HyperText Transfer Protocol (HTTP)
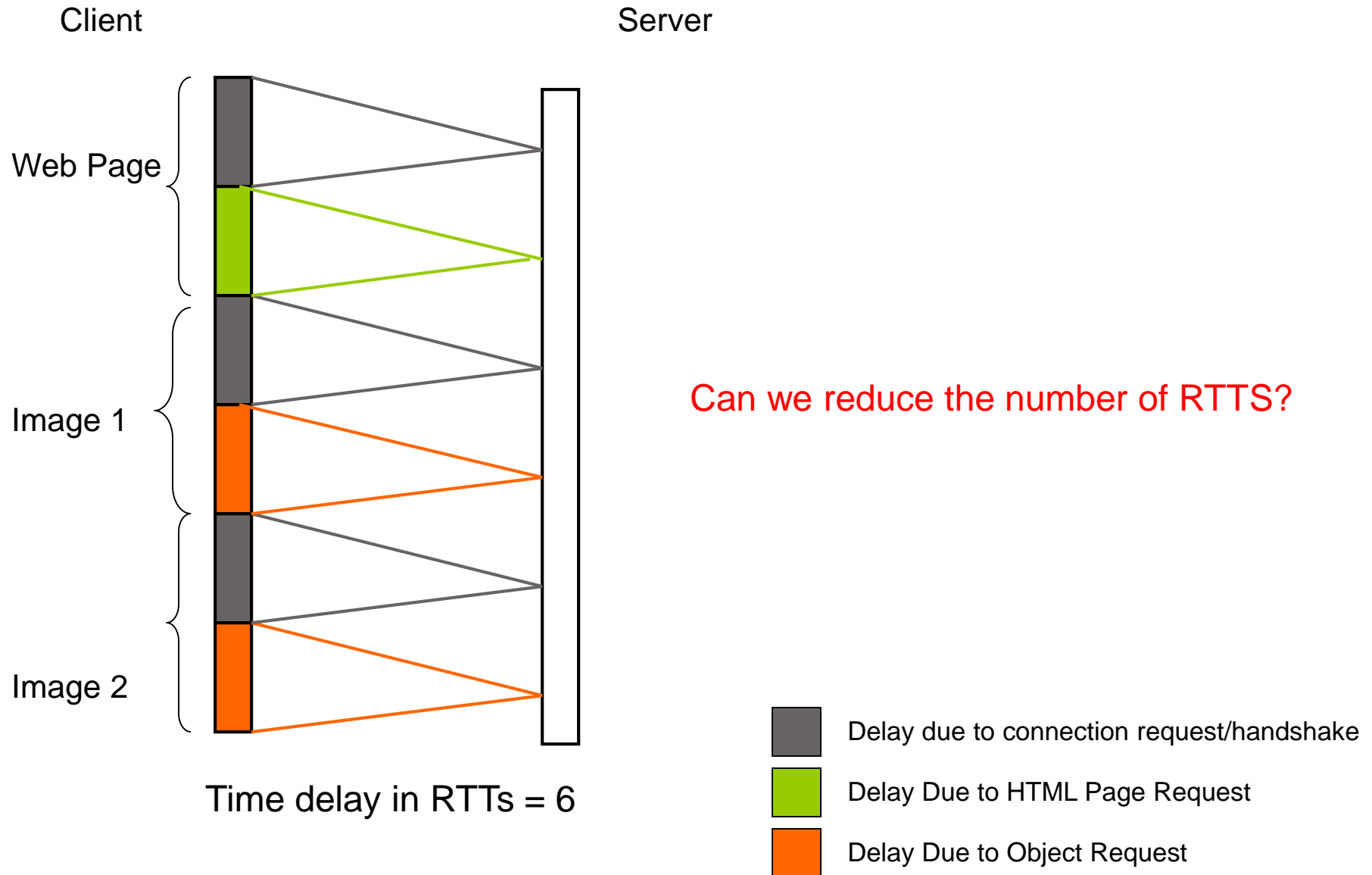
EE450: Computer Networks

Variations of HTTP

- Nonpersistent connections
    - with serial connections
    - with parallel connections

