

## Session 5.4.3 Multi-Level Linear Referencing and Temporal Data Management

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Departments of Transportation, Metropolitan Planning Organizations and other enterprise transportation bodies manage millions of records of data that contain locational reference information. These are used in conjunction with a geospatial representation of a road network. Very frequently these disparate data sets are in different location referencing methods from the network. This presents a fundamental problem for maintenance and analysis of both the network and business data. In addition, transportation organizations have requirements to temporally analyze the network for many reasons. Temporal analysis is used to define trends and prioritize portions of the network for capital expenditures.

This presentation will present the approach to solving the problem using multiple location reference methods within an enterprise transportation system. It will discuss how various linear referencing methods should be de-coupled from the geometry. In addition, this approach uses a linear datum that functions as the foundational bedrock for the system. Also, an approach to solving the problem of timely temporal analysis will be discussed.