

ITS - In-Building Networks/UMNet Governance - Meeting Notes

Meeting Calendar

<u>Jan 1/22</u>	<u>Feb 2/19</u>	Mar - no meeting	<u>Apr 04/03</u>	<u>May 05/25</u>	<u>Jun 06/25</u>	<u>Jul 07/27</u>	<u>Aug 08/27</u>	<u>Sep 09/29</u>	<u>Oct 10/26</u>	<u>Nov 11/19</u>	<u>Dec 12/17</u>
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Useful Links

- [Charter for this group](#)
- [\[ITS-CY20 Notes\]](#) [[Decisions/Strategic Discussions](#)] [[Norms & Agreements](#)] ([Strategy & Direction](#))

Meeting Agendas & Notes

2021-12-17

Attendees (via Zoom): Eric Boyd, Amy Peters, Andrew Palms, Cheryl Sobkow, Greg Laman, Hideko Mills, Jeffry Wright, Marcus Blough, Mark Giuffrida, Regis Vogel, Sebastien Korner, T. Charles Yun, Katarina Thomas

Absent: Dan Maletta, Kerry Flynn, Matt Bidlingmeyer, csinger@med.umich.edu, gmoney@med.umich.edu, Joseph Kryza, Kinnothan Nelson

Meeting Chair: Charles Yun

Note Taker: Katarina Thomas

Agenda and Meeting Notes

- Wifi update (29% complete, ramping up further at start of year, hope to have all but residence halls done by March) — Again, please provide access and assistance to help smooth things for installation.
 - as of yesterday 29% of APs installed, expecting the contractor to increase the number of installers and staggers in January - expecting to have everything complete except for LSA and maybe housing
 - LSA will be done during spring break
 - housing has to be scheduled
 - post sites surveys in February
 - engineering point of view: new system works really well (except for occasional operator errors)
 - Regis feedback - WoTo upgrade - additional comm had to be created by OUD. ACTION: Regis will share with Hideko what they communicated ahead of time (for example, people did not understand what AP means); meeting rooms also should be added to the communication so that people know when to reserve it and when not to
- Fiber update (almost done, some discussions on East Medical bridge discussion with the City). This ongoing item will become Core update shortly (progress!)

- No change in Cisco delivery dates - expecting end of February, DL replacements still targeting to start May 1, haven't reached out to schedule replacement dates yet because schedule is not stable yet - for the units that have dual DLs it would be good to know the schedule ASAP for the budgeting purposes - budget has to be drafted by Feb 1 - ACTION: schedule meetings with units that have dual DLs early January
- E. Med Center would dictate our timing for a small number of DLs - they would have to wait till fall of the next year
- Automation - DCT replacement - Jan rollout NetSplash for ITS and the will start looking into communication and training plan - planned rollout is building to building, more info next meeting
 - DC - will be wrapping up NCDC work next summer, SEB done
- ACTION: Eric will share slides from IT Symposium with the team
- IPS
 - going fine and on track to have everyone migrated by Jan 31
- NBIS
 - working well, planning to integrate blocking arbiter in spring
 - long term needs: upgrade link to 4x400 from 4x100 - looking for the appropriate filtering devices that can handle the more powerful links
- MLane
 - Continuing till June 30
 - Draft survey shared with Dan M. and Amy P. (Amy reviewed - looks fine) — targeting Jan 15 to send it out to the users
 - Looking at the reports: International Center data will be correlated too
 - ACTION: Eric will follow-up with Charles for more MLane use data
- UPS battery replacement- general update, timing, (estimated) cost for fiscal 2023
 - Previous meeting action item: Add UPS service in In-Building rate — in-building rate would go up slightly. Andy will check with LSA and Housing.
 - Andy: LSA has very few, housing has a lot - They agreed to include battery maintenance too
 - Hideko: will include annual cost (historic) for all the battery replacements and spread it across the units that have UPS - ~\$17/UPS in FY23
- VoIP

2021-11-19**Attendees (via Zoom):****Absent:****Meeting Chair:** Charles Yun**Note Taker:** Katarina Thomas**Agenda and Meeting Notes**

- Previous action items
 - VoIP - final recommendation made - availability expected in January
- Wifi Update
 - 100% of APs delivered
 - 13% AP installed (some minor issues, but mostly complete installs)
 - Reminder: please have your facilities group coordinate with installation team

