

Ice Sensor and Warning System



NRITS 2015

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Background

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- Section of TH 12 near Dassel-Cokato High School routinely ices up from snow blowing onto the road



SRF

Background

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- MnDOT District 8 plows this section of roadway out of Litchfield truck station, 17 miles away
- Snow blows from field to north
- Snow fence was not effective



SRF

Ice Sensors

- In-pavement sensor is placed in the wheel path at three locations
- Detects pavement surface state
 - Dry, Moist, Wet, Streaming Water, Frost, Snow, Ice
- Measures pavement temperature



Active Warning Signs

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- Active signs flash while any sensor detects snow or ice
- Sends email alert to project stakeholders
 - Alerts will be used to monitor road conditions
 - Link to camera access via website

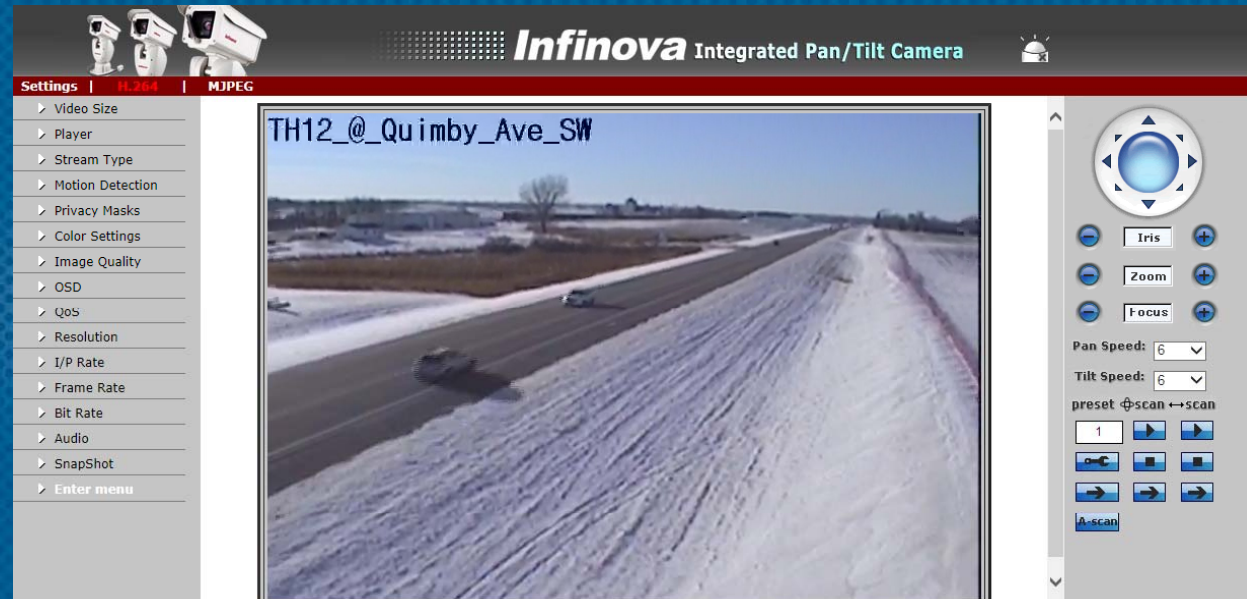


SRF

Pan-Tilt-Zoom (PTZ) Camera

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- Camera can zoom in to see road conditions or to see the general road conditions

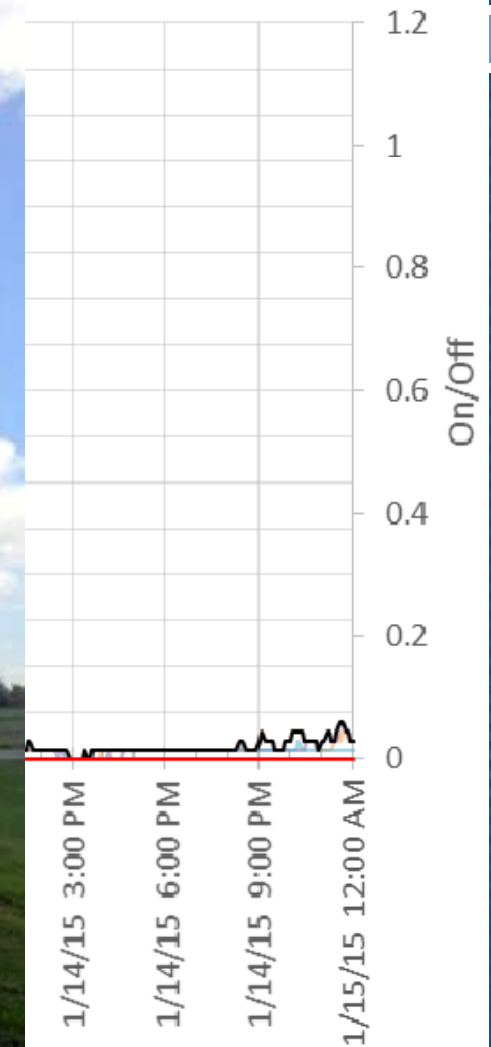
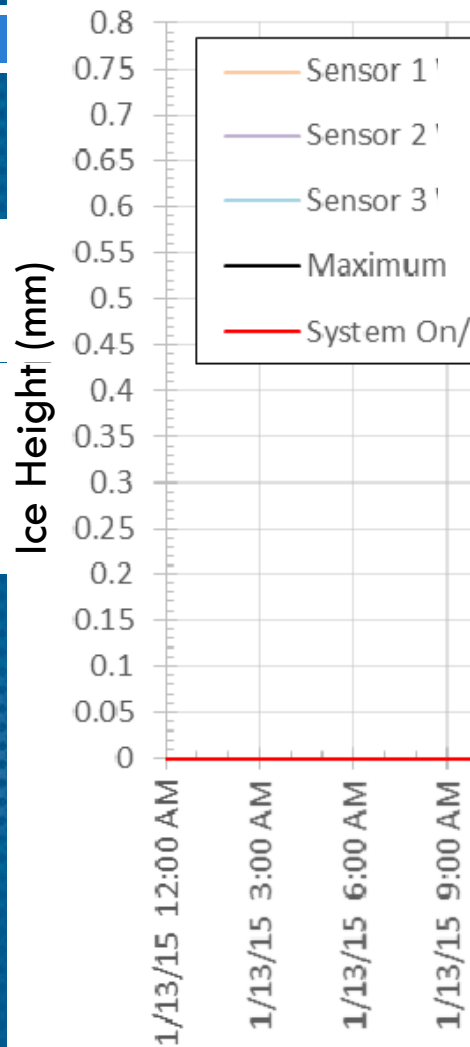


