



# TRANSPORTATION INNOVATION SERIES

*A strategic outreach series hosted by the  
Office of the Assistant Secretary for Research and Technology*

## Are Adaptive Signal Control Systems a Solution to Urban Congestion

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Wednesday, April 15, 2015 • 1:00pm – 2:00pm EDT

USDOT Headquarters West Building Conference Center – Rooms 8-9-10



Adaptive traffic signal control systems are an emerging technology for urban arterial operations. This presentation focuses on the current status of adaptive traffic signal control system applications in the U.S. An overview of adaptive signal system deployments is first

presented. Some insights of the advantages and drawbacks will be given. The results from some field before-after studies will be discussed. One

particular issue is related to how a comparison is made against conventional coordination methods that run pre-defined timing plans on a time-of-day basis. Potential biases can result if a comparison is against non-optimal time-of-day coordination plans. The second part of the presentation introduces some case studies on conventional signal coordination with the assistance of modern technologies and tools. In particular, an iOS-based software tool is demonstrated to show its applications on timing issue diagnostics and performance evaluation. This tool is expected to greatly assist traffic engineers in developing and implementing high quality and cost-effective coordination plans.

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