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**Activity 6.2 – Lab Computer Systems and Networking**

Consider the TCP segment containing the HTTP 'POST" as the first segment in the data transfer part of the TCP connection.



Figure 1. First TCP Segment that contains HTTP 'POST"

- At what time was the first segment (the one containing the HTTP POST) in the data-transfer part of the TCP connection sent?



**Answer: at 0.024047 second**

- At what time was the ACK for this first data-containing segment received?



**Answer: at 0.052671 second. Server (128.119.245.12) will gave us acknowledgement for the 3 TCP segments that we previously sent on index 4,5,6 to notify that first packet have successfully received**

- What is the RTT for this first data-containing segment?



**Answer: RTT of first segment containing data is 0.028624, obtained from the formula of $RTT = 0.052671 - 0.024047 = 0.028624$**

- What is the RTT value the second data-carrying TCP segment and its ACK?
  Second Segment

  

  **Answer: RTT of second segment containing data is 0.028628, obtained from the formula of** $RTT = 0.052676 - 0.024048 = 0.028628$

- What is the EstimatedRTT value after the ACK for the second data carrying segment is received? Assume that in making this calculation after the received of the ACK for the second segment, that the initial value of EstimatedRTT is equal to the measured RTT for the first segment, and then is computed using the EstimatedRTT equation (page 236 of the attached PDF file in elok), and a value of α = 0.125
  **Answer:**
  **EstimatedRTT = (1 − α) . EstimatedRTT + α . SampleRTT**
  **EstimatedRTT = (1 − 0.125) . 0.028624 + 0.125 . 0.028628**
  **EstimatedRTT = 0.875 . 0.028624 + 0.125 . 0.028628**
  **EstimatedRTT = 0.025046+ 0.0035785 = 0.0286245**

  **Hence,** $EstimatedRTT = 0.0286245$