- Cisco APs having issues, need to get updates done to address bandwidth issues
- Scheduling
 - the rest of December schedule, scheduling January, looking for the confirmation from Pier Group to start bringing additional crews in January (will now next week) and spring break
 - hoping to get through all the campus by the end of May
 - Waiting for Housing
 - Working on the process changes and adjustments - collaboration with Pier group
 - Targeting scheduling completion before the end of the calendar year
 - Check <https://its.umich.edu/projects/wifi-upgrade>
 - Access to the buildings is highly appreciated
 - Starting to turn on support for WiFi 6e this coming Tuesday - cutting over MSetup too
 - Special build of the software for hospitality will be replaced with the production code
- Issues and problems we encountered so far
 - Robotics lab - this is Ford Motor WiFi - **APs not owned by U-M are “rouge” - please let us know about those in advance**
 - team si keeping the record of “dead APs” and not taking anything down that is not in the plans
- Fiber update
 - on track for Dec 10 to have all the circuits build and tested - will be prepared to get new Ciscos in place
 - the building are all set on the fiber front
 - Note: we will end up with a substantial fiber plant - will be still constricted in some places, our focus will be on the appropriate design - cost of fiber may land to reconsideration of price of the system placement and we may a fundamental shift in the pricing because it may not be scarce any more
- Electronics - still expecting Cisco gear end of February (maybe January) - core up and running end of April, start DL replacement end of May starting with 1/week, shooting for 2/week
- Network automation - progress in automating Junipers, DCT replacement (dubbed “NetSplash”) - will have to coordinate training of the unit IT staff
- **Defence production act - tell Cisco about upcoming orders nine months in advance - please work with PM’s according to this for the large projects - like large projects with ALs - projects planned for August should be communicated to PMs now**
 - **payments will be do when the equipment is received**
- Data Center update - have sufficient capacity
 - Supporting new core nodes at NCDC and SEB
 - Executed during maintenance window, but be aware
 - MACC racks - fees included the support for everyone who has the equipment in the racks - rebuilding the network will start next week, once that is in place the switches may not be unit specific - will try to provide APIs for the switch management but the way the switches are managed will change - first year probably go with the core and some units, have also to consider at what point we buy the switches for them - **if anyone is planning to buy new switches for the MACC please contact Eric**
 - In general would like to avoid exceptions in the MACC but priority is to meet the unit needs
- IPS replacement - trying to migrate off Jan 31
 - MWireless will be moved out
 - Unit network will be moved per agreement with the Units
 - Money saved from IPS will be used fo beef up NGFW
- UPSs, battery replacements
 - Add UPS service in In-Building rate. **In-building rate would go up slightly - REACHED UNANIMOUS AGREEMENT FROM THE GOVERNANCE (Andy will check with LSA)**
 - For access layer switches (DL are already covered)

- Current pain: a lot of overhead in getting the agreement to fund battery replacement - it will be more effective to include battery replacement in the service and have spares on site
- MLane
 - Usage declined with the start of in-person school year - LSA and CoE would like to continue it through June 30 - need the data on the mix of users change (students, faculty...), do the survey of the known users (800+ users) - deans will follow up, meeting in mid-May to discuss the topic
 - IT leads requested a list of students who are using it

2021-10-26**Attendees (via Zoom):** Charles Yun, Andy Palms, Hideko Mills, Greg Laman, Eric Boyd, Amy Peters, Cheryl Sobkow, Marcus Blough, Sebastien Korner, Kerry Flynn, Kinnothan Nelson, Mark Giufridda**Absent:****Meeting Chair:** Charles Yun**Note Taker:** Katarina Thomas**Agenda and Meeting Notes**

- Previous action items
 - Andy: Keep the group up-to-date on VoIP contact and contact center decision
 - POC with over 100 people, still up and running, vendor selection made, working with procurement, requirements refinement, no specific timeline yet
 - Reminder: Units - advance planning for the projects and advance heads-up to ITS PMs for the potential projects to mitigate the equipment delay risks
- WiFi update (Hideko)
 - Townhall, installation and delivery update
 - Aruba APs operate quite well, no significant issues any more
 - Preparing for Dearborn and working on monitoring and setup
 - Onboarding with PIER group
 - Receive 10,500 APs - Monday November 8 start of installations
 - WiFi PMs reaching out to Units - expecting few more thousands APs to finish 60,000 AP order
 - Some units would like their locations done during holidays or weekends
 - Target completion pushed out to Spring 2022
 - Unit to Please get us access to their space (for ITS and contractors) to get the work done - this will help with getting the work done in the most effective and efficient manner
 - ITS will have more contractors working on parallel on various buildings - please be aware the units will be competing for the weekend and holiday/season days schedule
 - ITS have three PMs on the ground - Clark Smith is the lead PM on the WiFi project and can help with any specifics about the particular buildings
- Network DL connections (Eric)
 - ITS (dogfooding), LSI (immediate need)
 - Current schedule - new core receive by the end of Feb - first will be ITS buildings, first unit DL LSI
 - Working with Cisco to order DLs just in time (not too much ahead and not too late)
 - Please reach out (units) as soon as there are any questions
 - Automation - moving off DCT as soon as we can

