ACTIVITY
# 27 The VISSIM Simulation Model: Learning Your Way Around

DISCOVERY

## Purpose

The purpose of this activity is to introduce you to the VISSIM simulation environment and to give you the opportunity to explore some of its features.

## Learning Objective

- Describe the basic features of VISSIM

## Required Resources

- Movie file: A27.mp4
- PTV America website: www.ptvamerica.com

## Deliverable

- Prepare a document that includes your answers to the Critical Thinking Questions

## Critical Thinking Questions

1. What are some of the components of the VISSIM model that are accessible through the toolbar?

2. What are some of the traffic signal timing parameters that are required to specify the operation of the RBC controller?

3. What kinds of evaluation data are produced by VISSIM and which ones might be most important in evaluating a design?

4. Why would you consider various simulation speeds when you run VISSIM?

5. What did you learn about VISSIM from the PTV website?

## Information

VISSIM will be the primary tool with which you will test and evaluate your signal timing design options. VISSIM is one of several commonly used and very powerful simulation models on the market today. VISSIM includes components for how drivers interact with the roadway design, the control system, and with other drivers. It includes several options for emulating the traffic control system. While this book is not about learning to use any particular simulation model, including VISSIM, it is important for you to learn some of the key features of VISSIM and how you will use them as you do learn about traffic signal timing.

In this activity, you will learn about some of the basic features of the VISSIM simulation model. The main VISSIM screen (see Figure 105) shows the representation of the geometry, the flow of vehicles, and the control devices. Driver behavior is modeled based on car-following logic, lane changing logic, and response to the status of control displays. The signal controller operation is based on actuated control timing processes that are linked to detector inputs. The status of all vehicles, the controller timing processes, and the signal displays are updated every tenth of a second. Uncertainty in driver responses is based on probabilistic modeling of driver behavior. Evaluation and performance statistics are collected during the simulation and are available to the user both during and after the simulation period.

## Task 1

Open the movie file and start the movie. Write down questions that you have on what you observe. As you watch the video, take notes on what you see and the important features of the model that are shown.

## Task 2

Browse the VISSIM portion of the PTV America web site. Watch at least one of the VISSIM video demonstrations on the web site. Find and read a section of the web site that describes some of the new features on the latest VISSIM release.

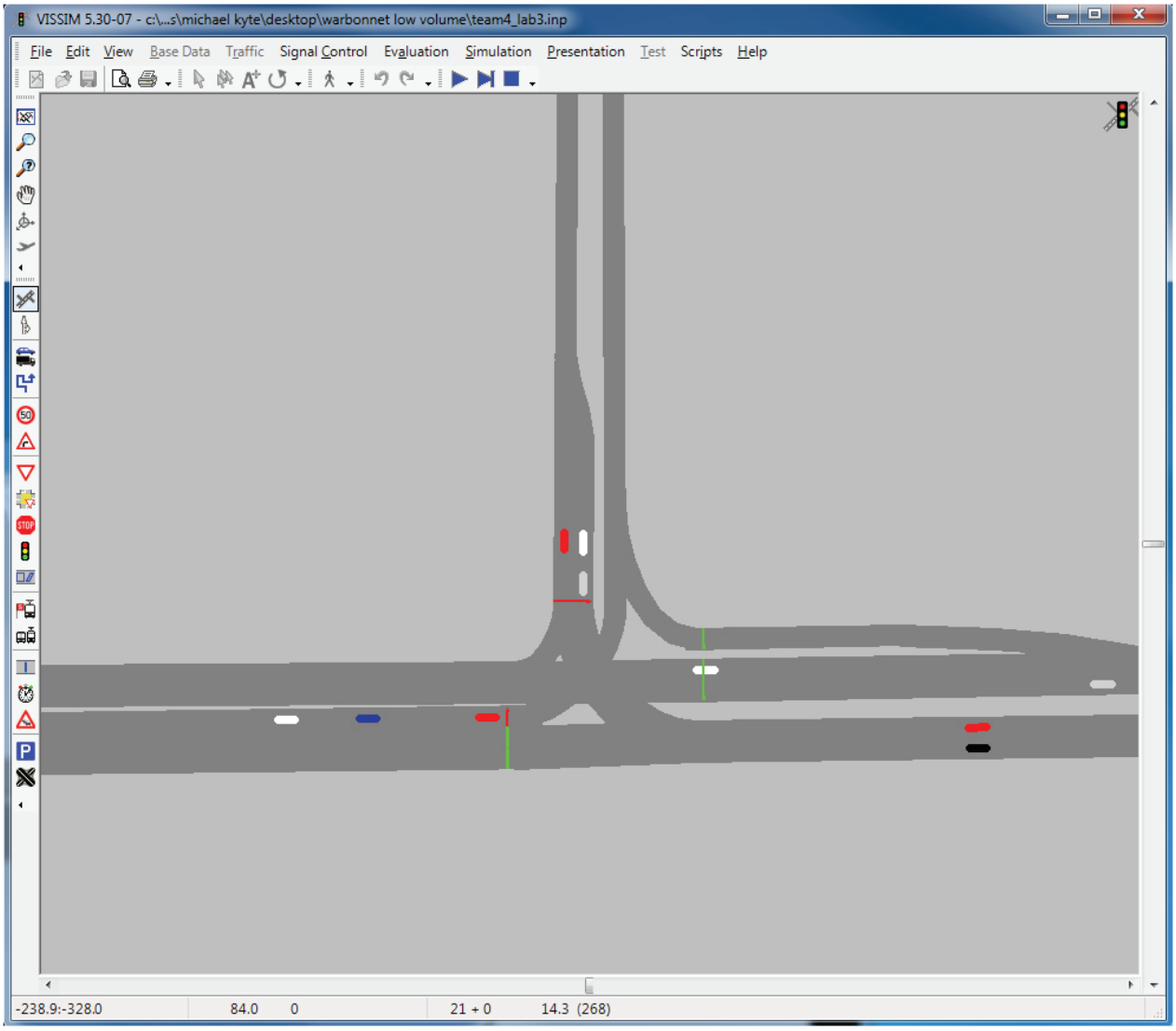


**Figure 105.** VISSIM display

Student Notes: