

**INST 346: Technologies, Infrastructure and Architecture**  
**Quiz 10, November 30, 2017**

**Standard Instructions** (unchanged from the last quiz):

This is a 5 minute quiz, starting promptly at 5:00 and ending promptly at 5:05. You may use any resources (Web, readings, class notes, class slides) that existed before the start of this quiz. You may not communicate with any other person (including the instructor) during the quiz. If you have difficulty interpreting a question, briefly describe that difficulty and any assumptions that you have made to allow you to answer the question and we will consider what you have written when grading your quiz.

Answer all questions. A maximum of 1 point is available.

0. (0 points) What is your name?
  
1. (1 point) Of the four types of network delays (transmission, propagation, processing, queueing), which one is usually the longest for a digital network communication between a control station on the Earth and a spacecraft on the surface of Mars. Provide reasonable estimates for all four types of delays to substantiate your answer.

Please **hand write and sign** the honor pledge on this quiz. (For reference, the honor pledge (described at <http://osc.umd.edu/Uploads/OSC/Honor%20Pledge.pdf>) is: "I pledge on my honor that I have not given or received any unauthorized assistance on this quiz.")