- Communications starting 2022 calendar year - PMs will have to work very closely on DL swaps / upgrades with Units
- Expected to have more issues with multiple DLs vs multiple building tenants - hope to be able to estimate the upgrade time for the buildings pretty closely
- Dual DL - kudos from LSA for Dana for his work on estimating - other units can get the estimates too - contact PMs
- EOL switch equipment, dangers, roadmap moving forward (Eric)
 - Goals
 - rapid response depending on the type of support (10 - 5 or 24/7)
 - rapid correction / shorter outage - EOL is the best effort on how fast we can get the switch fast and running - it may be a good thing if we have same/similar model spare which we would use (limited supply that is shrinking), next we would replace it with another model and do on the fly engineering (takes more time) or, the last resort, order new switch - shipping dates are delayed significantly even for the refurbished market (takes longer time)
 - strongly encouraging units to check their switches and plan the replacements for EOL - Hideko and Eric will have PMs reach out
 - Coverage time (24/7, 10-5)
 - Like for like Replacement vs new device
- IPS- moving to EOL, Feb target (Eric)
 - NBIS (border security solution) and NGFW in the future, IPS is in the containment - Nonso is working on scheduling move of the networks behind NGFW
 - Made a lot of successful moves with CoE
 - Some units may have difficulties - better start working on this ASAP
 - Goal: move of IPS by the end of January 22
- Ann Arbor Connectivity (Andy)
 - Working with the City to **potentially** gain access to Downtown Development Authority (DDA) area connectivity thereby moving from wireless to fiber connections
 - City has been investing in backbone fiber but not as much into the "final mile" fiber - this started shifting later (2-3 years ago) - now interested in providing fiber to multiple parties (Verizon, other companies, U-M) - we are analyzing how we could start using this fiber instead of the current wireless backhaul
 - this may be cost effective at a first glance
 - this is just a heads up - may become (likely) a significant development
 - for buildings on campus and in the very closed vicinity - U-M fiber, for the buildings that are a bit further we use (usually dual) radios we would like to use city fiber instead, some other sites may not be able to use the city fiber - this may impact the lease decisions
 - fiber resiliency - most buildings have one fiber to the building and we have not seen many single point of failure
 - if the ring is cut we can still use another fiber connection from the U-M network
 - extending fiber off MACC along railroad tracks
 - Financial model - pricing looks reasonable so far, to be discussed yet
- Residential (private residence) network connectivity. (Andy)
 - Stabilized? Is this now largely a non-issue?
 - Looks like Washtenaw county will end up with a decent connectivity according to plans
- MLane - a small service we are running to have better connectivity for particular students overseas - better connectivity for the classes and research - a meeting in November to discuss the future of this service now: pandemic response vs. long term service
 - Units need user and cost data (LSA, CoE, Ross...) to better understand the potential funding implications

- If full service - need a long term funding to scale the service
- Next meeting
 - Cellular/Passpoint (Andy: next meeting)
 - Reduce future meetings to an hour

2021-09-28 Tue 3:00-4:30

Attendees (via Zoom):

Absent:

Meeting Chair: T. Charles Yun

Note Taker: Katarina Thomas

Agenda and Meeting Notes

- WiFi Update - Eric
 - General update
 - Aruba deployment on campus
 - Delivery is taking longer than expected (supply chain problems)
 - Several buildings - worked through a couple early problems
 - *Doing surveys now - important to do the survey of the whole building at once: same will apply to installs!!!*
 - Doing a lot of peer reviews with other higher education institutions
 - Will not schedule new installations until devices are on the dock, although we are ready from the staff prep perspective
 - Running Aruba prod code - had one significant and now well understood bug limited only to hospitality APs - Law quad mostly
 - Performance impacts from usage changes on campus - start of the term and in-person campus activities
 - Issues patterns:
 - buildings that are new (deployed during pandemic shut-down) and were never occupied
 - some bad habits among the user population - machines that don't have the security software up to date for example
 - possible network congestion may be a concern due to new usage patterns - for example, using Zoom during the class in order to share the screen and presentations around the class - move to Arubas will position us for a better support for this
 - Moving quickly to get this installed - part of the contract is that the company we are buying this from wants to resell our equipment - pushed it now to the end of the calendar year 2022
 - financial impact and improved service are the drivers
 - Wi-Fi 6 - performance improvements in some places, for example in classes because of the number of devices/student - Eric tried and noticed that perf dropped to 10 from 200 when having more people in the atrium of Kinesiology
 - quicker response time if we don't support legacy
 - Network Core Update - shipping delays
 - Shipping delays - gear scheduled for November is coming late February

