

The change summary window **420** is also updated. A change summary display button **422** toggles the change summary window **420** between visible and hidden.

[0055] The change summary window **420** shows a hierarchical change summary tree **448** for a collaboration by person **421**, e.g., Michael **452** and Victoria **454**. The revision displayed in the evolving document window **412** and the comparison window **414** is revision **450** (“Revision as at Dec. 18, 2001 12:51:19”) with responses Michael **452** and Victoria **454**. The responses for Michael **452** and Victoria **454** correspond to the text displayed in tabs **418** for Michael and **416** for Victoria, respectively.

[0056] FIG. 6 is an example of an internal contributor GUI **510** of one embodiment of the present invention. The internal contributor GUI **510** includes an edit window **512**, a comparison window **514**, and a change summary window **520**. The edit window **512** is for entering the contributor’s proposed changes. For this example, the internal contributor GUI **510** has been opened by a third contributing author “Kim.”

[0057] The change summary window **520**, and the comparison window **514** generally cover the same content as the manager GUI’s change summary window **420**, and comparison window **414**, except in the internal contributor GUI **510**, the change summary window **520**, and the comparison window **514** are read-only (indicated by being grayed out). The tabs and associated contents of the comparison windows for tabs **416** and **418** are typically the same for the manager GUI **410** as tabs **520** and **522** for the internal contributor GUI **510**, respectively. FIG. 6 has an additional revision **620** (“Revision as at Feb. 25, 2002 3:38:17 PM”), not in FIG. 5, because a new contributing author “Kim” opened the revision **450** (“Revision as at Dec. 18, 2001 12:51:19”) after one or more proposed changes were accepted by the managing author into revision **450**. In the example of FIG. 6 revision **620** is revision **450** modified after all the proposed changes of Michael **452** and Victoria **454** have been accepted. The revision **450** is selected, as opposed to revision **620**, because a section of the revision **450** hierarchy is selected, e.g., item **454**.

[0058] There is a synchronization button **518** which operates like, but independently, from the synchronization button **440** of the manager GUI **410**. Since the contributor application is reading the same files in the change summary window and the comparison window, as the manager application, the contents of their displays should typically be the same. However, like the manager GUI, the contributor GUI **510** has a refresh or update button **518** which updates the change summary window and the comparison window displays with any new information over what is currently displayed, for example, a third contributor’s edits or a second response from Victoria. In one embodiment the refresh buttons, e.g., **518** and **440**, for the contributor GUI **510** and manager GUI **410**, respectively, operate independently, hence the change summary window and the comparison window for the manager GUI **410** may not show the same updates as the change summary window and the comparison window for contributor GUI **510**. In another embodiment the refresh buttons for the contributor GUI **510** and manager GUI **410** are linked together and the change summary window and the comparison window for the manager GUI **410**, as well as the same windows for the

contributor GUI **510** update together. In a further embodiment the summary window and the comparison window for the manager GUI **410**, as well as the same windows for the contributor GUI **510** update automatically.

[0059] Thus because the contributing authors have access to the same data repository as the managing author, e.g., the DMS or local file system or collaboration server database, each contributing author can view his/her proposed changes along with the other contributing authors proposed changes via the change summary pane **520** and the comparison pane **514**.

[0060] The edit window **512** displays the last revision received from the managing author. For example, in this case, revision **450** (“Revision as at Dec. 18, 2001 12:51:19”). The contributing author Kim makes edits (or comments) to a replica of revision **450**, which is displayed in edit window **512**. When the contributing author Kim is finished making edits, she submits her proposed changes to the managing author.

[0061] FIG. 7 is another aspect of the internal contributor GUI **510** of FIG. 6. In this case revision **620** (“Revision as at Feb. 25, 2002 3:38:17 PM”) is selected by the selection of item **622** (“Kim{Draft} (Feb. 25, 2002)”). Modifications to revision **620** by contributing author Kim are shown in editing window **612**. For example, in edit window **612**, item **630** shows the words: “This will give you the opportunity to” deleted (struck-through) by the contributing author, and item **632** shows the words “WE WILL” added (double underlined) by the contributing author. The edited replica has been saved as a draft on the contributing author’s computer as indicated by item **622**. The draft can be recalled later, edited again, and sent to the managing author. As the mark-up due to the changes is shown in the edit window **612**, comparison window **614** is blank for tab **616** (“Kim {draft}”).

[0062] FIG. 8 is another example of an internal contributor GUI of an aspect of the present invention. Manager GUI **710** shows the result, after the proposed changes by contributing author Kim **730** have been received and accepted by the managing author. In the change summary window **720**, Kim’s response is shown by label **722** (“Kim (Feb. 26, 2002)”). The proposed changes **630** and **632** in the Kim tab **730** comparison window **714** are shown accepted by the manager by the check on label **724** in the change summary window and the faded redline for changes **630** and **632** in the comparison window **714**. In the evolving document window **712** only the result, e.g., the words “WE WILL”**732** are displayed.

[0063] The displays of FIGS. 6 and 7 allow a contributing author to see the changes being proposed by other contributing authors, when they are using Internal Contributor Mode. a contributing author can use tabs along the bottom of the screen, e.g., Victoria tab **522** or Michael **520**, to switch to see work being done by other authors. Only work that has been submitted to the DMS will be visible. A user is aware that others are working on a document at the same time, but will not be able to see the specifics of their proposed changes until they have been submitted to the managing author. Thus users have “almost-live” access to the evolving collaboration within the DMS or collaboration server database.

[0064] One embodiment of the present invention includes updating the comparison window and change summary