Computer Networks - Assignment 3

Jannis Kühl, Henri Heyden
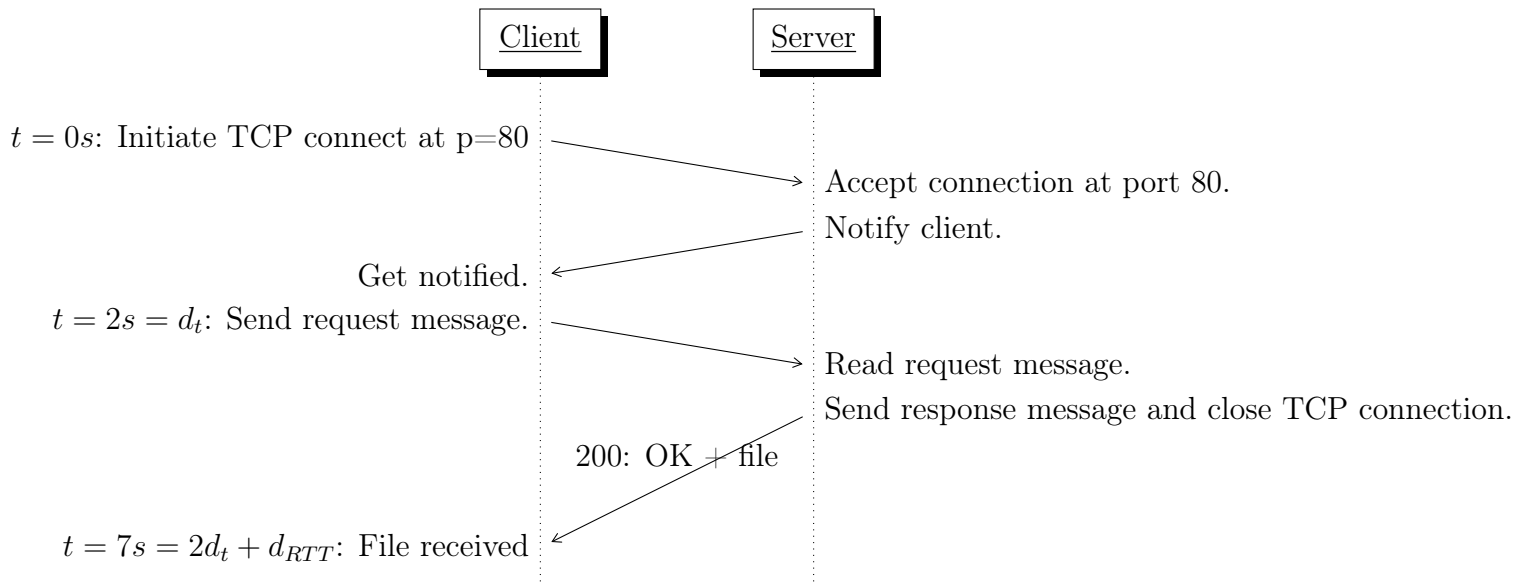
stu241399, stu240825

Task 2

a)

The following graphic should illustrate the delays for one HTTP v1.0 request. Here we will name the given delays with $d_t := 3s$ being the servers output transmission delay and $d_{RTT} := 2s$ being the RTT-delay.

As you can see I am not good with LaTeX...

| Client | | Server |

$t = 0s$: Initiate TCP connect at p=80

Accept connection at port 80.

Notify client.

Get notified.

$t = 2s = d_t$: Send request message.

Read request message.

Send response message and close TCP connection.

200: OK + file

$t = 7s = 2d_t + d_{RTT}$: File received

b)

Since the process illustrated in **a)** will have to be done 100 times, since we're using HTTP v.1.0 and are restricted to only one active TCP connection per client, we can calculate the total time: $T = 100 \cdot t_1 = 700s$. Since we only want the time between the first request being transmitted and the last file arriving at the client, we'll subtract d_{RTT} one time and get the asked time which is 698 seconds.