- New Cisco sales team is very responsive - updates on shipping are provided often - takes six months of lead time to order equipment
- Proper PM work will enable us to handle the delays - small projects are in particularly impacted - important for the Units to make timely decisions and adjust expectations to the shipping delay realities
- DL work is also going slower
- Working with Cisco to extend our discount
- Fiber work is in the good shape although shipping delays are also impacting us
- DC - SEB is in a good shape - working with AEC to get this done
 - NCDC is also in progress
- Software and automation
 - training for NSO product
 - workin on AL switch automation (to prevent network configuration drift and de-drift the ones that are straying from the template)
 - DCT replacement (a.k.a. NetSplash) - training for the Units' teams will be provided
- Addressing timing delays for (all) equipment via (significantly) advanced planning
 - See above above the timing of the project planning
 - The project that are in the pre-planning phase (no funding) - still reach out to ITS PM to creatively address how to work on this
 - The issues for the suppliers are limited capacity and the long delayed order list
 - companies predict (cautiously) that this may be somewhat resolved in a year
 - Whenever possible keep the network switch purchasing standardized - number of new network devices we are adding keep it to the small list of makes and models we have
 - What will happen with the replaced hardware - depending on the model, we may keep them as spares
- VoIP transition - Andy
 - We switched vendors to provide better user experience, however this solution requires more testing
 - Well into POC
 - 90-95 people currently using the product and is going well, will add 17 from another unit that has interesting use case
 - observations: poor IP network may still allow Zoom to work OK but the VoIP phone would not work - this may be due to the different ISPs handling the technology in a different way
 - Softphones are better than the land lines we currently have
 - Not expecting supply-chain issue on the equipment (2-4 weeks lead time)
 - In a good shape for rollout - application to transition to is really good - the transition is also not mandatory (yet)
 - Hard to predict when we will have a contract - Andy is optimistic that we may have this available this fall
 - Hard to work with Amazon connect because it is geared for the small/medium companies and has limited capabilities - may be able to obtain an extremely good contact center program at a lower cost than Amazon, however this will take time to deploy
 - Andy hopes that within four weeks we will know where we stand with the contact center system

Decisions/Action Items

- Andy: Keep the group up-to-date on VoIP contact and contact center decision
- Units - advance planning for the projects and advance heads-up to ITS PMs for the potential projects to mitigate the equipment delay risks

Next Meeting

- Oct 25, 2021

2021-08-27 Fri 2:30 – 4:00pm

Attendees (via Zoom):

Absent:

Meeting Chair: T. Charles Yun

Note Taker: Katarina Thomas

Agenda and Meeting Notes

- WiFi update (mostly on delivery, maybe on first installations)
 - installed upgrade in a number of locations included res hall - res hall we installed hospitality APs that turned out to have issue (Law quad was affected) - software bug
 - upside - vendor (Aruba) was very engaged and resolved the issue (found workaround) quickly
 - next week we will be doing more site surveys and AP repairs, contractors will not be on site until 09/20 - WiFi team is building a pre site survey contractors list, in time for APs arrival expected first or second week of October (700 installed, 15600 expecting to deploy in total, we were promised 14,000 in October and have 1,500 on the dock awaiting to be installed)
 - we will be running for over a month in production APs that are installed now in parallel with Cisco
 - models we are installing: 63500, hospitality APs (~10%), and outdoor APs
 - hospitality APs are a little different - chip sets are different (Broadcom chip in hospitality, also often wall mounted; Qualcomm chip in 63500s, ceiling mounted)
 - so far we did not have any other difficulties with the current new installations
 - schedule will depend greatly on the class schedule
 - Potential back to campus issues
 - expectation mismatch that may happen due to people working from home during pandemic
 - please let users know to let us know
 - different way of using applications then before the pandemic that may come across as network issues (example Zoom)
 - Exterior WiFi - U-M lighting is very cooperative in helping with the installation - it has become much more cost effective than it was in the past, it also is more cost effective to do it upfront in the project than later
 - *Let PM know if there are any plans/desires to include exterior WiFi*
 - *Need help from the governance members: get us in touch with the local facility management team to help with guiding the FSU and contractors through the building*
 - communication will be coming out, but also gov. team members alerting local folks would be very helpful
- Core update (again, mostly delivery delays)
 - Electronics delays - another couple of months
 - DLs orders - trying to order in advance as appropriate (not too early, not too late) - strategy is to have them just in time
 - Fiber: all the fiber spliced and circuits build by September
 - DC: ready in NCDC for the installation
 - Automation: challenges in WiFi area (intermapper interface) and DCT2 tool functionality, automation of the switch configuration

