Analyzing Signalized Intersections
Using the Newest Versions of HCM and HCS

by
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The latest update of Highway Capacity Manual in 1997 provided several modifications among which those regarding signalized and unsignalized intersections are the most significant. The latest, third version of Highway Capacity Software HCS-3 (Figure 1) is a faithful Windows-based computer implementation the 1997 HCM update. The objective of this presentation is to familiarize the participants with the newest version of HCS by running example calculations.

The contents of the presentation are listed.
1) This presentation provides a summary of HCM modifications introduced by the 1997 update.
2) The basic concepts of traffic signals are presented in the first part of the presentation. An animation of a signalized arterial using CORSIM is used to illustrate these concepts (Figure 2).
3) The participants have a unique opportunity to collect required data without leaving the presentation room.
4) The collected data are utilized in HCS to analyze the selected intersection. The obtained results are immediately compared with the results produced in the simulation.
5) Computer animation is used again to point out some limitations of HCS.

Handouts distributed during the presentation include an excerpt from the latest version of HCM and forms required in collecting and presenting input to the analysis.
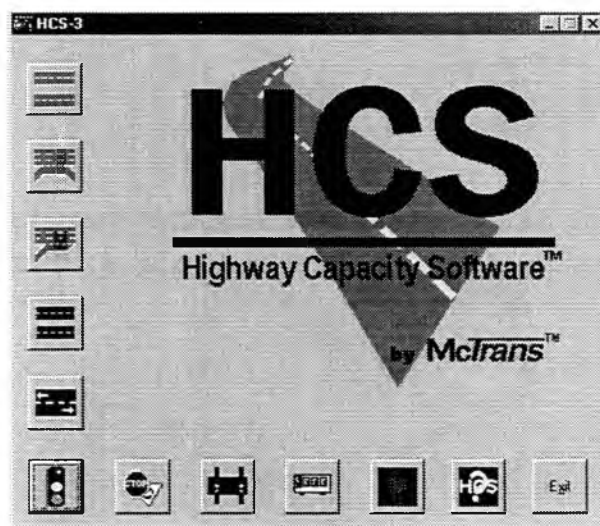

Figure 1   Highway Capacity Software v.3

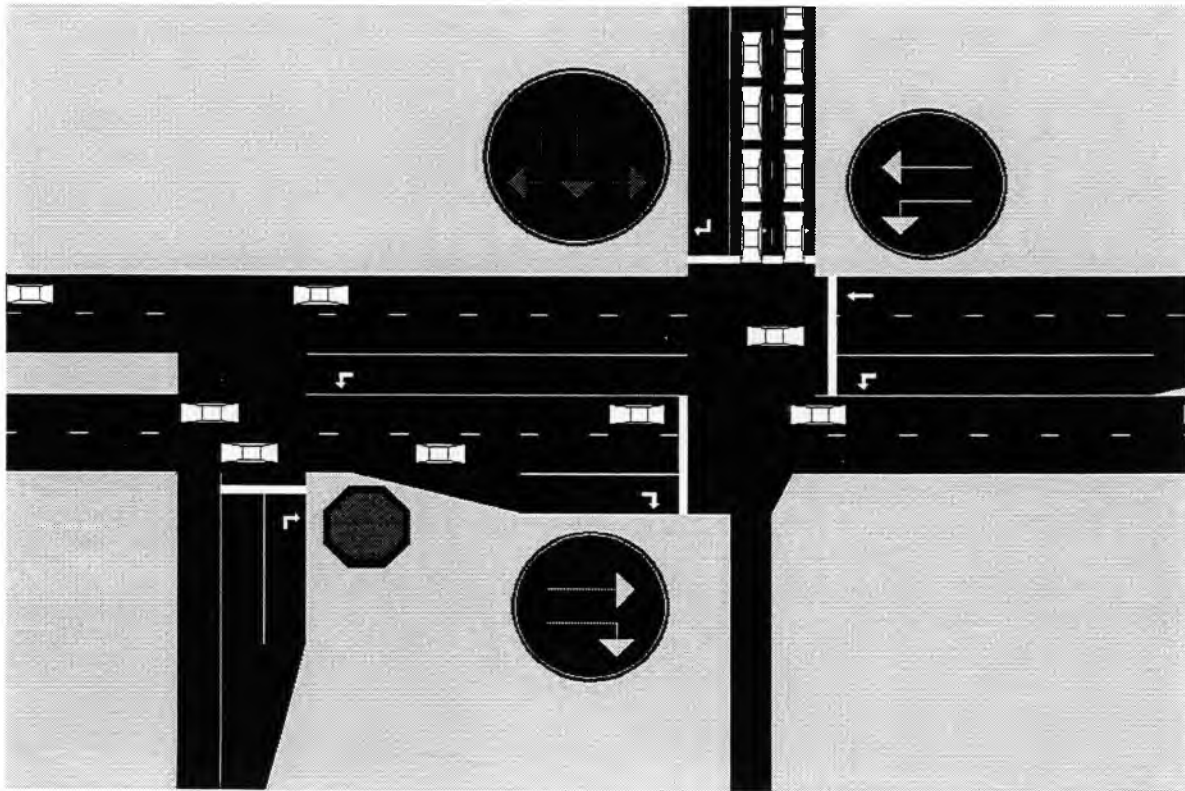[1]Assistant Professor of Civil Engineering, Purdue University, 1284 Civil Engineering Building, West Lafayette, IN 47907; phone: (765) 494-5027; fax: (765) 496-1105; email: tarko@ecn.purdue.edu

Figure 2 Computer animation