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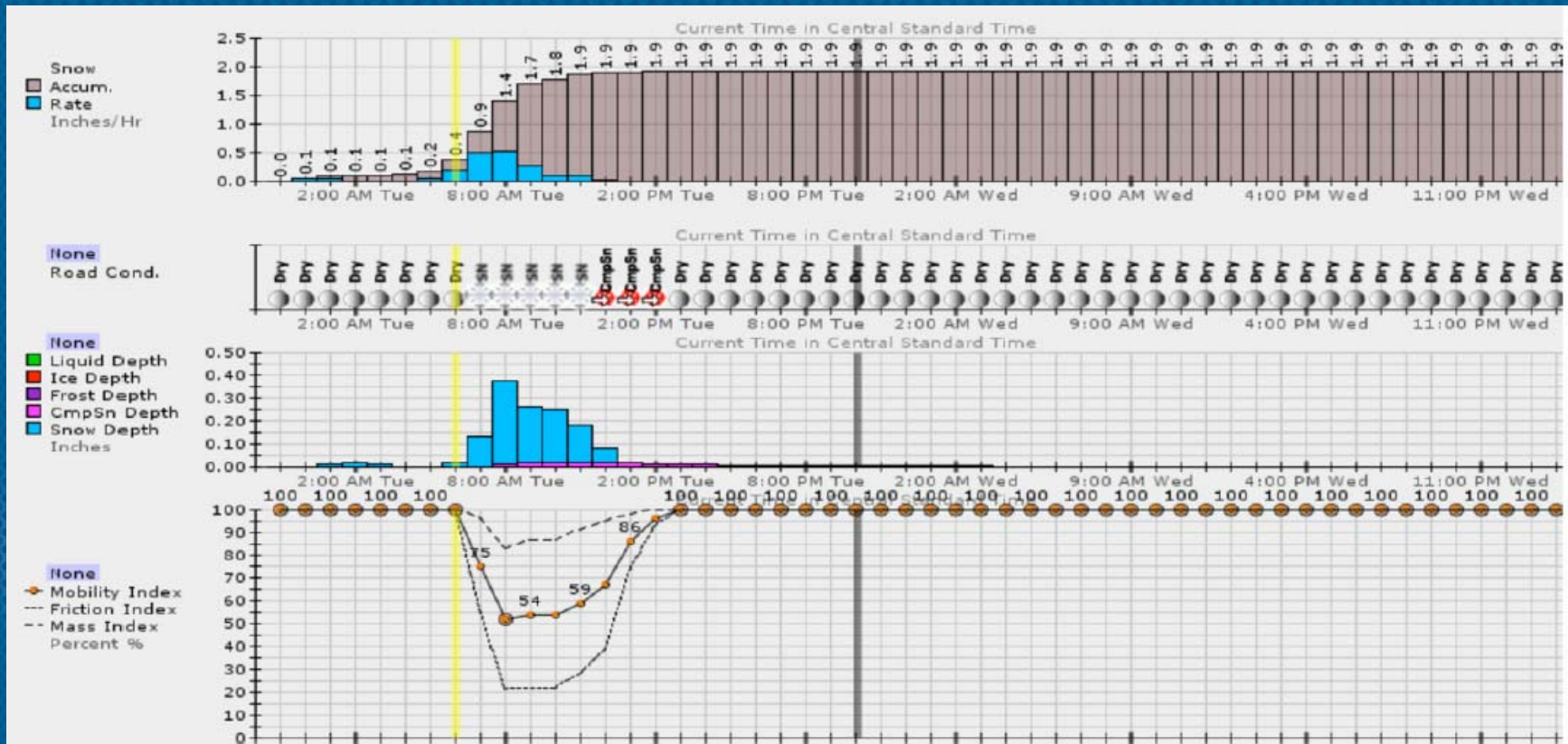
Data Logger/Controller



Data Analysis/Calibration



Winter 2014-2015 Data Compared to MnDOT's MDSS



Contact

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