

Session 4.4.3 Development of an Automatic Conflation Tool to Integrate Transportation Line Layers

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Conflation is the process of integrating, matching, transferring attributes and merging of geographic data sets. This document deals specifically with the task of conflating transportation line layers that do not have a perfect match of their alignment. An algorithm was developed, using the programming tools provided in TransCAD / Maptitude, to automatically transfer data between two line layers that do not align perfectly with respect to each other. This paper describes the algorithm used to identify similar alignment of lines stored in different layers; it also indicates the measures that were used to define the similarity between these lines. A description about the accuracy of the process is also presented. The operation of a Graphic User Interface (GUI) that was developed to expedite and ease the application of the algorithm is described. Finally, several applications of this conflation tool are illustrated. These applications are part of a comprehensive Integrated Transportation Information System that is currently undertaken at the North Central Texas Council of Governments.