WHAT IS CLAIMED IS:

1. A method for transmitting point cloud data, the method comprising:

encoding the point cloud data;

encapsulating a bitstream including the point cloud data into a file including video component tracks carrying the point cloud data and a track for a plurality of atlas data of the point cloud data; and

transmitting the point cloud data,

wherein a first sample entry of the file includes an atlas identifier of atlas data for the point cloud data, parameter set information for the atlas data, and Supplemental Enhancement Information, SEI, message for the atlas data,

wherein a second sample entry of the file includes identifier information for identifying atlas tiles for the atlas data, and information for representing a number of atlas tiles for the atlas data,

wherein the plurality of the atlas data are grouped based on a grouping type,

wherein one or more video component tracks related to a specific atlas identifier are grouped among the video component tracks, and

wherein the file further includes a timed metadata track for spatial regions that are dynamic in the point cloud data including information for a number of spatial regions.

2. A method for receiving point cloud data, the method comprising:

receiving a file including a bitstream including point cloud data, wherein the file includes video component tracks carrying the point cloud data and a track for a plurality of atlas data of the point cloud data;

decapsulating the file; and

decoding the point cloud data,

wherein a first sample entry of the file includes an atlas identifier of atlas data for the point cloud data, parameter set information for the atlas data, and Supplemental Enhancement Information, SEI, message for the atlas data,

wherein a second sample entry of the file includes identifier for identifying atlas tiles for the atlas data, and information for representing a number of atlas tiles for the atlas data,

wherein the plurality of the atlas data are grouped based on a grouping type,

wherein one or more video component tracks related to a specific atlas identifier are grouped among the video component tracks, and

wherein the file further includes a timed metadata track for spatial regions that are dynamic in the point cloud data including information for a number of spatial regions.

3. An apparatus for receiving point cloud data, the apparatus comprising:

a receiver configured to receive a file including a bitstream including point cloud data, wherein the file includes video component tracks carrying the point cloud data and a track for a plurality of atlas data of the point cloud data;

a decapsulator configured to decapsulate the file; and

a decoder configured to decode the point cloud data,

wherein a first sample entry of the file includes an atlas identifier of atlas data for the point cloud data, parameter set information for the atlas data, and Supplemental Enhancement Information, SEI, message for the atlas data,

wherein a second sample entry of the file includes identifier information for identifying atlas tiles for the atlas data, and information for representing a number of atlas tiles for the atlas data,

wherein the plurality of the atlas data are grouped based on a grouping type,

wherein one or more video component tracks related to a specific atlas identifier are grouped among the video component tracks, and

wherein the file further includes a timed metadata track for spatial regions that are dynamic in the point cloud data including information for a number of spatial regions.

4. An apparatus for transmitting point cloud data, the apparatus comprising:

an encoder configured to encode the point cloud data;

an encapsulator configured to encapsulate a bitstream including the point cloud data into a file including video component tracks carrying the point cloud data and a track for a plurality of atlas data of the point cloud data; and

a transmitter configured to transmit the point cloud data,

wherein a first sample entry of the file includes an atlas identifier of atlas data for the point cloud data, parameter set information for the atlas data, and Supplemental Enhancement Information, SEI, message for the atlas data,

wherein a second sample entry of the file includes identifier information for identifying atlas tiles for the atlas data, and information for representing a number of atlas tiles for the atlas data,

wherein a second sample entry of the file includes identifier information for identifying atlas tiles for the atlas data, and information for representing a number of atlas tiles for the atlas data,

wherein the plurality of the atlas data are grouped based on a grouping type,

wherein one or more video component tracks related to a specific atlas identifier are grouped among the video component tracks, and

wherein the file further includes a timed metadata track for spatial regions that are dynamic in the point cloud data including information for a number of spatial regions.