

Back to Basics: Coordinated-Actuated Traffic Signal Control

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ABSTRACT

Actuated traffic signal controllers provide the ability to service only those phases that have vehicles waiting. When a series of actuated controllers are deployed along an arterial (for example SR 26 or US 52), there is also a need to coordinate their operation to provide vehicle progression through the signal system. However, the problem of coordinating a system of traffic signals, each of which is trying to respond to local traffic demand is a very difficult problem. The purpose of this tutorial will be to introduce attendants to the desired operation (Figure 1) and describe why poor progression (Figure 2) often results, even when the output from commercial signal coordination packages is deployed. The session will conclude with a summary of procedures that can be used to alleviate the "early return to main street green" illustrated in Figure 2.

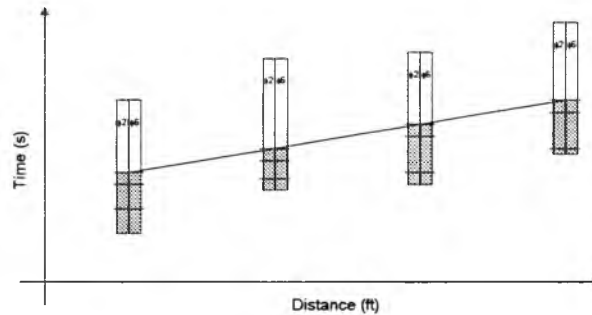


Figure 1: Ideal progression through traffic signal system.

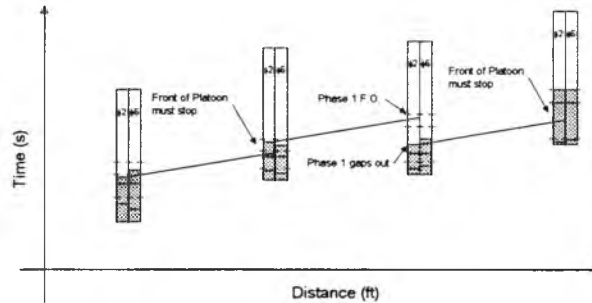


Figure 2: Actual progression through a traffic signal system with actuated controllers.

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