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# HTTP and TCP

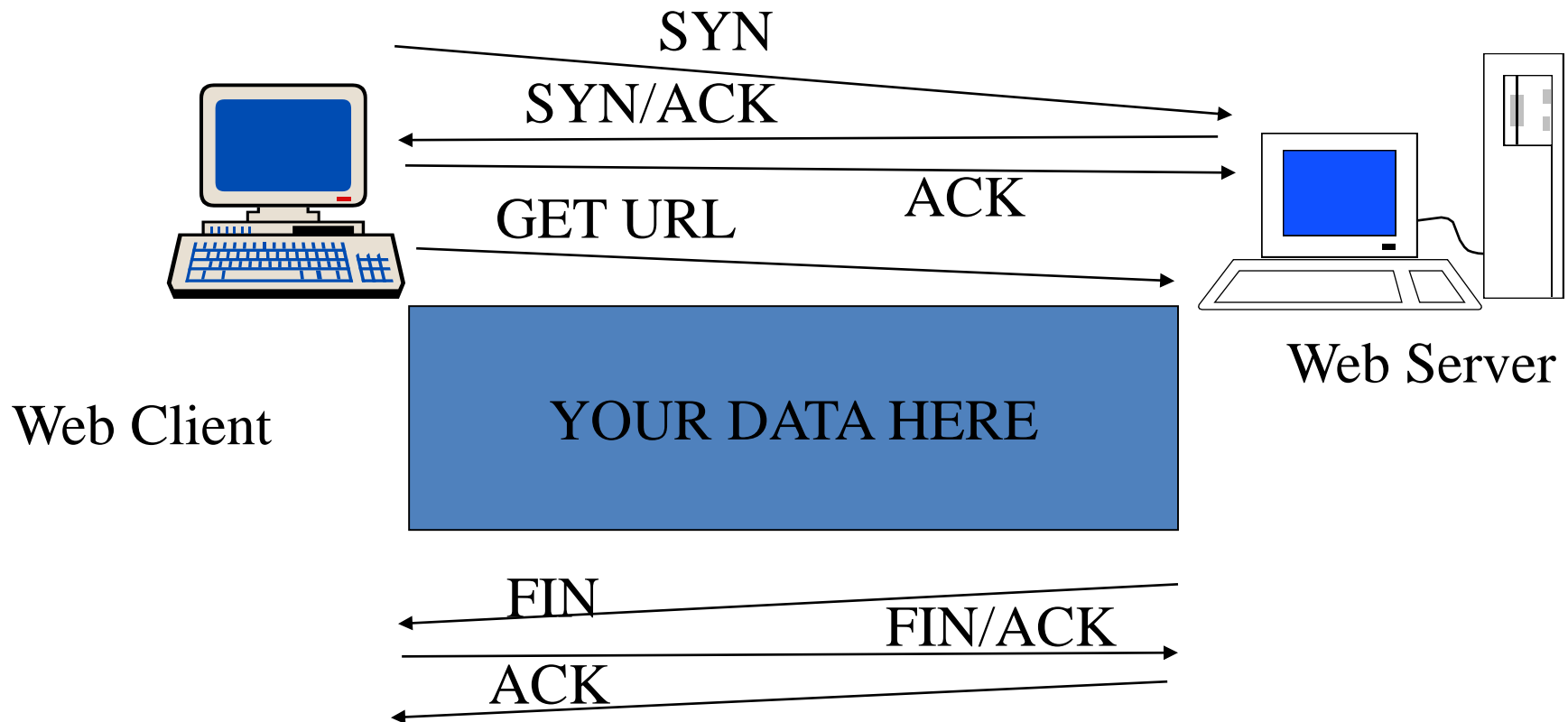
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Winter 2018

- TCP is a connection-oriented protocol



page.html

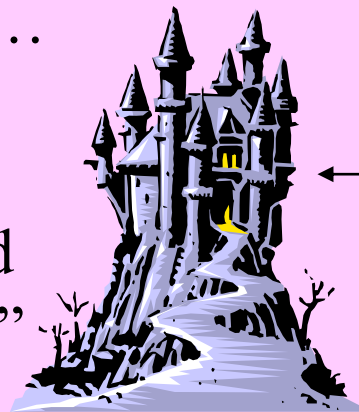
## Harry Potter Movies

As you all know,  
the new HP book  
will be out in June  
and then there will  
be a new movie  
shortly after that...