- Persistent connections
    - without pipelining
    - with pipelining
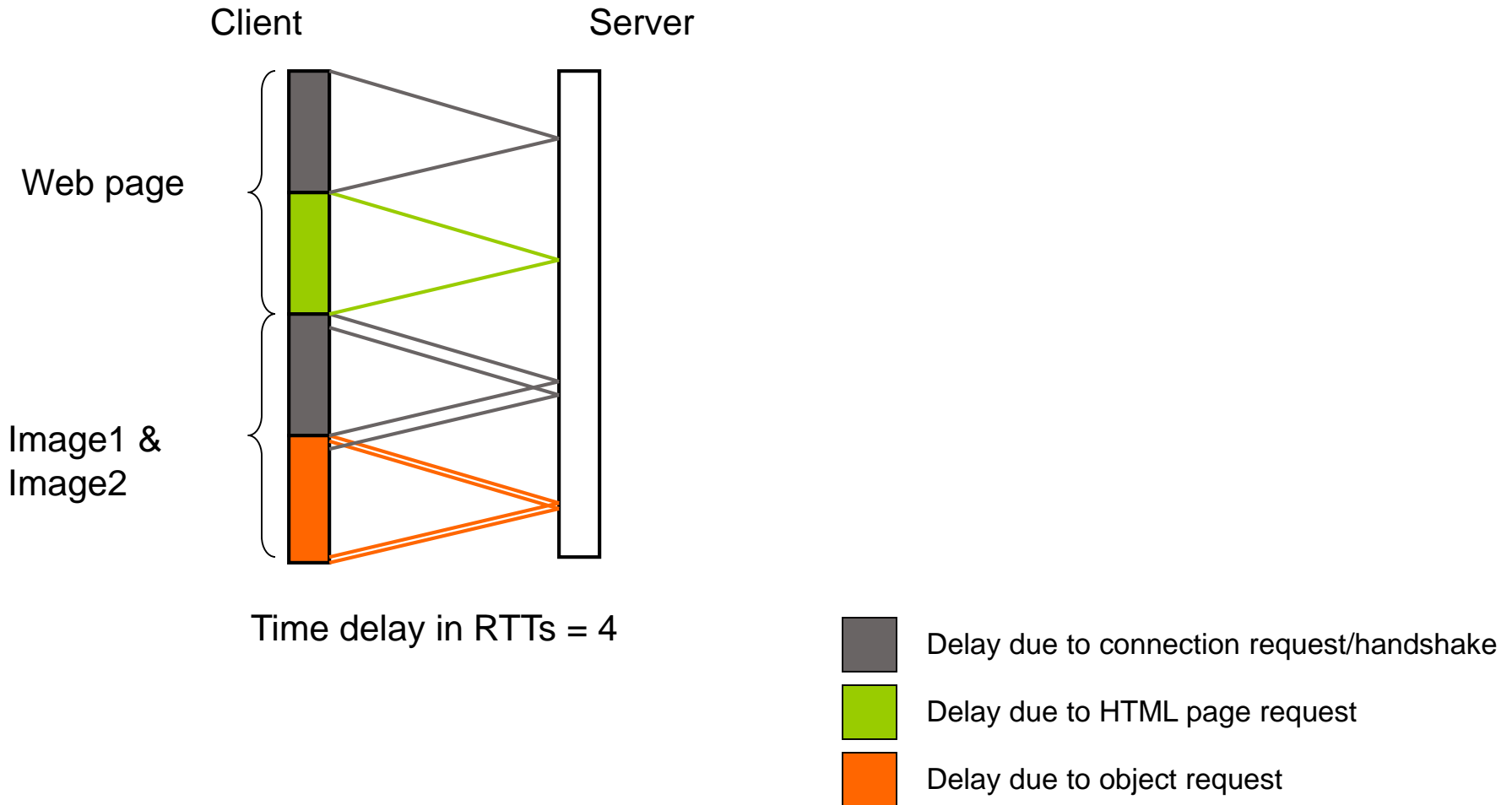
  ❖ Example: an HTML page with 2 objects (images)

