Computer Networks

Farewell for Now

David Wetherall (djw@uw.edu)
Professor of Computer Science & Engineering
UNIVERSITY *of* WASHINGTON

Congratulations!

- You've learned so much, and
 we've had a great deal of fun ☺

Networking Concepts*

- Protocols and layering
- Network models (latency, bandwidth-delay product)
- Encoding bits with signals (modulation, limits)
- Error detection and correction
- Reliable delivery with retransmissions (ARQ)
- Multiplexing (TDM, FDM)
- Wireless and wired multi-access (CSMA, token ring)
- Switches and switching
- Datagram (IP) and virtual circuit models (MPLS)
- IP prefixes and forwarding (IPv4/IPv6, ARP, DHCP, NAT)
- Internetworking (IP/ICMP, path MTU discovery)
- Shortest path routes (ECMP)
- Distance vector, link state routing and flooding
- Hierarchical routing and prefix aggregation
- Policy and interdomain routing (BGP)
- Sockets, ports and service models (UDP/TCP)

- Connection setup and teardown
- Flow control and sliding windows
- Efficiency, fairness and congestion
- Congestion models (AIMD)
- TCP congestion control (slow start, fast retransmit/recovery)
- Naming (DNS)
- Content models (Zipf, caching)
- Web protocols (HTTP, SSL/HTTPS)
- Content Distribution Networks
- Peer-to-peer networks (BitTorrent)
- Router service models (FIFO, WFQ, token buckets)
- Congestion avoidance (ECN)
- Streaming and real-time conferencing
- Differentiated and Integrated services QOS
- Firewalls and Virtual Private Networks (VPNs)
- Denial-of-service attacks

*= and this is just a selection of what we covered!

Thanks to the Course Staff

Presenter

Everyone else!
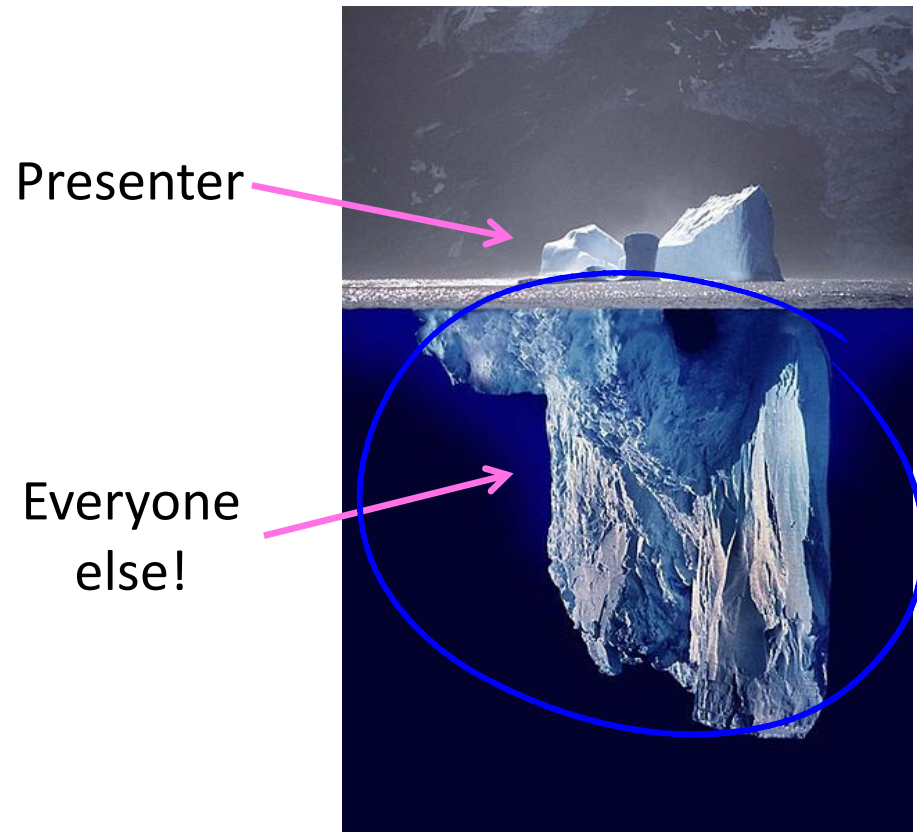
Good Luck, Stay in Touch

- Best of luck for the Final!
- Please take a moment to give us feedback via the ending survey
- We'll be in touch for statements, next offering, any other wrap-up

FINAL

NETWORK EXPERTISE

END

© 2013 D. Wetherall