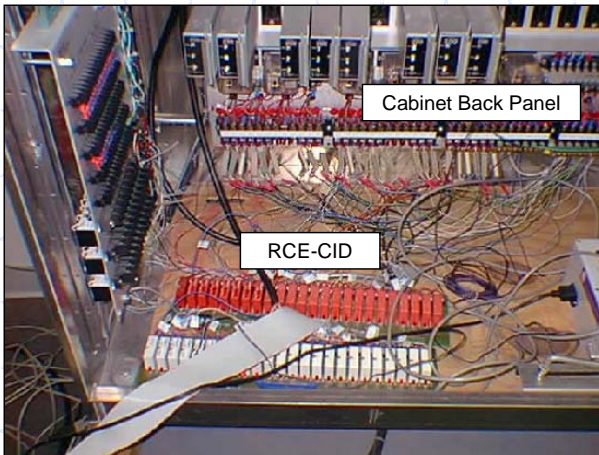


# The Future of Software-in-the-Loop Simulation Training and Research

Tom Urbanik  
The University of Tennessee



# Traffic Signal Objectives

- ◆ Achieve policy objectives for people and goods
- ◆ Maintain safe operations



# System Based Priority Control

- ◆ Drawbridges
- ◆ Railroad
- ◆ Emergency vehicles
- ◆ Pedestrians/Bikes
- ◆ Transit
- ◆ Trucks (including snow plows)
- ◆ SOV



# In The Old Days.....

- ◆ Policy was easy to implement



# Today.....



# So What?

- ◆ Need to evaluate existing or new policies
- ◆ Traditional field studies are impractical and expensive
- ◆ Traditional simulation models are unrealistic
- ◆ Optimization software does not address new approaches

# So What (II)?

- ◆ SILS is a tool that offers many opportunities
  - Training
  - Evaluation
  - Fine tuning
  - Research
  - Education



# What Have We Learned From MOST?



- ◆ SILS is an effective approach for training
- ◆ Getting the details right is hard
- ◆ Getting the details right is important



# What's Left to be Done?

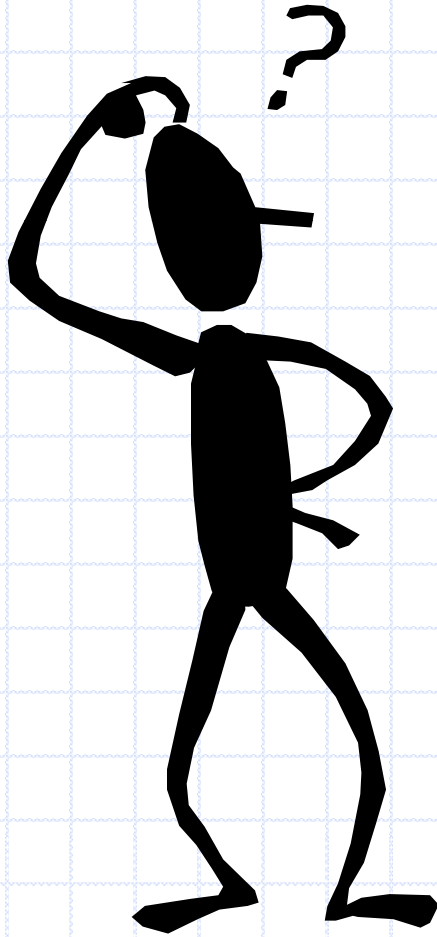
- ◆ More labs on “advanced” features
- ◆ More delivery capability for education and training



# The Future

- ◆ SILS will become more common
- ◆ It will become the standard for comparison
- ◆ It will allow even more experimentation
- ◆ The software will become easier to use
- ◆ Data requirements will become less

# QUESTIONS?



- ◆ Michael Kyte  
The University of Idaho  
(208) 885-6002  
[mkyte@idaho.edu](mailto:mkyte@idaho.edu)
- ◆ Darcy Bullock  
Purdue University  
(765) 494-2226  
[darcy@purdue.edu](mailto:darcy@purdue.edu)
- ◆ Kiel Ova  
PTV America  
(503) 297-2556 x2208  
[kova@ptvamerica.com](mailto:kova@ptvamerica.com)
- ◆ Tom Urbanik  
The University of Tennessee  
865-974-7709  
[turbanik@utk.edu](mailto:turbanik@utk.edu)
- ◆ Paul Olson  
Federal Highway Administration  
(720) 963-3239  
[Paul.Olson@fhwa.dot.gov](mailto:Paul.Olson@fhwa.dot.gov)