Nonpersistent (HTTP /1.0 default)
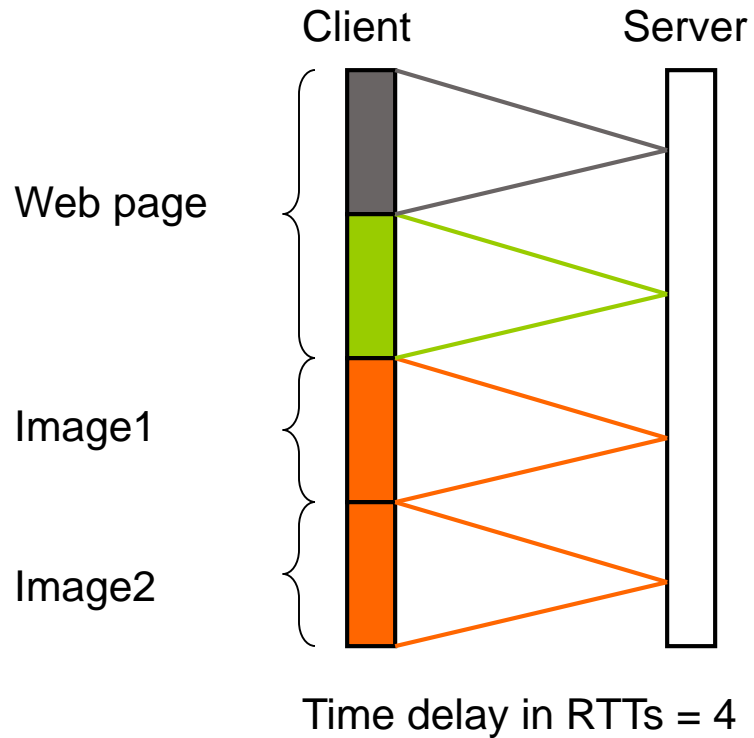
Rough calculation for number of RTTS

Client   Server

Web Page

Image 1

Can we reduce the number of RTTS?

Image 2

Time delay in RTTs = 6

Delay due to connection request/handshake

Delay Due to HTML Page Request

Delay Due to Object Request

Nonpersistent with parallel connections

Rough calculation

Client   Server

Web page

Image1 & Image2

Time delay in RTTs = 4

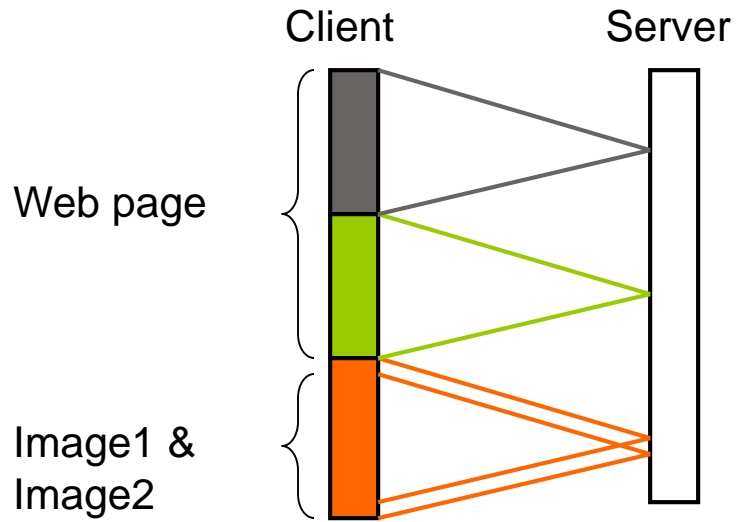Delay due to connection request/handshake

Delay due to HTML page request

Delay due to object request

Persistent without pipelining

Rough calculation

Client   Server

Web page

Image1

Image2

Time delay in RTTs = 4

Delay due to connection request/handshake

Delay due to HTML page request

Delay due to object request

Persistent with pipelining

Rough calculation

Client   Server

Web page

Image1 &
Image2

Time delay in RTTs = 3

■ Delay due to connection request/handshake

■ Delay due to HTML page request

■ Delay due to object request