

Internet lectures

1. **The Internet, the world cup and Africa**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/helwan10.pptx>
Thursday 30th September, 10:15-10:45am Grid Day
 - Methodology
 - Current State
 - What is happening?
 - Impact
 - Next Steps
2. **Internet History, trends and futures**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/internet-history.pptx>
Sunday 26th September 9:00-9:45am
 - Brief history
 - Design goals
 - Growth & Success
 - Current challenges
 - Internet NG
 - What is driving the changes
3. **How is the Internet performing**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/perform.pptx>
Sunday 26th September 9:45-10:30am
 - Internet characteristics
 - Users, capacities, satellites, packet sizes, protocols, routing, flows
 - How is it used apps etc.
 - How the Internet worldwide is performing as seen by various measurements and metrics
 - Application requirements
4. **Cell Phones**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/cellphone-work.pptx>
Monday 27th September, 9:00 - 9:45am
 - Not covering Cordless phones, CB radios, pagers, car phones, Iridium etc.
 - How they work
 - History
 - Cell phone components
 - Power
 - Carriers
 - Coverage
 - Bars
 - Growth
 - Concerns
5. **Smart phones & other Mobile computing**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/smartphones.pptx>
Monday 27th September, 9:45 - 10:30am
 - Wireless
 - What is a smartphone and their growth
 - Why are they important
 - How are they used
 - What's coming
 - Bandwidth impact
 - Not for everybody yet
 - Laptops & Netbooks
 - Smartbooks
 - Tablets
 - WiFi
 - How it works
 - Protocols
 - WiFi and smartphones
6. **Diagnosing network problems for non-networkers**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/diagnosis.pptx>
Wednesday 29th September, 16:00 - 17:30pm
 - Goal: provide a practical guide to debugging common problems
 - Why is diagnosis difficult yet important?
 - Local host
 - Ping, Traceroute, PingRoute
 - Looking at time series
 - Where is a node
 - Who do you tell, what do you say?
 - Case studies and More Information
7. **Network Measurements**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/internet-measure.pptx>
Wednesday 29th September, 17:30-19:00pm
 - Why is measurement important?
 - LAN vs WAN
 - Passive
 - SNMP, Netflow
 - Effects of measurement interval
 - Active
 - Tools various
 - Ping, traceroute
 - Available bandwidth, achievable bandwidth
 - PingER

Probably we will not cover the items below due to lack of time.

1. **Geolocation**, see <http://www.slac.stanford.edu/grp/scs/net/talk10/geolocation.pptx>
 - Importance
 - How is it done
 - Dynamic method
 - RTT => distance
 - Geometrical methods of finding location from circles
 - Application
 - Challenges
2. **Internet case studies**
 - Digital Divide and Africa (some of this will be covered in the Grid Day presentation)
 - Cable cuts
 - Impact of TEIN3
 - Pakistan
3. **How does the Internet work**, see <http://www.slac.stanford.edu/grp/scs/net/talk09/ictp-tcpip.ppt>