UT’s new wireless network

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What’s changing?

- Upgraded from 802.11b/g to 802.11n, 2.4 and 5 GHz
- Adding coverage: Phase1, Phase2
- 1 Gbps uplink in selected locations
- From Smart APs to Controlled APs
- Different SSIDs, different subnets
From 802.11 b/g to 802.11n

- New APs support 802.11b/g/a and n
- Moving from 10+ Mbps to 100+ Mbps
- Larger coverage
- Dual radio APs with 2.4 and 5 GHz support:
  - 802.11 b/g, 802.11a, 802.11n at 5 GHz, 802.11n at 2.4 Ghz but not in High Throughput mode!
Coverage: Phase1, Phase2

- Phase1: Replace every AP by a new AP (Main campus done, AG campus to follow)

- Phase2: Rely on community
  - Submit Service Request (additional coverage) to HelpDesk

- Based on budget, extension of outdoor coverage
  - Blue Phones?
1 Gbps in Selected Location

- APs connected to 10/100 Mbps ports will be limited by Uplink
- Analysis of AP usage determined upgrade to 1000 Mbps
- WLAN throughput: Max of 100 Mbps with 10/100, Max of 175 Mbps if ports is capable of 1000 Mbps
From Smart APs to Controlled APs

- Previously: Proxim’s AP, large Layer2 Networks, in house management software

- Today: Aruba Controller Based Architecture, Class C subnets (/24), roaming handled by controller (GRE tunnels) via VLAN pooling

- All traffic goes through controllers

- Built-in firewall and Spectrum Management

- Loaded with Security features
Different SSIDs, different subnets

- **4 New SSIDs by July 20**
  - **ut-open** (same as nomad, different IPs)
    - 216.96.176.0 > 216.96.207.255
  - **ut-wpa2** (encrypted to the core of UT’s network)
    - 216.96.216.0 > 216.96.231.255
    - 802.1x, helpdesk.utk.edu for configuration instructions
  - **ut-visitor**
    - Sponsored accounts (sub-admin privileges)
    - Un-sponsored accounts (limited access)
    - NAT, max 256 kbps
  - **eduroam**
    - Global Roaming Federation for edu
  - [www.eduroam.org](http://www.eduroam.org)
  - UT is the top level domain for the USA

- **nomad will be around until...**
Thank you

Read wireless report at:
http://wireless.utk.edu

Call 974-9900 with Coverage requests!