

[0072] FIG. 8 is a flow diagram showing a method of requesting a modification by transmitting a REQ\_MOD message;

[0073] FIG. 9 is a flow diagram showing a method of determining the difference between the current version of a document and another version of the document;

[0074] FIG. 10 is a flow diagram showing a method of modifying a document by transmitting a MODIFY message;

[0075] FIG. 11 is a flow diagram showing a method of publishing a document by transmitting a PUBLISH message;

[0076] FIG. 12 is a flow diagram showing a further method of transmitting a MODIFY message;

[0077] FIG. 13 is a flow diagram showing a method of updating a document;

[0078] FIG. 14 is a flow diagram showing a method of merging two sets of document modifications;

[0079] FIG. 15 is a flow diagram showing a method of logging into an editing session by transmitting a LOGIN message;

[0080] FIG. 16 is a flow diagram showing a method of broadcasting a message to a list of recipients;

[0081] FIG. 17 is a sequence diagram showing the process of publication and acknowledgment of a document, followed by the logout of a collaborator;

[0082] FIG. 18 is a sequence diagram showing the process of performing an online merge of two versions of a document;

[0083] FIG. 19 is a sequence diagram showing the process of performing an online merge of two versions of a document with both simultaneous and sequential modifications; and

[0084] FIG. 20 is a flow diagram showing a method of logging out of an editing session for a document by transmitting a LOGOUT message.

#### DETAILED DESCRIPTION INCLUDING BEST MODE

[0085] Where reference is made in any one or more of the accompanying drawings to steps and/or features, which have the same reference numerals, those steps and/or features have for the purposes of this description the same function(s) or operation(s), unless the contrary intention appears.

[0086] It is to be noted that the discussions contained in the "Background" section relating to prior art arrangements relate to discussions of documents or devices which form public knowledge through their respective publication and/or use. Such should not be interpreted as a representation by the present inventor(s) or patent applicant that such documents or devices in any way form part of the common general knowledge in the art.

[0087] Before proceeding with a description of the embodiments, a brief review of terminology used throughout this description will now be discussed.

[0088] The term "document" refers to a layout document for an associated digital photo album. The term "layout"

refers to the positions, sizes and rotations of images in the associated album. The term "patch" refers to a modification that can be applied to a document to turn the document into another document (e.g. the "patch B-A" applied to document A will yield document B). Further, the acronym "UUID" refers to a universally-unique identifier, as will be explained in detail below.

[0089] A method 100 (as seen in FIG. 1) of editing a document is described below with reference to FIGS. 1 to 19. For ease of explanation, the steps of the method 100 are described with reference to the collaborative editing of the layout of a digital photo album. However, it is not intended that the present invention be limited to the described method. For example, the invention may have application to the editing of any other type of electronic document such as a text document.

[0090] The method 100 allows users to cooperatively and/or competitively edit the layout of images in a digital photo album. For example, the method 100 allows for the simultaneous modification of a document by one or more users, so as to alter the position, scale or rotation of different images or possibly the same image. Such alterations to an image may augment each other or cancel each other out.

[0091] The method 100 is preferably practiced using a general-purpose computer system 200, such as that shown in FIG. 2 wherein the processes of FIGS. 1 and 3 to 19 may be implemented as software, such as an application program executing within the computer system 200. In particular, the steps of method 100 of editing a document are effected by instructions in the software that are carried out by the computer. The instructions may be formed as one or more code modules, each for performing one or more particular tasks. The software may also be divided into two separate parts, in which a first part performs the method 100 and a second part manages a user interface between the first part and the user. The software may be stored in a computer readable medium, including the storage devices described below, for example. The software is loaded into the computer from the computer readable medium, and then executed by the computer. A computer readable medium having such software or computer program recorded on it is a computer program product. The use of the computer program product in the computer preferably effects an advantageous apparatus for implementing the method 100.

[0092] The computer system 200 is formed by a computer module 201, input devices such as a keyboard 202 and mouse 203, output devices including a printer 215, a display device 214 and loudspeakers 217. A Modulator-Demodulator (Modem) transceiver device 216 is used by the computer module 201 for communicating to and from a communications network 220, for example connectable via a telephone line 221 or other functional medium. The modem 216 can be used to obtain access to the Internet, and other network systems, such as a Local Area Network (LAN) or a Wide Area Network (WAN), and may be incorporated into the computer module 201 in some implementations. In this manner, the computer 200 can permit transmission of messages to remote computers 250, 252 connected to the network 220.

[0093] The computer module 201 typically includes at least one processor unit 205, and a memory unit 206, for example formed from semiconductor random access