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## **Data Integration across Geospatial Data life Cycle of Transportation Assets**

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### **Abstract**

Geospatial data of transportation assets are typically captured and/or determined during the preconstruction stages including planning and design stages. However, due to the lack of usable digital data transfer protocols established in most state Department of transportations (DOTs) and the proprietary nature of software programs that works as a significant barrier to achieving high data interoperability, these geospatial data need to be recaptured by maintenance staff members after construction and entered into a Geospatial Information System for asset maintenance and management purposes. By seamless exchange of data and information throughout the project life cycle, a significant amount of efforts can be saved, and high efficiency can be achieved. This presentation will talk about an applied research project at Iowa DOT to develop process maps and exchange requirement matrices for transportation assets and how these are being used to facilitate data integration from Design through to Operations. This includes identifying changes in workflows between work groups and leveraging new and existing technologies. Work is also being done to leverage tools like Feature Manipulation Engine for data transfer from different software platforms to another software program or central database repository. The presentation will demonstrate that a functional process can be established for data integration across the geospatial data life-cycle.

**Keywords: Digital Data workflows, Data Integration, Geospatial Data, Geographic Information System, Process Maps.**

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