CLAIMS

1. A computer-implemented method comprising:

communicating, by a computing device, a first light field data to a user device, wherein the first light field data is limited to a first volume of space that represents a first plurality of views for display on the user device;

receiving, by the computing device, a sensor data associated with the user device;

predicting a behavior based at least in part from the received sensor data and based at least in part on at least one of a velocity vector and an acceleration vector of a user, another user, or an object, wherein predicting the behavior includes making a prediction that a user of the user device is likely to interact with an object based on a user device location or field of view;

generating with the computing device a second light field data based at least in part on the predicted behavior, wherein the second light field data is limited to a second volume of space that is different from the first volume of space and represents a second plurality of views for display on the user device and comprises a volume of light field spatial data surrounding the object, and wherein the volume surrounding the object is sufficiently large to accommodate hand translations or rotations of the object; and

communicating, by the computing device, the second light field data to the user device.

2. The method of claim 1, wherein the sensor data is generated by at least one sensor integrated into the user device and the behavior is a behavior of the user device.

3. The method of claim 2, wherein the sensor data is at least in part translational sensor data and wherein predicting the behavior includes predicting a future position of the user device located within the second volume of space.

4. The method of claim 2, wherein the sensor data is at least in part rotational sensor data and wherein predicting the behavior includes predicting a future viewing angle of the user device within the second volume of space.

5. The method of claim 2, wherein the predicting of the-behavior is based on sensor data stored from a prior action of the user device while the user device was previously in the first volume of space.

6. A computer-implemented method comprising:

receiving, by a computing device associated with an image processor, a sensor data associated with a user device, wherein the sensor data is in response to a first light field data limited to a first volume of space that represents a first plurality of views for display on the user device;

generating, by the computing device, a second light field data based on a predicted behavior, the predicted behavior being a prediction that a user of the user device is likely to interact with an object based on a user device location or field of view, wherein the predicted behavior is determined at least in part by the received sensor data and at least in part by at least one of a velocity vector and an acceleration vector of a user, another user, or an object, and wherein the second light field data is limited to a second volume of space that is different from the first volume of space and represents a second plurality of views for display on the user device and comprises a volume of light field spatial data surrounding the object, the volume surrounding the object being sufficiently large to accommodate hand translations or rotations of the object; and

communicating, by the computing device, the second light field data to the user device.

7. The method of claim 6, wherein the first light field data and the second light field data each comprise a three-dimensional volume describing the light flowing in a plurality of directions through a plurality of light field data points.

8. The method of claim 6, wherein the sensor data is at least in part translational sensor data and wherein determining the predicted behavior includes predicting a future position of the user device located within the second volume of space.

9. The method of claim 6, wherein the sensor data is at least in part rotational sensor data and wherein determining the predicted behavior includes predicting a future viewing angle of the user device within the second volume of space.

10. The method of claim 6, wherein the predicted behavior is determined based on sensor data stored from a prior action of the user device while the user device was previously in the first volume of space.

11. The method of claim 6, wherein the predicted behavior is determined based on an action of a second user device while the user device was in the first volume of space.

12. The method of claim 6, wherein the first volume of space is proximate the user device and the second volume of space is determined by the predicted behavior.

13. The method of claim 6, wherein the second light field data comprises a light field resolution and the light field resolution is determined by the predicted behavior.

14. The method of claim 6, wherein the second light field data comprises a directionality with respect to a user device perspective and the directionality is determined by the predicted behavior.

15. The method of claim 6, wherein the second light field data comprises a light field point density and the light field point density is determined by the predicted behavior.

16. The method of claim 6, wherein the user device is a head-worn device, and the predicted behavior is associated with a head position of the user device.

17. The method of claim 6, wherein the predicted behavior is determined at least in part through machine learning associated with previous behavior.

18. The method of claim 6, wherein the predicted behavior is determined to be associated with a user contact with an object.

19. The method of claim 6, wherein the user device is communicatively coupled to a display for presentation of views for display on the user device.

20. The method of claim 6, wherein the sensor data comprises motion sensor data.

21. A system comprising: a computing device associated with an image processor, the computing device configured to store a set of instructions that, when executed, cause the computing device to:

receive, by the computing device associated with the image processor, a sensor data associated with a user device, wherein the sensor data is in response to a first light field data limited to a first volume of space that represents a first plurality of views for display on the user device;

generate, by the computing device, a second light field data based on a predicted behavior, the predicted behavior being a prediction that a user of the user device is likely to interact with an object based on a user device location or field of view, wherein the predicted behavior is determined at least in part by the received sensor data and at least in part by at least one of a velocity vector and an acceleration vector of a user, another user, or an object, and wherein the second light field data is limited to a second volume of space that is different from the first volume of space and represents a second plurality of views for display on the user device and comprises a volume of light field spatial data surrounding the object, the volume surrounding the object being sufficiently large to accommodate hand translations or rotations of the object; and

communicate, by the computing device, the second light field data to the user device.

22. The system of claim 21, wherein the sensor data is generated by at least one sensor integrated into the user device.

23. The system of claim 22, wherein the sensor data is at least in part translational sensor data and determining the predicted behavior includes predicting a future position of the user device located within the second volume of space.

24. The system of claim 22, wherein the sensor data is at least in part rotational sensor data and determining the predicted behavior includes predicting a future viewing angle of the user device within the second volume of space.

25. The system of claim 22, wherein the predicted behavior is determined based on sensor data stored from a prior action of the user device while the user device was previously in the first volume of space.