updated to the active version.

[0082] For example, suppose that the previous version included a drop shadow property on an object. The active version may no longer support this property, i.e., the drop shadow property has been deleted from the active version. The newer version of the application program recognizes that the drop shadow property has been deleted. However, the drop shadow property can still be written to the file by the active version. In step 820, the original data file can be loaded, and the deleted drop shadow property can be ignored. When a modified version of the original data file is saved in step 830, the file can be saved with the deleted drop shadow property available to older versions. While the active version did not use the deleted drop shadow property, the deleted drop shadow property can be returned to the saved file for use by previous versions. The drop shadow property value can be determined from the value of other properties, or a default value can be used. In step 840, the high version watermark can be updated to the active version.

[0083] FIG. 9 is a flow chart depicting a method 900 for loading and saving an original data file according to the present invention, where the active version has modified an old object property of a previous version. Rather than replacing the old property with the modified property, a new property that represents the modified property is provided in the active version. In step 910 of method 900, a default value for a new property is defined in an OPL of the active version of the application program. The old property is left

unchanged. Then in step 920, the original data file is loaded into the active version, and the old property is converted to the new (modified) property. After the original data file has been modified, it is saved in step 930. In step 930, the new property is saved without reference to the old property. Additionally in step 930, the new property is converted to the old property and saved for use by a previous version. In step 940, the high version watermark is updated to the active version.

[0084] For example, suppose that the previous version of the application program used the RGB (Red, Green, Blue) color model to define colors of objects. The active version of the application program could include a new property to allow defining the colors of objects in the CMYK color model (Cyan, Magenta, Yellow, Black) used by professional printers. The new CMYK color property can be based on the old RGB color property, and an equivalent CMYK value can be determined for each RGB value. A new opyid can be added to the appropriate OPL dictionary. For example, the appropriate dictionary can be a page object dictionary for a page object, another existing dictionary, or a new dictionary. In step 910, the default value for the new CMYK color property can be defined in the OPL dictionary. The old RGB property remains unchanged. In step 920, the original data file can be loaded into the active version, and the new CMYK color property can be updated based on the old RGB property of the object. After the original data file has been modified, it can be saved in step 930. In step 930, the new CMYK color property can be saved without reference to the old RGB property from the original data file. The new CMYK property can be converted to a corresponding old RGB property and saved in the file. Accordingly, the new CMYK color property can be saved for use with the active and future versions of the application program. Previous versions will simply ignore the new CMYK color property. In step 940, the high version watermark can be updated to the active version.

[0085] The method of the present invention can also resolve inconsistencies between two versions of the application program that are saved in the data file. In the CMYK-RGB example discussed above, previous versions can read the file because the later version will convert the new CMYK color property down to a corresponding RGB property. However, inconsistencies can develop when the last version to write the file is older than both the active version and the high version to write the file. The active version can be the same version or a later version than the high version to write the file. If the high version, which is not the last version, to write the file recognized the new CMYK color property, then it will write out the new CMYK color property value into the data file, as well as a corresponding RGB color property value. Additionally, if the last version to write the file recognized only the RGB color property, then it will write out the RGB color property value into the data file. When the data file is loaded into the active version that supports the new CMYK color property, the CMYK color property in the data file corresponds to old information. Two versions of the color property information exist in the data file because the high version wrote the CMYK color property value in the file and the last version wrote RGB color property value in the file. The RGB and CMYK values do not match because the last version to write the file updated the RGB value, but retained the value of the unknown CMYK property. When the file is loaded into the active