

UTC Project Information	
Project Title	Low Cost High Density RWIS Development Phase II
University	University of Alaska
Principal Investigator	Billy Connor
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Funding Source(s) and Amounts Provided (by each agency or organization)	University of Washington PacTrans \$50,000 Fathym Incorporated \$50,000
Total Project Cost	\$100,000
Agency ID or Contract Number	DTRT13-G-UTC40
Start and End Dates	December 16, 2016 – January 31, 2018
Brief Description of Research Project	Remote Weather Information Systems (RWIS) are commonly used to provide DOT's and the public with current weather information along highways. WeatherCloud in partnership with UAF and PacTrans has developed a RWIS that costs about 1/10 the cost of previous RWIS. As part of the development process it was recognized that communications remain a barrier to the deployment of RWIS in very remote areas. WeatherCloud developed a Weather Mesh which allows each RWIS to relay information from RWIS around it to a connected site. The purpose of this study is to test the Weather Mesh system in remote Alaska over a winter.

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	<p>Three prototype RWIS were installed; one in Fairbanks, one in North Pole and one at Montana Creek Maintenance Camp about 60 miles north of Fairbanks. The first two have been working well for three years and the one at Montana Creek has been working for nearly one year. All three have been integrated into the Departments RWIS reporting system.</p> <p>The Montana Creek site is solar, and wind powered proving that the system will work in Alaska through the winter with temperatures below -40 deg. F.</p> <p>The systems are being left in place and operating to obtain the service life of the systems.</p>
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<p>Impacts/Benefits of Implementation (actual, or anticipated)</p>	<p>The installed systems have proven that a low-cost system is viable and that they do work in the Alaskan Environment. We anticipate one or more companies to make similar systems available which will allow users to install RWIS at a higher density. This will provide users with improved data upon which to base winter maintenance activities and to provide the motoring public in improved road condition information.</p>
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<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project Website	<p>https://digital.lib.washington.edu/researchworks/bitstream/handle/1773/43484/Connor%20RWS%20Final%20Report.pdf?sequence=1&isAllowed=y</p> <p>https://digital.lib.washington.edu/researchworks/handle/1773/43484</p>
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