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### **Development of a Statewide Crash Map: Incorporating Statewide Crash Mapping Capabilities Into Practice**

#### **Presenter**

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DOTs continue to face many challenges in order to comply with new federal safety, highway performance monitoring, and other requirements. On a national level, the federal government has a long-term vision for State DOTs to report state and off-state data in a single network. Emerging HPMS requirements, as codified within MAP-21, are expected to include performance data for all public roadways compared to previous sampling based methods. Within the safety arena, the ability for states to perform system-wide safety analysis and problem identification is critical to meet MAP-21 safety performance goals and to efficiently allocate limited safety improvement resources. Wisconsin has recently completed a project to locate multiple years of state and non-state crashes onto a single statewide map. The underlying crash location database is linked to an online crash map interface and data retrieval tool which is in the process of being rolled out to all levels of government statewide. Results from a pilot phase of this project were presented to GIS-T in 2010. This presentation provides an update of the completed effort and describes evolving business processes to incorporate the crash map into ongoing operations and planning activities at the Wisconsin DOT.

Business process development to improve the roadway network information within the agencies' Wisconsin Local Roads (WISLR) linear referencing system to support the crash mapping process will be discussed. Additional considerations to implement ongoing updates to the crash map, along with associated quality control procedures, will also be discussed. The WISLR crash mapping project is one of several safety data initiatives at the Wisconsin DOT, including a planned revision to the existing crash report form and a major upgrade to the statewide electronic crash and citations reporting software (TraCS) to include crash mapping capabilities directly in the patrol cars. Expected impacts and coordination efforts between the different initiatives will be presented.

#### **Bio(s):**

Dr. Xiao Qin is a Civil and Environmental Engineering Assistant Professor at South Dakota State University. Research interests are traffic operations and safety, statistical modeling/application in transportation, and GIS/GPS application and spatial data

Ms. Kelly Schieldt is WisDOT's Statewide Local Roads Coordinator. Her responsibilities include management of the Wisconsin Information System for Local Roads (WISLR), which is an inventory and certification program for over 100,000 Wisconsin local roads.