- *Please let us know how much your teams are using the Intermapper - Eric will send a survey, or just an email with questions, to the team about the use of monitoring tools*
- *AL switches - observing significant delays in shipping - units are advised to make decisions relatively quickly and let PM know ASAP*
- [tentative] IPS (intrusion protection system) update
 - Exploration phase for migration off IPS to NGFW - decide when based on the effort involved and institutional priorities
 - Recently moved CoE completely off IPS
 - NBIS is also providing some protection even without IPS or NGFW - *Eric will have someone reach-out to Marcus and Charles to start collaborating on identifying articulare security requirements*
 - Would anyone have concerns moving the IPS into containment?
- Log storage from the firewall (Kerry) - does ITS offer anything? - Charles thinks ARC would have some suggestions
 - *Eric will meet with Kerry's staff to answer questions, right now we use Splunk, Humio, and NGFW Panorama - ITS has experience and can provide information on cost and trade-off*

Decisions/Action Items

- WiFi upgrade
 - Unit IT staff to let PM know if there are any plans/desires to include exterior WiFi
 - Need help from the governance members: get us in touch with the local facility management team to help with guiding the FSU and contractors through the building
 - Please let us know how much your teams are using the Intermapper - Eric will send a survey, or just an email with questions, to the team about the use of monitoring tools
- AL switches - observing significant delays in shipping - units are advised to make decisions relatively quickly and let PM know ASAP
- IPS retirement
 - Eric will have someone reach-out to Marcus and Charles to start collaborating on identifying articulare security requirements
- Log storage: Eric will meet with Kerry's staff to answer questions, right now we use Splunk, Humio, and NGFW Panorama - ITS has experience and can provide information on cost and trade-off

Next Meeting**2021-07-27****Attendees (via Zoom):** Eric, Andy, Marcus, Jeff, Kinnothan, Hideko, Charles**Absent:****Meeting Chair:** T. Charles Yun**Note Taker:** TCY**Agenda and Meeting Notes**

- Wifi rollout adjustments
 - Shipment delays (pandemic supply chain issues)
 - Delivering 1500 APs mid-August. Potentially another 1500 by end of Aug. Plan to ramping up September/October
 - Reprioritize

- Initially considered Housing first (req'd 3000 APs)
 - Identifying 3 approaches understanding that these too *will* change as details arrive
 - Installation speed varies
 - Easy locations: 5 mins/AP
 - Difficult locations: ??? (e.g., auditoriums that require scaffolding)
 - 7 days/week, 12 hours/day installation effort
 - Option
 - 1: Housing First
 - 2: ITS Buildings+
 - ITS focus to gain experience inside ITS before rolling out to campus
 - 3: 'Difficult' installations
 - Goal: minimize impact on academic units
 - Want to convert entire bldgs at once. Do not leave bldgs partially updated
 - Difficult in terms of non-standard locations that require scaffolding or requires adjustment to schedule based on location usage
 - Discussion around risk and how to choose between options
 - TCY will summarize options and share with this group via email for input. That input in conjunction with PM logistics will inform the choice. Due COB Wed 28 July 2021 (tomorrow)
 - Consensus, Higher priority at top of list :
 - ITS bldgs first
 - Identify low risk locations
 - Women's dorms (for logistics of entry)
 - Dorms generally (for variety of users)
 - Difficult installation locations
 - General academic rollout
 - Understanding that things will change based on delivery of APs and there may not be time to communicate back with this group
 - Core Network
 - Fiber
 - Fiber is laid out to NCDC
 - East and west ring are done (not spliced)
 - Bldg to hub reinforcement mostly done
 - Data Center
 - Good progress
 - Network electronics- delays
 - Delivery mid- late Aug
 - Access Switches are late Oct
 - Electronics are not needed for core rollout, but delays should be considered for new equipment
 - First DLs late in this year, starting with ITS for testing.
 - Then LSI, ...
 - Larger communication plan will be shared and executed as infrastructure is in place
 - Fiber management
 - Vertical fiber that ITS does NOT manage
 - Desire to document all fiber across campus. But considered unrealistic
 - Campus to coordinate w/ ITS
 - Actions:
 - [DONE] TCY to send email to UMNet Governance around prioritization.

