CLAIMS:

1. An augmented reality (AR) and 3-dimensional (3-D) viewing system for providing an AR and 3-D experience to a user, comprising:

a show controller;

a wearable visualization device communicatively coupled to the show controller and comprising a viewing assembly through which the user is capable of viewing a real-world environment, wherein the viewing assembly comprises:

a first display configured to display one or more AR features; and

a 3-D viewing component that enables the user to perceive a plurality of coded 2-dimensional (2-D) images as one or more deciphered 3-D features, wherein the 3-D viewing component comprises active shuttering lenses, and wherein the viewing assembly is configured to coordinate actuation of the active shuttering lenses during a first periodic time interval;

a second wearable visualization device comprising a second viewing assembly that comprises:

a second display configured to display one or more second AR features; and

second active shuttering lenses that enable a second user to perceive a plurality of second coded 2-D images as one or more second deciphered 3-D features, wherein the second viewing assembly is configured to coordinate actuation of the second active shuttering lenses during a second periodic time interval, offset from the first periodic time interval, and wherein the one or more deciphered 3-D features and the one or more second deciphered 3-D features are different from one another; and a 3-D display system communicatively coupled to the show controller and comprising a plurality of third displays, wherein each third display of the plurality of third displays is configured to display respective portions of the plurality of coded 2-D images and the plurality of second coded 2-D images based on control signals provided to the 3-D display system by the show controller, and wherein the 3-D display system is disposed within the real-world environment.

2. The AR and 3-D viewing system of claim 1, wherein the 3-D viewing component comprises light-filtering coatings disposed on the first display.

3. The AR and 3-D viewing system of claim 2, wherein the light-filtering coatings comprise a first anaglyph lens filter for a first portion of the first display and a second anaglyph lens filter for a second portion of the first display.

4. The AR and 3-D viewing system of claim 2, wherein the light-filtering coatings comprise a first polarized lens filter for a first portion of the first display and a second polarized lens filter for a second portion of the first display.

5. The AR and 3-D viewing system of claim 1, wherein the active shuttering lenses comprise a liquid crystal layer disposed adjacent to the first display, wherein a first portion of the liquid crystal layer is configured to turn opaque in response to a control signal, and wherein a second portion of the liquid crystal layer is configured to turn or remain transparent in response to the control signal.

6. The AR and 3-D viewing system of claim 1, wherein the 3-D display system comprises a projector configured to transmit the respective portions of the plurality of coded 2-D images onto at least one third display of the plurality of third displays, and wherein the at least one third display comprises a projector screen.

7. The AR and 3-D viewing system of claim 1, wherein at least one third display of the 3-D display system comprises an electronic display device configured to generate and display the respective portions of the plurality of coded 2-D images.

8. The AR and 3-D viewing system of claim 1, wherein the one or more deciphered 3-D features are individualized for the user, and wherein the one or more second deciphered 3-D features are individualized for the second user.

9. The AR and 3-D viewing system of claim 1, wherein the active shuttering lenses are disposed adjacent to the first display, wherein the second active shuttering lenses are disposed adjacent to the second display, and wherein the 3-D display system comprises a transmitter configured to transmit a signal that enables the active shuttering lenses and the second active shuttering lenses to synchronize with a refresh rate of the 3-D display system.

10. The AR and 3-D viewing system of claim 9, wherein the show controller is configured to enable the one or more deciphered 3-D features and the one or more second deciphered 3-D features to be different from one another by: actuating a first display portion of the active shuttering lenses during a first time period; actuating a second display portion of the active shuttering lenses during a second time period; actuating a first display portion of the second active shuttering lenses during a third time period; and actuating a second display portion of the second active shuttering lenses during a fourth time period, wherein the first, second, third, and fourth time periods are offset from one another.

11. The AR and 3-D viewing system of claim 1, wherein left eye portions of the plurality of coded 2-D images are offset relative to right eye portions of the plurality of coded 2-D images to enable the user to perceive the one or more deciphered 3-D features.

12. The AR and 3-D viewing system of claim 1, wherein the show controller comprises a processor configured to instruct a computer graphics generation system to instruct each third display of the plurality of third displays to display the respective portions of the plurality of coded 2-D images based on an orientation of the user, a position of the user, a motion of the user, or a combination thereof.