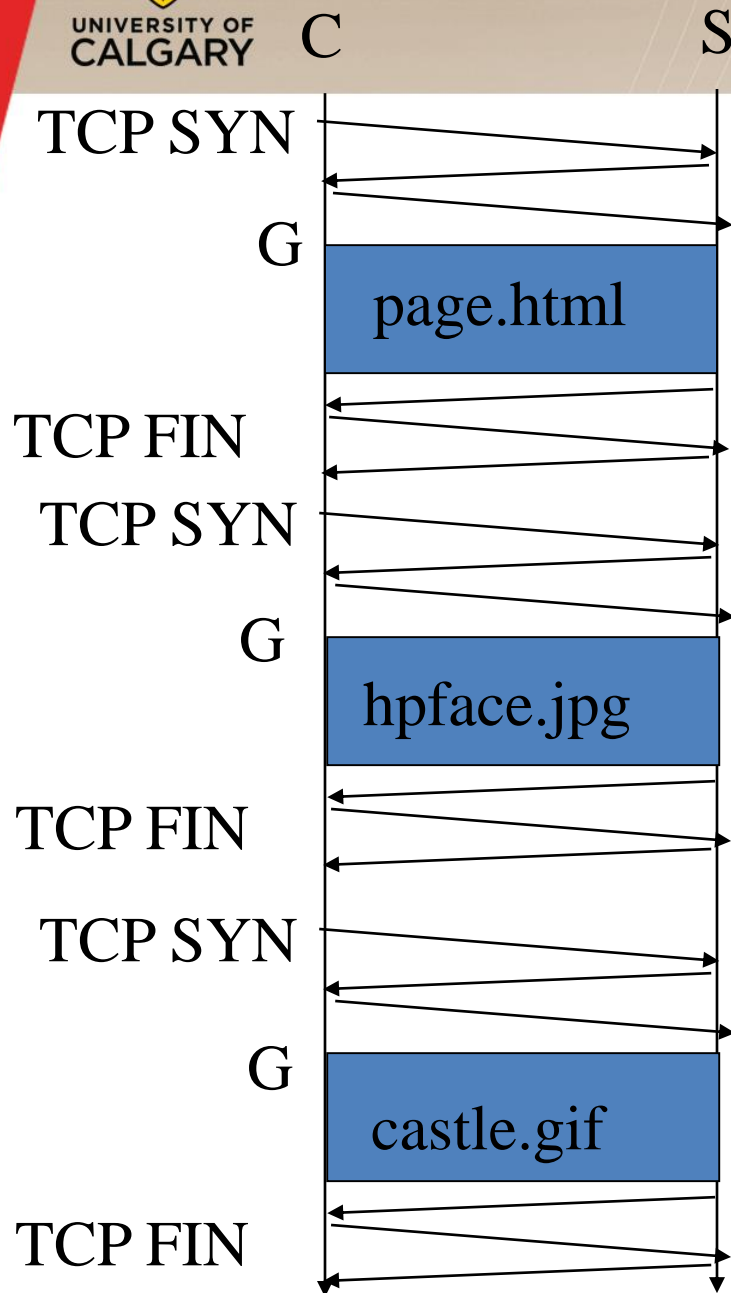


hpface.jpg

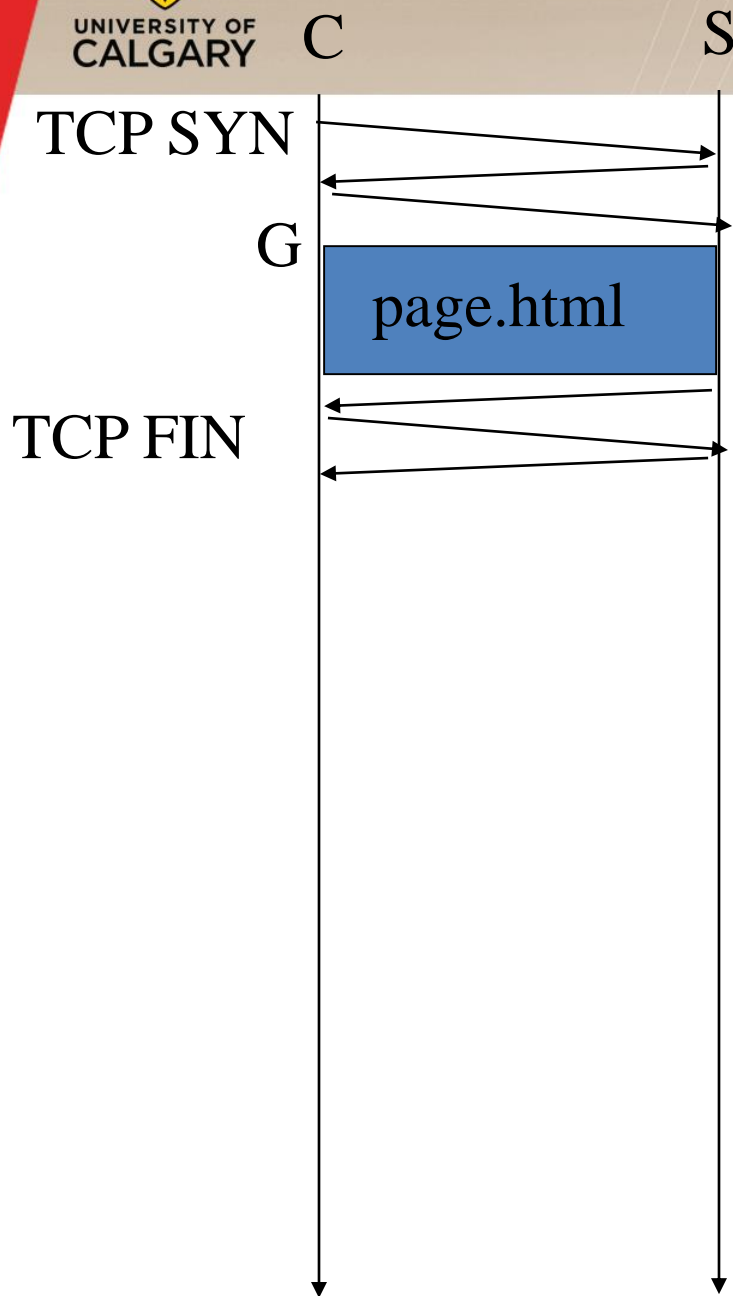
“Harry Potter and  
the Bathtub Ring”



