

## 2.3.2

### GIS Integrated Real-Time Snow Plow Tracking System

#### Presenter

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During the wintertime, the snowplow operation has always been an imperative and challenging task for the DOTs and DPWs. By integrating spatial technology with GPS and wireless communication, the treatment conditions of roads can be tracked in real-time to help the snowplow management team. Using GIS and GPS technologies, the tracking system can provide traditional AVL capabilities plus the road treatment progress status. In the rural areas, the availability of GPS and wireless communication can be spotty. In the urban areas, not only the tall building will block the GPS and communication, the high density of the roads also presents a challenge to accurately determine the snowplow truck location. This presentation demonstrate how GIS technologies are used to address the above issues to provide the needed information for managing, balancing, and estimating the plow and salting progress during snow storms. Several active snowplow tracking and vehicle locating systems will be demonstrated and compared during the presentation.