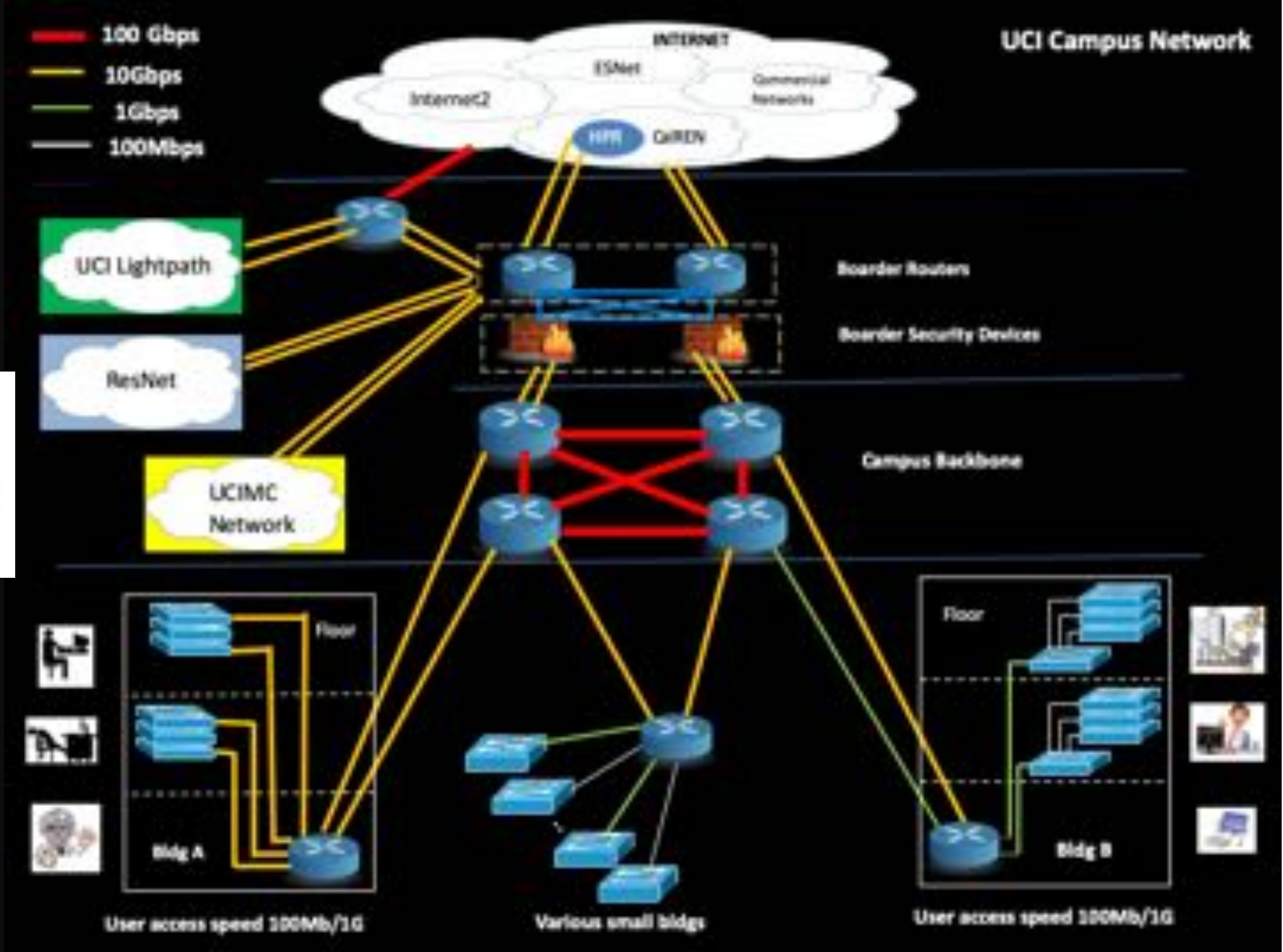
OIT NETWORK AND TELEPHONE SERVICES

We ensure the UCI Campus Network is available and reliable for use anytime you need it. We upgrade and deploy new networking capabilities to support the campus vision.