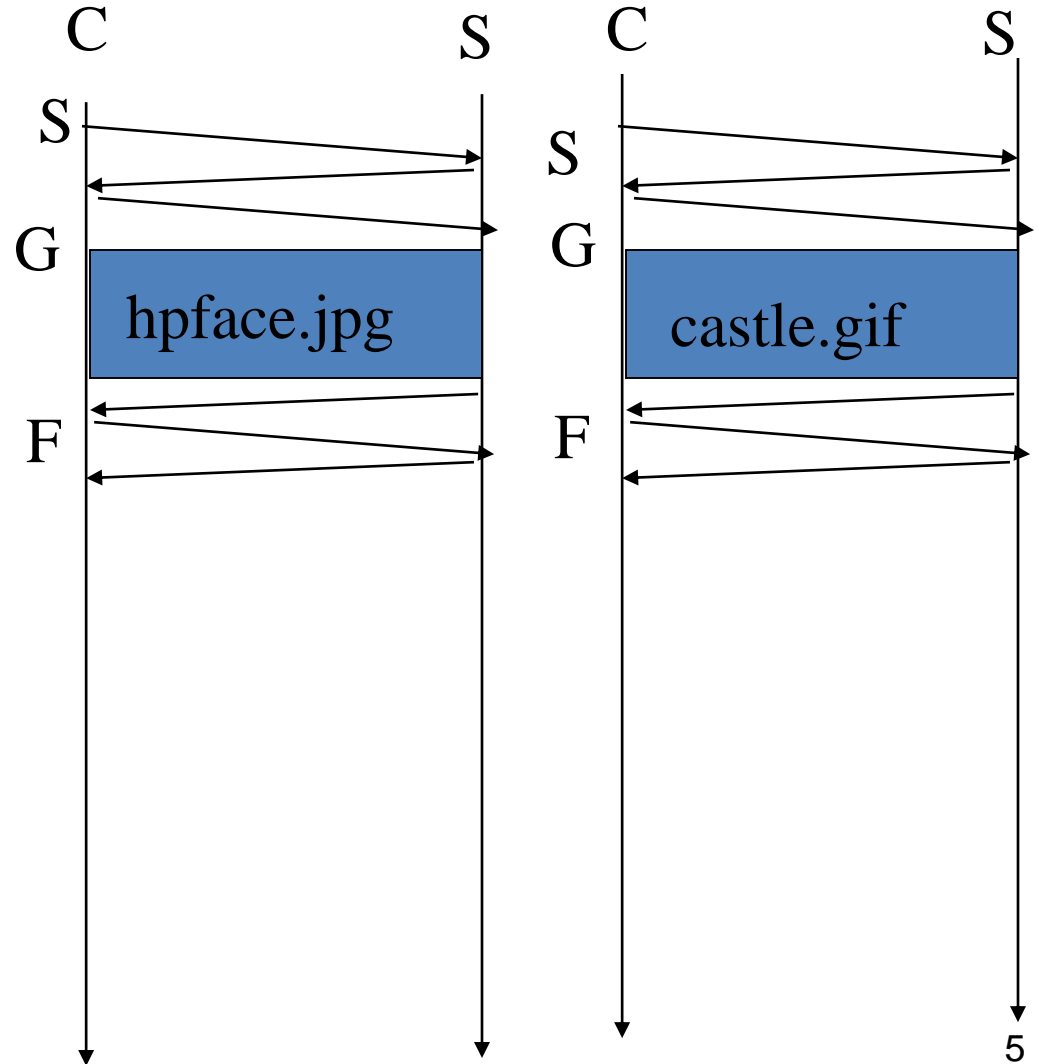
castle.gif

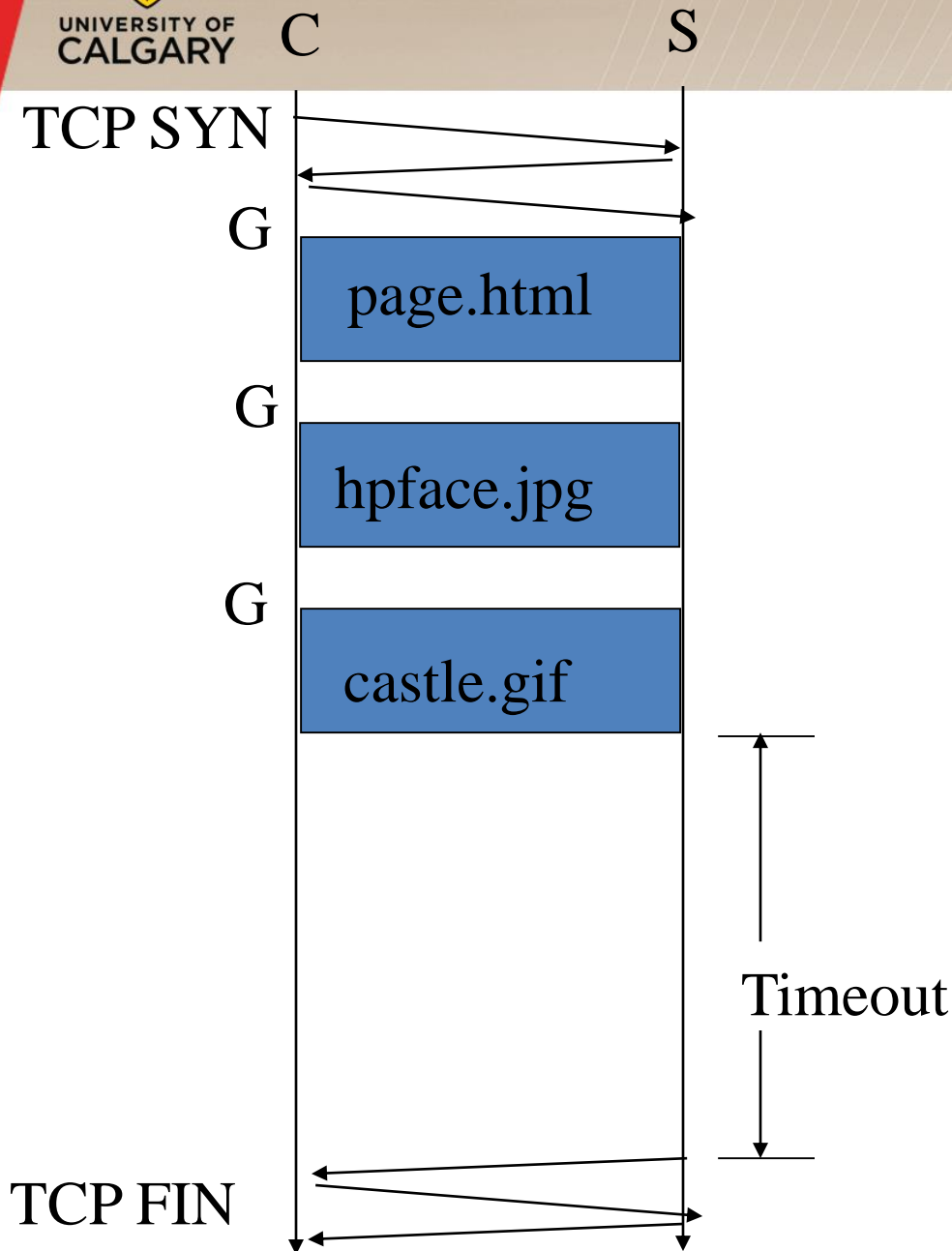


The “classic” approach in HTTP/1.0 is to use one HTTP request per TCP connection, serially.