13. An augmented reality (AR) and 3-dimensional (3-D) viewing system for providing an AR and 3-D experience to a user, comprising:

a wearable visualization device that comprises a viewing assembly through which the user is capable of viewing a real-world environment, wherein the viewing assembly comprises:

a first display configured to display one or more AR features; and

a 3-D processing assembly comprising a first 3-D filtering layer for a first eye portion of the first display and a second 3-D filtering layer for a second eye portion of the first display, wherein the first 3-D filtering layer and the second 3-D filtering layer cooperate to enable the user to perceive a plurality of coded 2-dimensional (2-D) images as one or more deciphered 3-D features, wherein the 3-D processing assembly comprises active shuttering lenses, and wherein the viewing assembly is configured to coordinate actuation of the active shuttering lenses during a first periodic time interval;

a second wearable visualization device comprising a second viewing assembly that comprises:

a second display configured to display one or more second AR features; and

second active shuttering lenses that enable a second user to perceive a plurality of second coded 2-D images as one or more second deciphered 3-D features, wherein the second viewing assembly is configured to coordinate actuation of the second active shuttering lenses during a second periodic time interval, offset from the first periodic time interval, and wherein the one or more deciphered 3-D features and the one or more second deciphered 3-D features are different from one another; and

a 3-D display system separate from the wearable visualization device and the second wearable visualization device, wherein the 3-D display system comprises a plurality of third displays, wherein each third display of the plurality of third displays is configured to present respective portions of the plurality of coded 2-D images to the wearable visualization device and present respective portions of the plurality of second coded 2-D images to the second wearable visualization device in response to receiving control signals from a show controller.

14. The AR and 3-D viewing system of claim 13, wherein the respective portions of the plurality of coded 2-D images presented by each third display of the plurality of third displays comprise relatively offset perspectives of an object, and wherein the 3-D processing assembly enables the user to optically decode the respective portions of the plurality of coded 2-D images by perceiving the object as having depth from the offset perspectives of the object.

15. The AR and 3-D viewing system of claim 13, wherein the first 3-D filtering layer comprises a first coating having a first optical effect, wherein the second 3-D filtering layer comprises a second coating having a second optical effect that is different from the first optical effect.

16. The AR and 3-D viewing system of claim 13, wherein the first 3-D filtering layer comprises a first active shutter lens and wherein the second 3-D filtering layer comprises a second active shutter lens.

17. An augmented reality (AR) and 3-dimensional (3-D) viewing system for providing an AR and 3-D experience to a user, comprising:

a wearable visualization device comprising a viewing assembly through which the user is capable of viewing a real-world environment, wherein the viewing assembly comprises:

a first display configured to display one or more AR features within a first focal plane; and

a 3-D viewing component that enables the user to perceive a plurality of coded 2-dimensional (2-D) images as one or more deciphered 3-D images within at least one second focal plane, wherein the first focal plane and the at least one second focal plane are independent of one another, wherein the 3-D viewing component comprises active shuttering lenses, and wherein the viewing assembly is configured to coordinate actuation of the active shuttering lenses during a first periodic time interval;

a second wearable visualization device comprising a second viewing assembly that comprises: a second display configured to display one or more second AR features within a third focal plane; and

second active shuttering lenses that enable a second user to perceive a plurality of second coded 2-D images as one or more second deciphered 3-D features within at least one fourth focal plane, wherein the second viewing assembly is configured to coordinate actuation of the second active shuttering lenses during a second periodic time interval, offset from the first periodic time interval, and wherein the one or more deciphered 3-D features and the one or more second deciphered 3-D features are different from one another;

a 3-D display system comprising a plurality of third displays, wherein each third display of the plurality of third displays is configured to display respective portions of the plurality of coded 2-D images and the plurality of second coded 2-D images;

a computer graphics generation system comprising a processor configured to:

generate the one or more AR features and the one or more second AR features, provide the one or more AR features to the wearable visualization device, and provide the one or more second AR features to the second wearable visualization device; and

generate the plurality of coded 2-D images and the plurality of second coded 2-D images and provide the respective portions of the plurality of coded 2-D images and the plurality of second coded 2-D images to each third display of the plurality of third displays; and

a show controller configured to operatively communicate with the wearable visualization device, the second wearable visualization device, and the 3-D display system to coordinate presentation of the one or more AR features, the one or more second AR features, the plurality of coded 2-D images, and the plurality of second coded 2-D images.

18. The AR and 3-D viewing system of claim 17, wherein the processor of the computer graphics generation system is configured to generate the one or more AR features and the plurality of coded 2-D images based on an orientation of the user, a position of the user, a motion of the user, or a combination thereof.