Routing With Queues

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CSCI 136

The Network

Message: 137.165.8.3 216.239.37.99 “Search for…”

Routers

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Router Internals

Routing Algorithm
1. Receive message
2. Look up Destination Address
   a) Deliver message to Dest
   b) Forward to next Router

Buffering Messages

• There may be delays
  - router receives messages faster than it can process
  - some links are slower than others (common speeds: 10 Mbs, 100Mbs, 1Gbs).
  - hardware problems
  - ...
• Want to be able to handle short-term congestion problems
Choosing Routes

- Routers exchange information periodically
  - attempt to route on “best” path to destination
  - not easy to determine:
    - network congestion varies (evening vs. morning)
    - hardware added/removed or failures
- Later in semester we will see one way to find best paths
- Look at www.traceroute.org