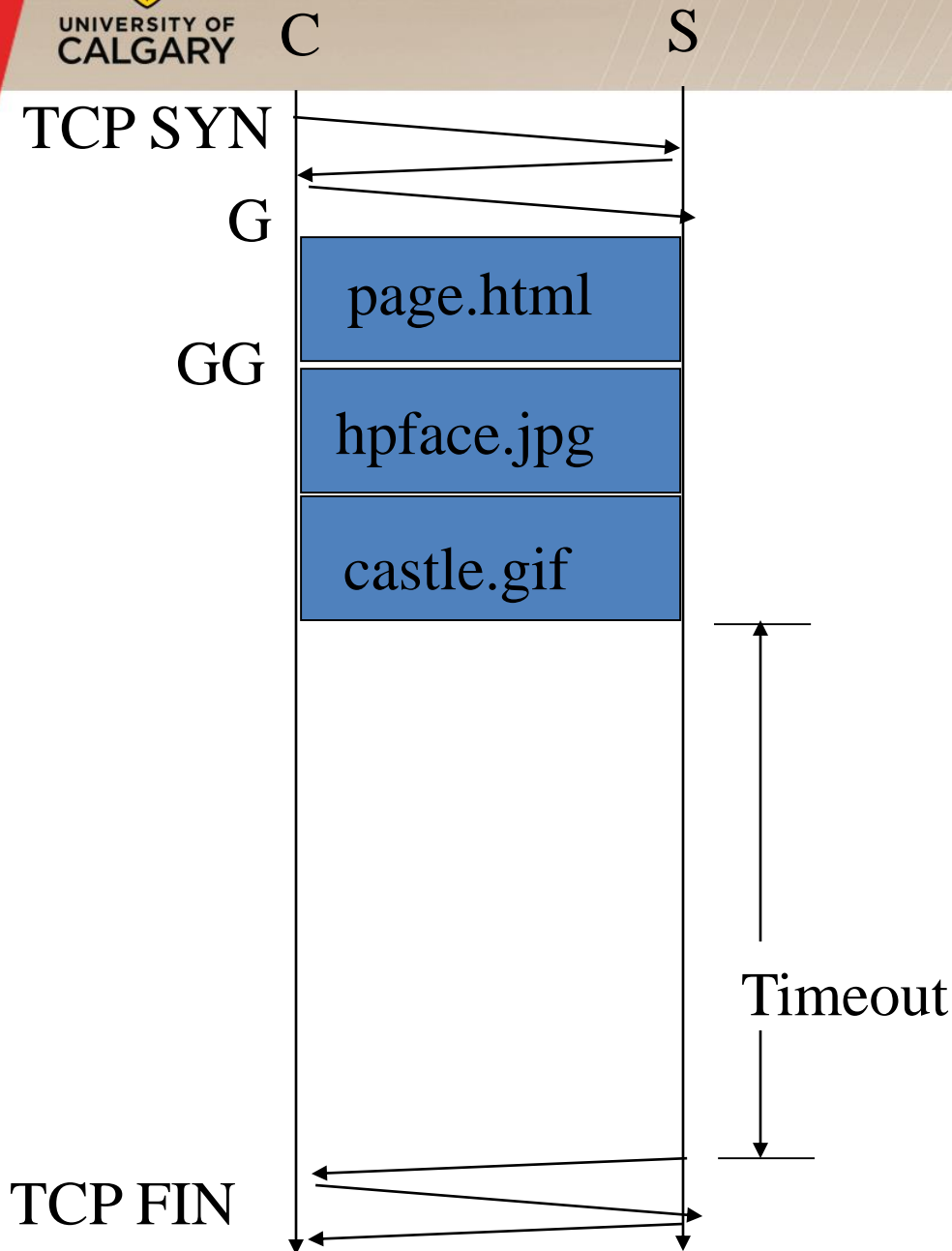


Concurrent (parallel) TCP connections can be used to make things faster.





The “persistent HTTP” approach can re-use the same TCP connection for Multiple HTTP transfers, one after another, serially. Amortizes TCP overhead, but maintains TCP state longer at server.



The “pipelining” feature in HTTP/1.1 allows requests to be issued asynchronously on a persistent connection. Requests must be processed in proper order. Can do clever packaging.

- The major application on the Internet
  - Majority of traffic is HTTP (or HTTP-related)
- Client/server model:
  - Clients make requests, servers respond to them
  - Done mostly in ASCII text (helps debugging!)
- Various headers and commands
  - Too many to go into detail here
  - Many web books/tutorials exist (e.g., Krishnamurthy & Rexford 2001)