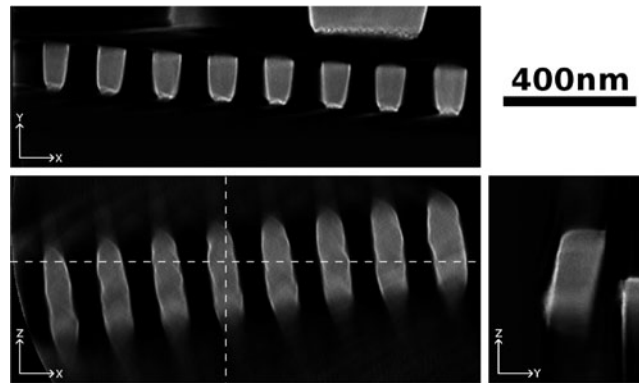




Supplementary Figure. Three cross sections through the original tomographic reconstruction showing the Cu (gray) lined with a Ta/TaN barrier (white). The lower left panel shows the detailed information only available in a 3D reconstruction along the length and width of eight separate wires. The Z-direction is the projection direction of the original tilt series along the STEM optical axis. White dotted lines indicate the locations of the slices shown in the other two panels. The top panel shows the wires' in cross section as they are normally viewed for conductor area measurements. The tomography tilt axis, around which the structure was rotated to acquire a tilt series, is parallel to the Y-direction and passes through the center of the wire structure. The lower right panel shows a section through one wire along its length and height. Elongation of the wire structures due to the missing wedge effect is seen along the Z-direction but does not considerably affect cross-sectional area measurements.