ABSTRACT

Data performs as an integral part in network modelling for spatial analysis, and decision-making for future prospects. A utility network refers to the collection, connection and distribution of resources using 'controllers' to regulate their flow. Hence, it is important to manipulate or modify these networks systematically and logically, based on the functions carried out by different feature using various tools and packages provided by ESRI suite. Since 1999 – present, ArcMap has served the purpose of network modelling in this domain using geometric networks, but with the latest release of ArcGIS Pro version, geometric network is now to be replaced by utility network. Moreover, it has been officially announced that ArcMap will have its last supported version till March, 2026. Therefore, the transition from geometric network to utility network has become a significant need for all the industries involved in this sector.

Utility network has several advantages over geometric network like, reducing the huge number of feature classes to 7 distinctive feature classes which integrates all the features participating in the network including domains and structures, categorized into various asset groups. It also provides better visualization and analytical capabilities for modernizing and building smarter networks.

The primary focus of the project is to migrate data from geometric network to utility network, and modifying the features for better performance. Also, this paper addresses the challenges faced during the execution of each task, and methods to solve them.