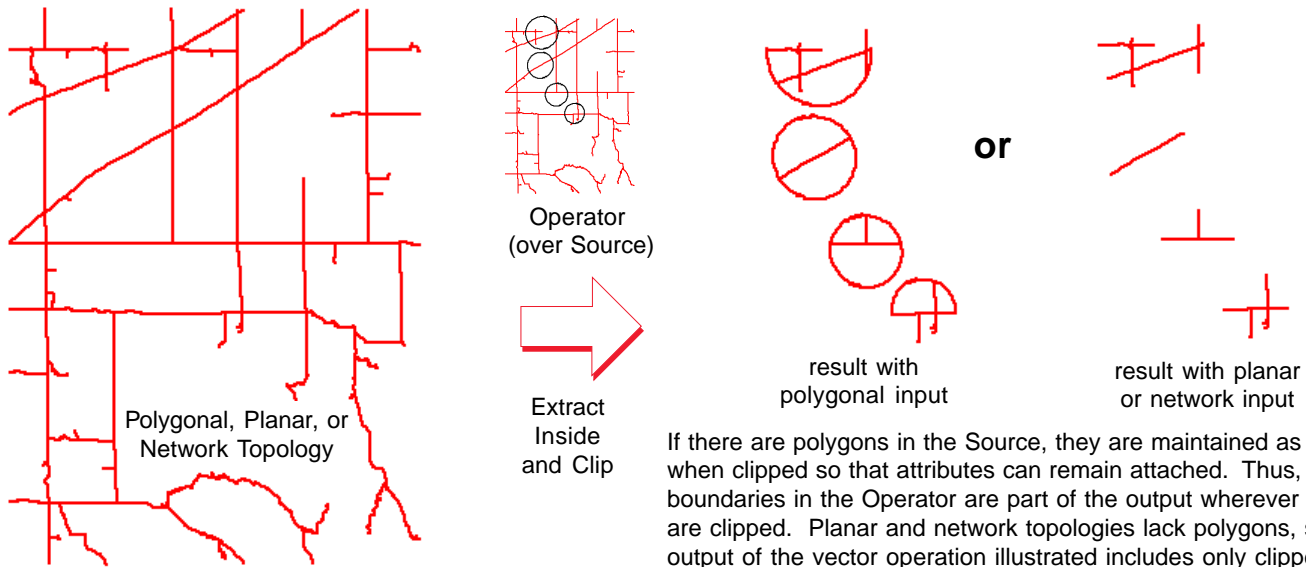


Behavior of Topology Types

The color plate entitled *Vector Topology Types* lists the characteristics of polygonal, planar, and network vector objects. How the objects behave in different applications provides insight into their differences beyond a simple listing of their characteristics. The results of specific vector combinations (such as Extract Inside and Clip, shown below) demonstrate functional differences between these new topology types.



In the example above, the results from planar and network topology appeared similar to each other but different than the polygonal topology results. In the example below, the results from polygonal and planar topologies appear similar to each other but different than the network topology results. Topology is maintained in the X-Y plane for polygonal and planar 3D vector objects (polygon dimensions and the location of nodes separating lines that would otherwise cross are determined by projection onto the X-Y plane). Thus, when polygonal and planar vector objects are merged, lines that may not actually cross in three dimensions will have nodes inserted where their X and Y coordinates are the same. Z values at such inserted nodes are interpolated. The constraints imposed by 2D topology on 3D vector objects are eliminated by network topology, since lines can cross each other in two or three dimensions.

