

5.3.3

Modeling Techniques for DoT Geographic Data Models in Open, Standards Based Relational Database Management Systems

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Departments of Transportation (DoT's) business requirements and constituent conceptual geographic data models have proven difficult to design in existing commercial off the shelf (COTS) Geographic Information System packages. Inherently, DoT's geographic data models require hierarchical topological feature models with multiple Linear Referencing Systems (mLRS). Database vendors have released open and standards based capabilities to natively persist and model topological primitive, geographic feature, and LRS measure data types in standard relational database management systems. This session presents data modeling techniques in COTS database technology to represent topologically hierarchical themes of geographic features with multiple linear referencing systems and presents concrete examples of data models utilizing these techniques in real world DoT business systems.