

tive embodiments of the invention will become apparent to persons skilled in the art upon reference to the description of the invention. It is therefore contemplated that the appended claims will cover any such modifications or embodiments that fall within the true scope of the invention.

What is claimed is:

1. In a multi-media collaborative computer based editing system including a network connecting a plurality of terminals for communication, an output display device for each terminal, a user input device for each terminal, and a shared data object concurrently accessible by a plurality of users of the system, a method of protecting regions of the shared data object from manipulation originating from more than one user, the method comprising the steps performed by a computer of:

responsive to a user accessing the shared data object, assigning the user a distinguishing cursor available for display in any private view;

allowing an establishing user to select through the cursor an area in the shared data object for an associated region;

examining the area to determine if the area conflicts with any existing lock regions or any owned regions associated with a user other than the establishing user; and

if no conflicts exist, establishing a lock region from the area independent of the position of the cursor of the establishing user.

2. A method of protecting regions of a shared data object from manipulation originating from more than one user as set forth in claim 1, the method comprising the additional step performed by a computer of:

responsive to establishment of the lock region, visually identify the lock region with the establishing user.

3. A method of protecting blocks of a shared data object from manipulation originating from more than one user as set forth in claim 2, wherein the shared data object includes text.

4. A method of protecting blocks of a shared data object from manipulation originating from more than one user as set forth in claim 2, wherein the shared data object includes graphics.

5. A method of protecting blocks of a shared data object from manipulation originating from more than one user as set forth in claim 2, wherein the shared data object pictorial material.

6. A method of protecting blocks of a shared data object from manipulation originating from more than one user as set forth in claim 2, wherein the method further comprises the steps performed by a computer of:

determining whether an action is for modification of the shared data object through a cursor;

if the action is for such a modification, determining if the modification would occur within a lock region and through a cursor other than the cursor assigned in the establishing user of the lock region;

if the result of the prior step is yes, blocking the modification; and

if no, making the modification.

7. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object from manipulation by other users, the multi-media collaborative computer based system comprising:

a plurality of terminals, each terminal having an output display device and a user input device; at least a first computer;

a network connecting the terminals and said at least first computer for communication;

memory means user the control of said at least first computer for providing concurrent access to the shared data object by a plurality of users;

means, responsive to a user obtaining access to the shared data object, for assigning the user a cursor available for display on all of the output display devices;

means, responsive to user selection, for moving a cursor within the shared data object;

means, responsive to selection by an establishing user, for determining a location in the shared data object; and

means, responsive to the location not including any portion of a previously established lock region, for establishing a lock region over the location independent of the position of the cursor for the establishing user.

8. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object as set forth in claim 7, and further comprising:

means for releasing the lock region through the cursor assigned to the establishing user of the lock region.

9. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object from manipulation originating from more than one user as set forth in claim 8, further comprising:

means for changing a visual attribute of each lock region established to distinguish the lock region from remaining portions of the shared data object and to identify the establishing user of the lock region.

10. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object as set forth in claim 7, and further comprising:

means for serializing user actions entered through the user input devices.

11. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object from manipulation originating from more than one user as set forth in claim 10, further comprising:

first means for determining whether a current user request modifies the shared data object;

second means, responsive to a positive determination by the first determining means, for determining if the modification would occur within a lock region established by a user other than the current user;

means, responsive to a positive determination by the second determining means, for blocking the modification; and

means responsive to a negative determination by the second determining means, for entering the modification.

12. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object as set forth in claim 11, wherein the shared data object includes text.

13. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object as set forth in claim 11, wherein the shared data object includes graphics.

14. A multi-media collaborative computer based system for protecting user selected lock regions in a shared data object as set forth in claim 11, wherein the shared data object includes still video.

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