2021-06-25

Attendees (via Zoom): Eric Boyd, Amy Peters, Charles Yun, Mark Giuffrida, Kerry Flynn, Cheryl Sobkow, Kinnothan Nelson, Marcus Blough, Andy Palms, Sebastien Korner, Katarina Thomas

Absent:

Meeting Chair: Charles Yun (School of information)

Note Taker: Katarina Thomas

Agenda and Meeting Notes

- ITS Updates (Eric Boyd, 30 minutes)
 - Update on WiFi Status
 - [tcy] Will the existing 'secret' mDNS SSID be removed and would you share the comms plan for those who are using that system. Email is fine.
 - Wi-Fi project: website - <https://its.umich.edu/projects/wifi-upgrade>
 - Wi-Fi vs. ethernet - It would be good for most of the units to start thinking about what their use of Wi-Fi is and the model of activating jacks (by default - as of now, vs. on demand) - what pattern of usage we will see in the offices (laptops and docking stations - need only Wi-Fi vs. VoIP desk sets - need active jacks, maybe use softphones) and start conversations with the unit PM
 - this is hard to do during pandemic - buildings are empty (pre-pandemic usage may be helpful to look at)
 - if we could cut the number of active jacks in half would be a huge savings
 - separate conversation with Housing - different requirements and it make sense to keep it all activated - mDNS ([multicast DNS](#)) capable Wi-Fi
 - We will be looking into cellular over Wi-Fi but are not promising the deployment because of the high collaboration / coordination requirements
 - Clark is PM, Hideko overseeing
 - Aruba is the vendor
 - Scheduling of the planning meetings with the Units will start soon
 - Goal is to get as much installed before the classes start and students return to the residents halls, but may go into February 2022
 - may work over Holidays
 - will work weekends, and evenings
 - will work closely with the Units to get this coordinated
 - Product availability (per vendor): end of July/start of August will be getting 100 APs/week
 - Priorities for installation:
 - Residents Halls are top on the list - large ones first

- Next - classrooms - we will try to get as many of them as we can before the class start - we will not get all the devices in time to install them all
- Early next week we will have more information about the delivery of the APs
- Transition
 - SSID will be the same: Roaming between the buildings, or even floors of the building, that have old and new WiFi will not be possible: the connection will drop and the new one will be picked up - will have to do building in a single day
 - Swap time for a optimal AP is 5 minute for the swap, which excludes auditoriums and hard to access points
 - Multiple teams replacing APs - possible short outage at a particular spot in the building
 - Utmost coordination is the key to successful upgrade
 - Upfront and timely communications to the users (a week before and the day of) - [Web page](#) will have up-to-date information
 - When the classes start, we will do the installations as the opportunity arises (so administrative buildings may be addressed week days)
 - ACTION: email to the group with the update to the communication plan
 - ACTION: invite Hideko to these meetings
- Core Network Project:
 - Timeline for planning/building - at least three month notification
 - AL projects will likely not happen in FY21 - not sure when in FY22 - working with Hideko on the plan
 - Workstreams
 - Fiber - 80% building to hub reinforcement complete, have a good handle on cost for all of them
 - need more fiber for the West and for the East ring - will be pulling it very soon
 - DC buildout
 - SEB work almost complete (additional cooling in place)
 - NCDC - rack space will be expended in the future, we have enough for the start, figuring out the cost
 - Network Electronics
 - Most challenging is the ordering of the new components - dates may be slipping - ship dates are being delayed (originally July, now bumped to October)
 - need early conversations about AL switches
 - Priorities
 - Running two cores in parallel

- Need to understand the current status of the unit infrastructure in order to justify the changes to the Deans - PMs can help with the list of all the Unit network equipment (ALs, APs, UPS, high end switches, DLs are excluded unless the Unit is paying for it)
 - we can add the status of DLs
- Network Metrics:
<https://its.umich.edu/infrastructure/service-metrics>

- [Campus Network Metrics](#) - moved to DropBox - accessing files may look a little convoluted
- DNSSEC Zone signing pilot with LSA and ICPSR
 - Grant (in particular government agencies) started to require it - will help in competition for the grants
 - All or nothing for the Units within umich domain
 - Pilot end of summer with the non-umich unit domains (ICPSR and LSA)- rollout during the Season Days - the timeline may slip due to the high risk (low probability) of the longer than desired outage

Meeting Notes/Decisions/Action Items

- [Decisions](#)
- Action Items
 - WiFi project
 - Email to the group with the update to the communication plan
 - Invite Hideko to these meetings

Next meeting agenda

2021-05-25

Attendees (via Zoom):**Absent:**

Meeting Chair: Charles Yun (School of information)

Note Taker: Brittni Geer

Agenda and Meeting Notes:

- Update on WiFi Status
 - Waiting to hear back from vendor today
 - 6E capable for campus
 - Provost funding Ann Arbor, Dearborn funding their own
 - WiFi access points expected July and mostly August, waiting to hear about outdoor ones (hope to get sooner)
 - “Rolling outages” through building, would work with tenants to be prepared
 - Clark Smith-PM
- Update on Core Network Upgrade Status (Roadmap Slide)
 - Fiber Permit Update
 - Vendor Negotiation Update / Ordering Timelines

