# Communication Technologies Advisory Group

Notes

# April 5, 2018

# **Present:** Eric Sills, Ed Rogers, Greg James, Alan Galloway, Josh Gira, David Ladrie, Mark Williams, Jill Sexton, Chris Eichman, Kevin Lee, Keith Boswell, Debbie Caraway, Chris Allen, Joe McCoy

# **Welcome**

**Staffing Changes (announced March 15th)**

* Alan Galloway retiring June 30, 2018
* Kristina Kelly now Associate Director for Operations (continuing to report to Greg James)
  + Taking on responsibility for data center operations (Dana Strickland’s team) as well as coordination of ComTech’s ITSM processes
* A new NOC Manager position (reporting to Kristina) will be posted soon
* Lisa Gallond and the AWS team will report to Gary Li within Shared Services

## CATV

* Repair work in five dorms this summer
* Working on new contract with Spectrum

**MDFs**

* NMDF generator replaced

**Infrastructure Records**

* Classroom maps being reworked
* Fiber inventory in progress - cables only (16% complete)

**Building Infrastructure Projects**

* In construction: CVM Main, Nelson, Schaub, Kilgore
* In design: Brooks, Dabney, Kamphoefner, Lang & Comp Labs
* In planning: 5 new Greek houses

**UPS -** Replacement project is nearing completion - 2 battery packs left to do

**Campus Network**

* Centrex Replacement NMDF, SMDF zones (construction)
* Backbone updates - Investigating requirements and implementation standards
* New alternate fiber route Main Campus to CVM - installation in progress
* Firewall Service Module migration continues.
  + Avent Ferry - discussions with EAS are underway
  + Public Safety - Rescheduled for Mid-April
  + Harris Hall, Peele Hall schedule for next week
  + EB3
* VPN decision made - **Decided on Cisco**, waiting on quote
  + Will allow for 2-factor for VPN
    - Will begin evaluation immediately after go-live
    - Integrate with DUO
      * Can we enforce 2FA for all VPN users?

**NIST**

* Demo of the Secure University Research Environment (SURE) will be presented at April CITD as a result of CTAG suggestion

**Data Center**

* State auditors are planning to tour DC1, DC2 and Poe
* DC1 Decommissioning
  + Continuing to gather inventory
  + Have submitted order for MCNC fiber to provide a 100Gbs connection to DIT’s EDC
  + Evaluating options for resilient connectivity
  + Targeting June 1, 2018 for first equipment installation in EDC (DIT’s Eastern Data Center)
  + Target date for completion December 22, 2019
* DC2 - study in progress for new electrical/mechanical systems
* Interior Layer 1 (fiber) upgrade for DC2 and COLO - finalizing RFP
* Updating DC Guidelines and Procedures
* Critical items in progress (UPS capacitor replacements, DC2 leak detection system, UPS battery monitoring, DC2 power meter)

**Access Layer**

* Big Layer Two (BLT) project - 44 pf 61 academic buildings designed (72%)
* Access layer IOS upgrades - 3650 updates for stragglers remain - completed
* Vlan 60 (wired NOMAD) - APs have been installed, as soon as they are provisioned, then we can announce a decommission date.
* Installation of ASR 920 routers in routed buildings:
  + Talley - delayed,
  + OSCAR Lab - delayed,

**Cellular/mobile**

* Indoor - Spidercloud - design in progress on [next 9 buildings](https://docs.google.com/spreadsheets/d/1daic4iHUd2thrJUQWXu4qh0ho9mE9GhokGRHsOnD30k/edit?usp=sharing)

**IT Strategic Planning**

* Interim Report coming late April/early May
* Focus on service portfolio
* Governance team has issued report and has moved to mechanics phase
* Space/Tech initiative has an internal draft

**Budget**

* Had to send revised numbers for FY19 due to issues with algorithm
* Meeting with Operations Group on 4/10/18

**Unified Communications**

* Partner Updates: UNCG, App State, NC A&T, Pembroke
* Life safety infrastructure installation

**Systems & Development**

* Tools Updates
  + VictorOps -- cloud event management
  + AKiPS -- thresholds and alerts
* Development
  + Ansible for bulk conf change
  + PCI validation

## Wireless

* New AP-340 series to start deployment this summer
* Have paid for professional services to help upgrade controllers to 8.x code - May 13 - 15
* New controllers for 8.x code have arrived, looking to install next week
* Looking to move to 4 large subnets for wireless users per manufacturer’s recommendation
  + Subnets have been created and AFTC has been moved to new subnet
  + Moving multiple buildings next week to new subnets
* Classroom wireless
  + [Classroom Coverage](https://docs.google.com/spreadsheets/d/1EM_YfPCHXV7BNHRdlUaj0_x6E75tMZblSppfhlmfJgQ/edit#gid=2136708155) - current list
  + 90 out of 238 110-classrooms remain - most will be done this summer
* Beacon focus group met on 2/27/18
  + Agreed to meet again in the fall
* EDUROAM (secure SSID)
  + Working on SecureW2 documentation, collaborating with Walk-in Center and Help Desk - not planning to highlight as preferred method at NSO
  + Goal is to eventually transition as many stakeholders as possible to use this SSID
    - Eduroam use - see monthly metrics link below
* Now tracking wireless metrics as part of overall [monthly metrics](https://oit.ncsu.edu/campus-it/campus-data-network/communication-technologies-metrics/)

**Large Data Sets**

* Best way to set-up stakeholder meeting we discussed? Start with a small group (1:1s?) and then build up to larger virtual and/or F2F meeting

### HCI

### ScaleIO will be platform

### “one-off” VMs (only instance is in DC1) will be first workloads to shift to this hardware

* Plan is to run at least Hyper V in addition to VMWare

### Parking Lot Items

* Routing licenses at the BDF level – when and how much should occupants pay? Interim solution is 50/50 when “desired”, ComTech funds when required
* “virtual data center” – has this become an obsolete need with technology increasingly moving to layer 3?
  + There is still some need for “flat” networks (even outside the data center)
* Funding for server rooms, higher capacity (10Gbs ports), etc. - between our current operational aspect of dedicated switches where needed and the new 10Gbs model presented earlier in the year, is there more to discuss here?

## Upcoming Meeting Dates

* Next CTAG Meeting – May 3, 2018 - 9:30, AFTC 106