

Description of Additional Supplementary Information

Supplementary Video 1: Particle Cell level and Piece-wise Constant Reconstruction: Visualization of the adaptation of the APR by Particle Cell level and piece-wise constant APR reconstruction compared with the original image for exemplar dataset 1 from Supplementary Table 3.

Supplementary Video 2: Graph-Cut Segmentation Example: Maximum projection ray-cast visualization and direct particle rendering of segmentation result for exemplar dataset 13 from Supplementary Table 3. Visualization done using the software Scenery.

Supplementary Video 3: Maximum Projection Ray-cast Comparison: Comparison of maximum projection ray-casts of the APR and of the original pixel image for exemplar dataset 2 from Supplementary Table 3.

Supplementary Video 4: Visualization by Direct Particle Rendering, Example 1: Example of visualization using direct particle rendering with the visualization software Scenery. Image courtesy of Royer Lab (CZ Biohub) and Keller Lab (HHMI Janelia).

Supplementary Video 5: Visualization by Direct Particle Rendering, Example 2: Example of visualization using direct particle rendering with the visualization software Scenery for exemplar dataset 17 from Supplementary Table 3.