

<b>UTC Project Information</b>	
Project Title	Transit Origin-Destination Flow Estimation Considering Temporal Variations based on APC Data
University	The Ohio State University
Principal Investigator	<p>Principal Investigators:</p> <p>Rabi G. Mishalani Associate Professor, Civil, Environmental, and Geodetic Engineering The Ohio State University <a href="mailto:mishalani.1@osu.edu">mishalani.1@osu.edu</a></p> <p>Mark R. McCord, Professor, Civil, Environmental, and Geodetic Engineering, The Ohio State University, <a href="mailto:mccord.2@osu.edu">mccord.2@osu.edu</a></p> <p>Contributing Investigator:</p> <p>Prem K. Goel Professor, Statistics The Ohio State University, <a href="mailto:goel.1@osu.edu">goel.1@osu.edu</a></p>
PI Contact Information	See above
Funding Source(s) and Amounts Provided (by each agency or organization)	<p>\$103,065: NEXTRANS Center/USDOT</p> <p>\$67,831: The Ohio State University</p>
Total Project Cost	\$170,896
Agency ID or Contract Number	DTRT12-G-UTC05
Start and End Dates	1/1/2013
Brief Description of Research Project	<p>This project builds upon the progress made by the NEXTRANS investigators in using APC data from transit buses to estimate route-level OD flows considering a variety of new dimensions and identified limitations. Specifically, these efforts relate to the temporal representation of OD flows.</p> <p>Route-level bus passenger OD flow estimation methods recently developed by the NEXTRANS investigators are presently being</p>

	<p>used to provide insights on empirical flow patterns for a few transit agencies. The research here is targeted to improve upon these applications for sustained, long-term use. As was done in moving the recently developed approaches toward empirical implementation, methodological formulations must be developed, evaluated, and refined before being put into use. The advanced methods eventually developed would form the basis for long-term benefits to transit agencies and MPOs.</p> <p>The methods being developed are based on exploiting spatially and temporally extensive boarding and alighting data that are now available from APC technologies in use on many transit properties. As with previously developed methods, the new methods will be inspired by an understanding of bus passenger behavior that is consistent with data and in situ observations collected on OSU's living Campus Transit Lab and refined according to these data and observations.</p> <p>The developed methods will lead to a richer representation of OD flow patterns and more accurate estimates of such patterns. In both cases, improved service planning and operations, where OD flow patterns are used as inputs, are expected. Planning applications include, for example, extending, splitting or combining, and designing new routes, and operations applications include short-turning, expressing, and holding. Improved service and operations will eventually result in a more competitive transit mode, with subsequent effects on reduced congestion, improved sustainable use of energy resources, and mitigated environmental impacts stemming from passenger travel</p>
<p>Describe Implementation of Research Outcomes (or why not implemented)</p> <p>Place Any Photos Here</p>	

Impacts/Benefits of Implementation (actual, not anticipated)	
Web Links <ul style="list-style-type: none"><li>• Reports</li><li>• Project website</li></ul>	