- NCDC MOU Update
- Implications of Vendor and MOU decision-making process
 - Core Network Implementation
 - When do DL upgrades start
 - When will we be prepared to start using new vendor ALs in new projects
- Riser fiber question
 - Have to verify what fiber is in the building (every project).
 - Alternative: Partner up and have a database to hopefully lower cost for future projects?
 - Would need to do the next big project, so it would be over time. Ask unit to keep up to date
- Campus Network Metrics
 - Review metrics

2021-04-23**Attendees (via Zoom):** _____**Absent:****Meeting Chair:** Charles Yun (School of information)**Note Taker:** Katarina Thomas**PROPOSED Agenda and Meeting Notes:**

- Update on WiFi Status
- Update on Core Network Upgrade Status
 - Fiber Permit Update
 - Vendor Negotiation Update / Ordering Timelines
 - NCDC MOU Update
- Implications of Vendor and MOU decision-making process
 - Core Network Implementation
 - When do DL upgrades start
 - When will we be prepared to start using new vendor ALs in new projects
- Campus Network Metrics
 - Review metrics
 - Discussion: MACC Broadcast Storm Update

2021-02-26**Attendees (via Zoom):** Eric Boyd, Andrew Palms, Charles Yun, Matt Bidlingmeyer, Kinnothan Girard Nelson, Mark Giuffrida**Absent:**

Meeting Chair: Charles Yun (School of information)

Note Taker: Katarina Thomas

PROPOSED Agenda and Meeting Notes:

- **Summary of the previous meeting**
 - Answer about Wi-Fi in six weeks
 - DL replacements - about 15 in the initial phase and some of them are ITS
 - Second DL - Responsibility of the unit
 - AL replacement - possible financial incentive for the units to replace them by December 2023
 - Need to push SLE across the finished line
- **Core Upgrade**
 - Vendor Selection - Still in negotiations
 - AL replacement - should sign the deal today - hoping to start putting new vendor switches July 1 (need two months from the start of the project, engineering to start May 1)
 - the max discount would be achieved if we replace all AL switches in the first three years
 - Rollout plan - still targeting July 1: units need detailed schedule for FY21 for planning
 - Automation - goal to have it as present as possible, will not let it slow us down
 - Constraints and challenges - PMs to add the status of DLs to their reports for the units
 - **Wi-Fi project** - waiting on the funding decision, if all goes well we will be done no later than the fall (WiFi6e) - will not expand the quantity of APs, just swapping with the new model
 - Wi-Fi vs. ethernet - what are the units' use patterns of Wi-Fi: what is and the model of activating jacks (by default - as of now, vs. on demand) - start conversations with the unit PM
 - Benefits: greeter performance, better compatibility with IOT (NDNS support), seamless switching from enterprise to home network
 - DCT tool: the strategy may be to switch to the vendor software, don't have it completely worked out, will know more after the automation software training
 - may have to withstand for some time using two systems in parallel during the transition period: use DCT on Junipers and other solution on the new vendor
 - extreme options - 1) use DCT as long as we have Juniper switches, or 2) switch right away and work with the new vendor automation
 - most likely somewhere in-between
 - DCT vs. new tool - it will meet DCT functionality at a bare minimum, for the specific use cases please send email to [Eric Boyd](#) to add to the requirements going forward, more comprehensive functionality is potentially possible
 - Good progress on core networking - need agreement for the fiber in NCDC and contract signed with the vendor
 - Next Meeting Agenda
 - [UMNet Future State document](#)

2021-01-22

Attendees (via Zoom): Boyd, Eric, Amy Peters, Andrew Palms, Greg Laman, Jeffry Wright, Kerry Flynn, Marcus Blough, Mark Giuffrida, Regis Vogel, Sebastien Korner, T Charles Yun, Katarina Thomas, Kinnother Nelson

Absent:

Meeting Chair: Charles Yun (School of information)

Note Taker: Katarina Thomas

PROPOSED Agenda and Meeting Notes:

