## Claims

1. A method of generating a video including a plurality of graphic objects provided in a shared environment, the method comprising:

acquiring, at a first computing device associated with a first user identifier, a shared session identifier from a shared session manager, the shared session identifier being associated with the first user identifier;

receiving a selection of a second user identifier;

causing the shared session identifier and the first user identifier to be provided to a second computing device associated with the second user identifier;

starting to record a video in response to receiving a selection on a record control;

displaying, at the first computing device, a recording progress control indicating recording progress;

receiving as input, a first graphic object for rendering to a display of the first computing device during the recording, the first graphic object being associated with the first user identifier;

receiving from a data synchronizer during the recording, a second graphic object associated with the second user identifier and the shared session identifier for rendering to the display of the first computing device; and

generating the video including a plurality of graphic objects by rendering the first graphic object and the second graphic object together with a plurality of video frames of the video.

2. The method of claim 1, wherein acquiring the shared session identifier from the shared session manager comprises:

transmitting a request for a new shared session identifier to a shared session manager; and

receiving the shared session identifier from the shared session manager.

3. The method of claim 1, further comprising:

providing the first graphic object associated with the first user identifier and the shared session identifier to the data synchronizer.

4. The method of claim 3, wherein the data synchronizer and the shared session

manager are located at a device other than the first computing device.

5. The method of claim 1, further comprising:

acquiring video using at least one camera of the first computing device;

while acquiring the video:

receiving as input, the first graphic object for rendering to the display of the computing device;

receiving from the data synchronizer, the second graphic object associated with the second user identifier for rendering to the display of the first computing device; and

generating the video by rendering the first graphic object and the second graphic object together with a plurality of video frames from the acquired video.

6. The method of claim 5, further comprising:

while acquiring the video, providing the first graphic object associated with the first user identifier and the shared session identifier to the data synchronizer.

7. The method of claim 1, wherein the first graphic object is associated with a first drawing effect and the second graphic object is associated with a second drawing effect.

8. The method of claim 7, wherein the first drawing effect is different from the second drawing effect.

9. The method of claim 7, further comprising:

causing a graphic element including information associated with the second user identifier to be displayed at the display associated with the first computing device.

10. The method of claim 1, further comprising:

receiving a selection of a third user identifier;

causing the shared session identifier and the first user identifier associated with the first computing device to be provided to a third computing device associated with the third user identifier;

receiving from the data synchronizer, a third graphic object associated with the third user identifier for rendering to the display of the first computing device; and

generating the video by rendering the first graphic object, the second object, and the

third graphic object together with a plurality of video frames of the video.

11. A computing device comprising:

a processor; and

a memory storing instructions that, when executed by the processor, configure the computing device to:

acquire a shared session identifier from a shared session manager, the shared session identifier being associated with a first user identifier;

receive a selection of a second user identifier;

cause the shared session identifier and the first user identifier to be provided to a shared augmented reality session processor;

start to record a video in response to receiving a selection on a record control;

display, at the first computing device, a recording progress control indicating recording progress;

receive as input, a first graphic object for rendering to a display associated with the computing device during the recording, the first graphic object being associated with the first user identifier;

receive from a data synchronizer during the recording, a second graphic object associated with the second user identifier and the shared session identifier for rendering to the display associated with the computing device; and

generate the video including a plurality of graphic objects by rendering the first graphic object and the second graphic object together with a plurality of video frames of the video.

12. The computing device of claim 11, wherein acquiring the shared session identifier from the shared session manager comprises:

transmitting a request for a new shared session identifier to a shared session manager; and

receiving the shared session identifier from the shared session manager.

13. The computing device of claim 11, wherein the instructions further configure the computing device to:

provide the first graphic object associated with the first user identifier and the shared session identifier to the data synchronizer.

14. The computing device of claim 13, wherein the data synchronizer and the shared session manager are located at a device other than the computing device.

15. The computing device of claim 11, wherein the instructions further configure the computing device to:

acquire video using at least one camera of the computing device;

while acquiring the video:

receive as input, the first graphic object for rendering to the display associated with the computing device;

receive from the data synchronizer, the second graphic object associated with the second user identifier for rendering to the display associated with the computing device; and

generate the video by rendering the first graphic object and the second graphic object together with a plurality of video frames from the acquired video.

16. A non-transitory computer-readable storage medium, the computer-readable storage medium including instructions that when executed by a first computing device, cause the first computing device to:

acquire a shared session identifier from a shared session manager, the shared session identifier being associated with a first user identifier;

receive a selection of a second user identifier;

cause the shared session identifier and the first user identifier to be provided to a second computing device associated with the second user identifier;

start to record a video in response to receiving a selection on a record control;

display, at the first computing device, a recording progress control indicating recording progress;

receive as input, a first graphic object for rendering to a display associated with the first computing device during the recording, the first graphic object being associated with the first user identifier;

receive from a data synchronizer during the recording, a second graphic object associated with the second user identifier and the shared session identifier for rendering to the display associated with the first computing device; and

generate the video including a plurality of graphic objects by rendering the first graphic object and the second graphic object together with a plurality of video frames of the video.

17. The computer-readable storage medium of claim 16, wherein acquiring the shared session identifier from the shared session manager comprises:

transmitting a request for a new shared session identifier to a shared session manager; and

receiving the shared session identifier from the shared session manager.

18. The computer-readable storage medium of claim 16, wherein the instructions further configure the first computing device to:

provide the first graphic object associated with the first user identifier and the shared session identifier to the data synchronizer.

19. The computer-readable storage medium of claim 18, wherein the data synchronizer and the shared session manager are located at a device other than the first computing device.

20. The computer-readable storage medium of claim 16, wherein the instructions further configure the first computing device to:

acquire video using at least one camera of the first computing device;

while acquiring the video:

receive as input, the first graphic object for rendering to the display associated with the first computing device;

receive from the data synchronizer, the second graphic object associated with the second user identifier for rendering to the display associated with the first computing device; and

generate the video by rendering the first graphic object and the second graphic object together with a plurality of video frames from the acquired video.