

## Richard E. Hangen ITS Laboratory

### What is ITS?

- ❖ Intelligent Transportation Systems (ITS) are the next generation in the evolution of transportation technologies and services.
- ❖ With the use of advanced information and communications technologies, we can apply ITS to improve the efficiency, safety, and mobility of existing transportation facilities and services.
- ❖ These new information and communications technologies allow better monitoring and management of transportation infrastructure and services, so that the system can respond quickly to the public's needs.



### What is an ITS Control Lab?

An ITS Control Laboratory is a state-of-the-art research and educational facility used for learning the traveler/driver behavior and for developing information and control strategies in the context of multi-modal applications. The lab is also used for the education of transportation engineering students and for the training of traffic control professionals from the Delaware Department of Transportation (DelDOT).



### What happens in the lab?

We receive real-time video images of traffic conditions, both highway and public transit, from DelDOT's Traffic Management Center. Given these video images, our lab

- ❖ monitors transportation facilities and services and evaluates the current conditions;
  - ❖ develops and tests simulation models of vehicle movement in a network and pedestrian behavior in an urban setting to enable better network design, signal control, and a safe and pleasant mobility environment; and
- ❖ provides useful real-time information to the general public, transit users, and automobile drivers regarding the conditions of transportation services and facilities via radio, television, Internet, and variable message signs to promote the most efficient use of various transportation modes.

### Roles of the ITS lab

The main roles of the ITS lab include monitoring conditions, learning the interactions of supply and demand, developing simulation models, translating the research results to policies and implementable control strategies, and disseminating the information to the professional community.



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