- Vendor Selection update
 - Vendor - not official yet, in negotiations
 - may be able to add AL switches at the same price
 - getting automation software for free
 - lost the month of January for signing the deal - a month slip
 - not able to make official announcement yet
 - will communicate once we have the negotiations complete
 - Brief overview of rollout plan
 - Stand up the core
 - July 1 - start with the first unit DLs
 - The list of buildings for the FY: team is working on the exact detailed schedule
 - First DL in ARBL most likely - will start with ITS
 - After we will be transitioning to the Units
 - Timeline for planning/building - at least three month notification
 - AL projects will likely not happen in FY21 - not sure when in FY22 - working with HJideko on the plan
 - Workstreams
 - Fiber - 80% building to hub reinforcement complete, have a good handle on cost for all of them
 - need more fiber for the West and for the East ring - will be pulling it very soon
 - DC buildout
 - SEB work almost complete (additional cooling in place)
 - NCDC - rack space will be expended in the future, we have enough for the start, figuring out the cost
 - Network Electronics
 - bringing, installing and configuring the core
 - new DLs and new ALs
 - DLs - EOL of DL is an important criteria but we can't replace them all fast enough because there are so many of them - we will keep the DLs we replace as spares
 - Another criteria are raising requirements for more capacity

- The third criteria is if the unit has two DL's - Units ability to pay for the replacement of the second DL or for reconfiguration to a single DL of decided so
 - ITS is leaning towards a single DL recommendation based on our reliability analysis - if no downtime is the goal (including the planned maintenance) recommendation is to have two DLs
- Automation
 - challenge to do as much as possible in automated way
 - negotiating with the vendor using their top-notch automation software at zero cost for U-M
 - figuring out the architecture
- No inventory shortfall we are aware at this time - for the core expecting 8 weeks lead time
- Priorities
 - training
 - automation software licensing
 - not sure if this will be available to the Unit IT - will have to talk with Any how to structure this
 - reasonable pricing for optics
- Understanding constraints and challenges
 - Funding requirements and constraints - working through those for the next few years
 - Unit communications - have plan, have to sign it up
 - When to transition to the new hardware (switches) - working with **Hideko Mills**
 - Running two cores in parallel
 - Need to understand the current status of the unit infrastructure in order to justify the changes to the Deans - PMs can help with the list of all the Unit network equipment (ALs, APs, UPS, high end switches, DLs are excluded unless the Unit is paying for it)
 - we can add the status of DLs
 - Need a high overview on timing
 - how it affects the DL layer to the units
 - important for the Unit budgeting conversations
 - about three years for all DLs (owned by ITS) on campus and old core shut-down
 - hope is that most of the units will replace their ALs over three fiscal years starting in FY21 (Jan, 21 to Dec, 23)
 - Cost/benefit of the equipment upgrades/replacements per building (DL/AL/Wi-Fi)
- Wi-Fi project
 - a lot of unknowns - intent is to provide Wi-Fi for campus - working on it
 - the Wi-Fi will get upgraded centrally soon if the decisions are made to do so
 - the more realistic update will be provided in six weeks
 - APs are rapidly approaching end-of-support - this is now responsibility of the units
 - Andy will provide update next Thursday at STAC on the telephone upgrade - this will touch-up on the Wi-Fi

- Wi-Fi vs. ethernet - It would be good for most of the units to start thinking about what their use of Wi-Fi is and the model of activating jacks (by default - as of now, vs. on demand) - what pattern of usage we will see in the offices (laptops and docking stations - need only Wi-Fi vs. VoIP desk sets - need active jacks, maybe use softphones) and start conversations with the unit PM
 - this is hard to do during pandemic - buildings are empty (pre-pandemic usage may be helpful to look at)
 - if we could cut the number of active jacks in half would be a huge savings
 - separate conversation with Housing - different requirements and it make sense to keep it all activated - mDNS ([multicast DNS](#)) capable Wi-Fi
 - port utilization
- [UMNet Future State document](#)
 - Charles and Eric will talk about completion offline
- Slack use
 - SI has purchased own workspace (enterprise instance) - locked down, channels can only be created by faculty and staff
 - Ross - not whole IT dept uses it, department have own licenses, students use it - not ready to manage it the right way - it requires a lot of manpower to manage it
 - OUD - some marketing and communication use Slack, most of the people are using G-chat - not the best way to communicate
 - Nursing - some use, like Ross hard to manage
 - CoE - variety of channels within CANE and some within the schools - prefer Slack for its alert capabilities and layering different workspaces and mobile phone capabilities - preferred medium for IT
 - LSA - heavy use for IT, not sure about other areas
 - SRC - some niche usage due to decentralized funding model - uses of G-chat and MS Tamwork
 - Recommendation from some time ago - campus-wide Slack use
 - Slack is pervasive in the student community and they are resistant to change
 - per Andy - will be able to text with U-M phone, not sure how to implement with the personal cell phones
- Summary
 - Answer for Wi-Fi in six weeks
 - DL replacements - about 15 in the initial phase and some of them are ITS
 - second DL - responsibility of the Unit
 - AL - hoping to some time mid-summer start putting new vendor switches - may be some financial incentive for the units to replace them by December 2023
 - Push SLE across the finished line