

Using Visualization Tool to Learn About Traffic Signal Timing

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Most engineers deal with complex systems. Uncovering these systems for students is a key to their ability to design these systems. The purpose of this presentation is to describe the development of curriculum and the supporting visual tools to help students more deeply understanding the components (machine and human) of the traffic control system through an interdisciplinary partnership between faculty and students from the College of Engineering and the College of Art and Architecture at the University of Idaho, and other universities around the U.S. This technology-based curriculum has been developed over the past five years to improve traffic signal timing understandings and skills for university students and practicing traffic engineers. MOST, or mobile signal timing training, is a set of 37 separate experiments designed to provide a realistic environment in which to learn about signal timing. A simulation environment has been developed so that students can change timing parameters in the signal controller and immediately see the results in the flow of traffic through an intersection. Additional visualization tools have been recently developed to provide further insights into the process of signal timing, significantly improving the learning process. Versions of the MOST course are being used by the National Highway Institute and by university faculty around the U.S. A new distance based course is being pilot tested this spring to four universities in the Northwest.