STEM Day – Student Handout

Name:_____ **Group:** _____

Location: Bell Engineering CVEG computer Lab (2nd Floor).

UNIVERSITY OF ARKANSAS COLLEGE OF ENGINEERING

Signal Timing:

The goal of any traffic system is **to maintain** a safe, consistent, predictable and efficient environment for drivers. Traffic Control lets you act as a traffic engineer by letting you control signals and traffic flow at multiple intersections. We'll use this simulation to test a hypothesis and in doing so, develop a better understanding about how traffic engineers use the scientific process to solve every-day problems.

- Important to know:
  - Efficiency:
  - Offset:
  - Queue:
  - Performance Index (PI):

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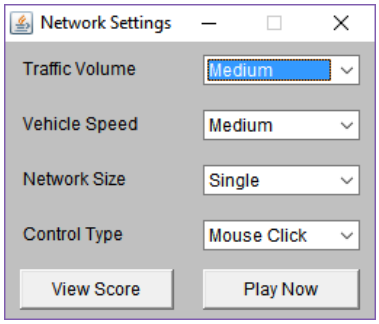
Activity 1: Manual Control

1. *Open* the simulation following the instructor's indications. You will have a couple minutes to interact with the traffic control simulation.
2. *Restart* the simulation with the following settings:



1. *Answer the questions*:

   a. What is the longest queue you created?

   b. How many cycles are there in your simulation? (a cycle is a peak and valley)

   c. How consistent is your pattern?

   d. Compare your graph to the 1 x 1 Fixed Time graph shown below. Make comments on how your graph compares to this graph.

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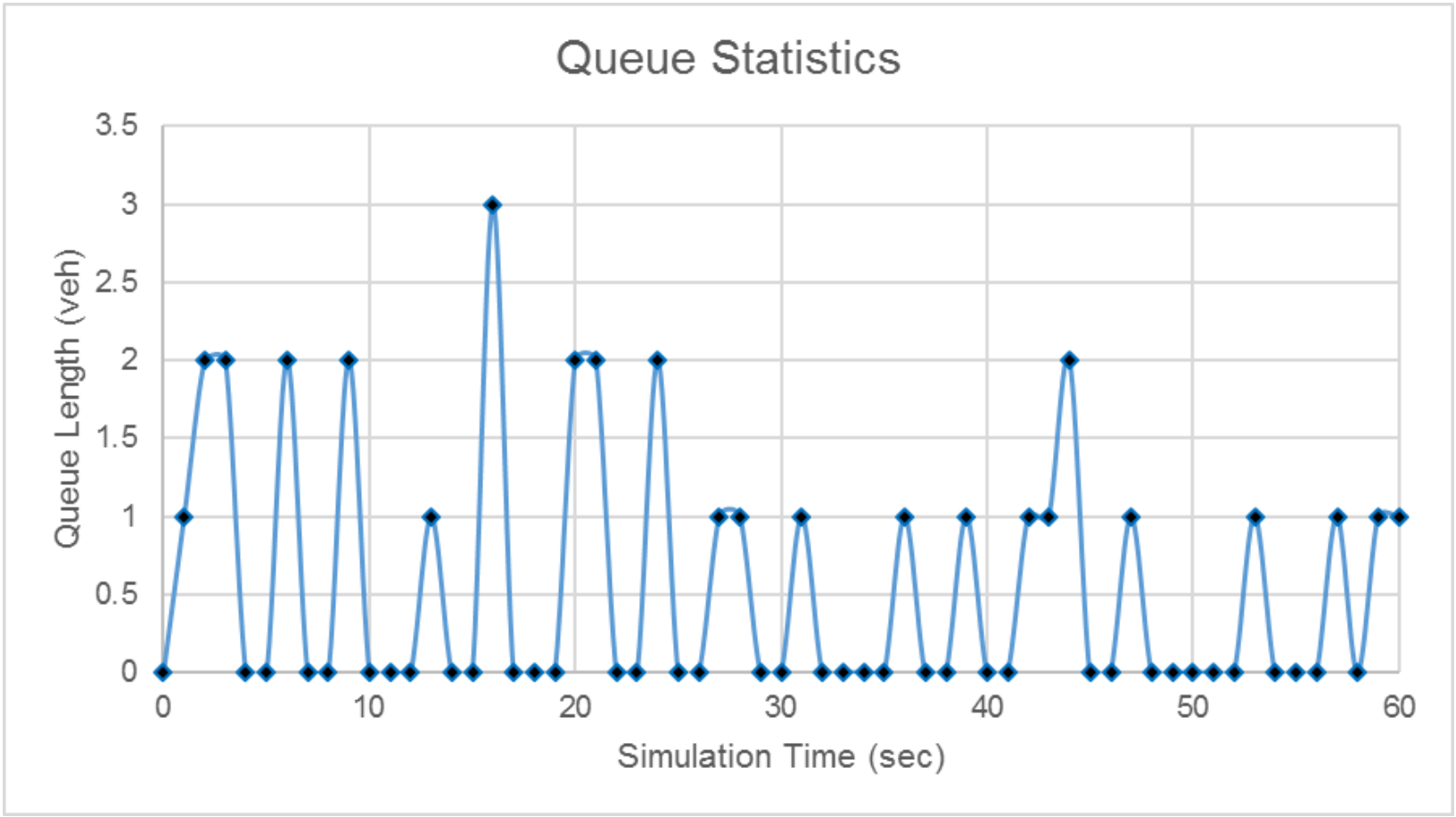

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