

UTC Project Information	
Project Title	Mobile air quality monitoring for local high-resolution characterization of vehicle-sourced
University	The Ohio State University
Principal Investigator	Andrew A. May Assistant Professor of Civil, Environmental, and Geodetic Engineering The Ohio State University
PI Contact Information	may.561@osu.edu
Funding Source(s) and Amounts Provided (by each agency or organization)	\$89,968 NEXTRANS UTC / USDOT \$89,968 The Ohio State University
Total Project Cost	\$179,937
Agency ID or Contract Number	DTRT12-G-UTC05
Start and End Dates	Sept 2015 - Dec 2016
Brief Abstract of Research Project	<p>This research would investigate the technical feasibility of using transit buses as platforms for carrying inexpensive sensors to obtain spatially detailed air quality data over extensive portions of urban areas. Using bus platforms with inexpensive sensors can offer a low cost means of integrating technologies and modes to obtain air quality data on an ongoing basis at presently unachievable spatial resolution. A specific hypothesis to be investigated is that using present configurations of stationary monitoring sites would not be able to provide the spatiotemporal detail required to detect localized indications of transportation-generated air pollution and indications of air pollution levels that would affect travelers in roadway corridors, whereas using the mobile transit bus platform would be able to provide this detail. The approach of taking advantage of the characteristics of one mode – namely, the regular, repeated route coverage of the transit buses – to provide information on air quality of the urban area, and especially for travelers of transit and other modes (auto, bicycle, walk) would be transferable to all urban areas that are served by regular transit service. Since buses are deployed for other purposes (providing urban public transportation), the marginal cost of supplying the sensing platform is low. Given the developments in low cost sensors, the total cost of acquisition would be low.</p>

<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	
<p>Impacts/Benefits of Implementation (actual, not anticipated)</p>	
<p>Web Links</p> <ul style="list-style-type: none">• Reports• Project website	