Telecommunications Services provides telecommunications services to the campus to include telephones, voice mail, automated attendant, ACD/call center, emergency phones, and more.

TECHNO EXPO 2019

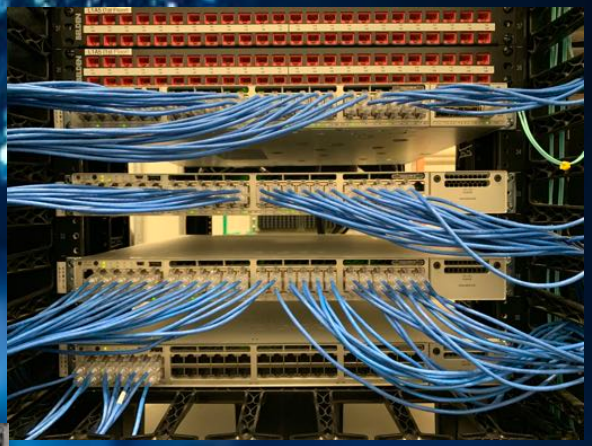


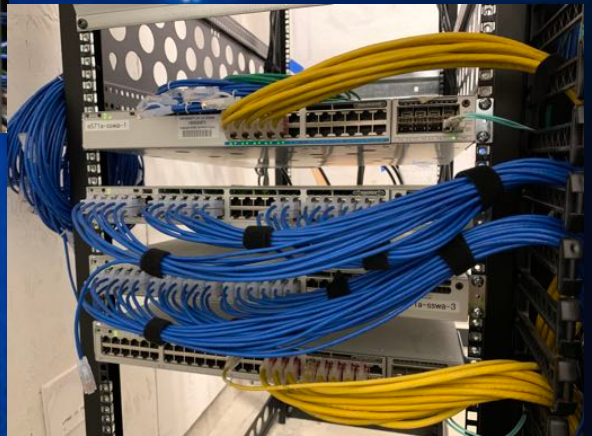
- In 2015, the 30+ year old Ericsson phone system was upgraded to an Aastra phone system. Aaastra was later purchased by Mitel so the current phone system is Mitel.

- In 2016, the aging voice mail system was replaced.

- In 2019, OIT replaced the 1500 Cisco IP phones with Mitel IP phones to standardize on the Mitel phone system.

BEHIND THE SCENES





PHONES AND PHONE LINES :

- Analog single line phones
- Analog lines without a phone (used for fax, modems, security systems, fire alarms, and emergency phones)
- Ericsson/Aastra/Mitel digital multi line phones (most common)
- Generic/Virtual extensions (a virtual phone line without the phone)
- Mitel IP multi line phones (restricted to certain buildings)

TELEPHONE FEATURES:

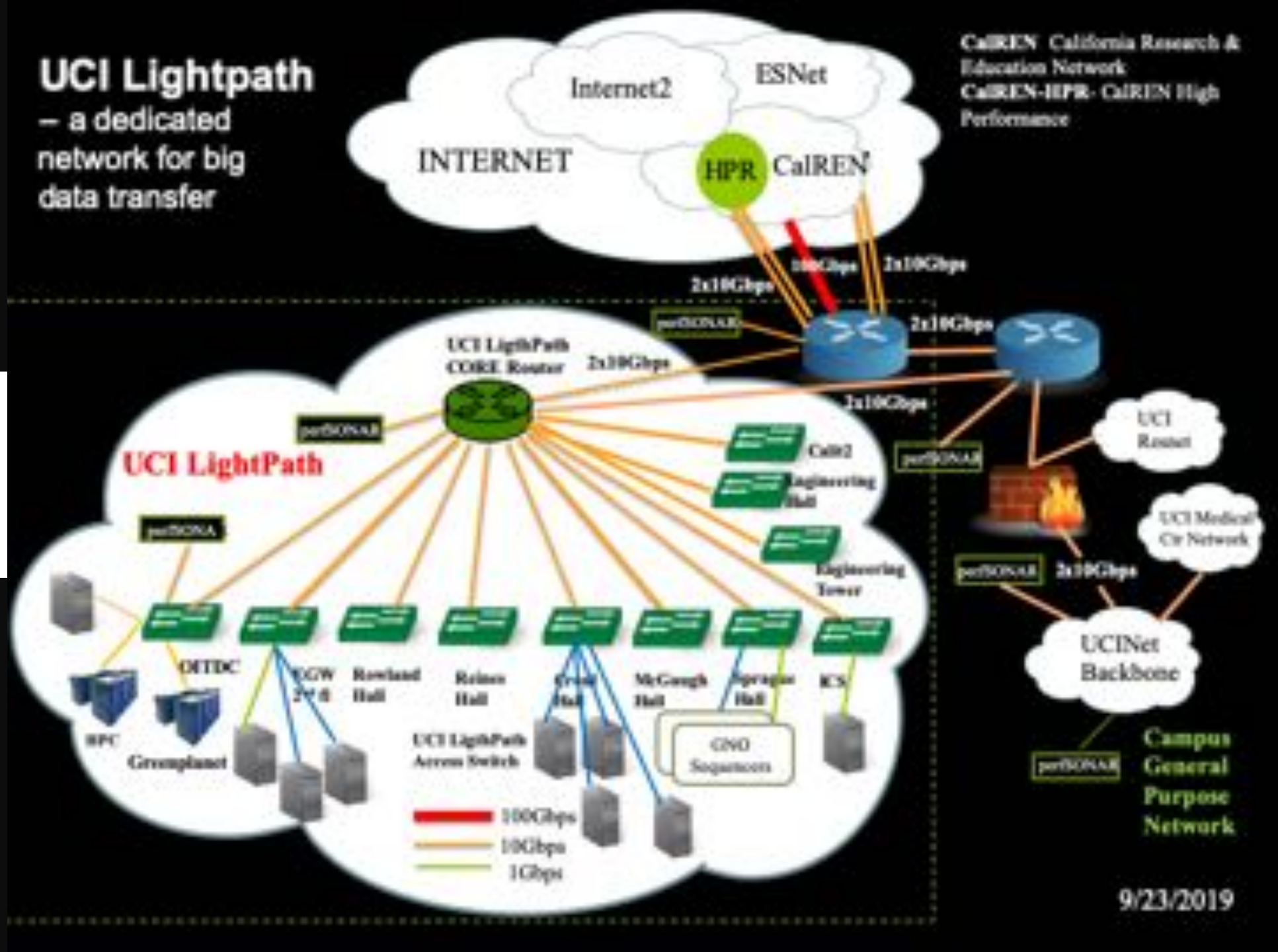
- Paging (only on Mitel IP phones)
- Music on Hold (included with phone service)
- Additional Directory Number (additional lines on multi line phones)
- Authorization code (e.g. your phone can be programmed to be able to call international if you enter an Authorization code)
- Automatic Call Distribution (ACD) Call Center services
- Hunt Groups (Collection of extensions under a group hunt number. Calls to Group hunt number will be distributed to the collection of extension either sequentially or based on least called extension)
- Pick-up group (a number of extensions can pick-up a call to a certain extension by pressing88 when the extension is called)
- Personal profile or Call List (Extension with a call list can have up to 5 different destinations when called. Example: ring first on the extension for 18 seconds and then if no answer rings on extension for 10 seconds and finally if no answer goes to voicemail).

VOICEMAIL FEATURES:

- Email or phone notifications (get a notification via email or phone when you receive a voicemail)
- Call Tree (create your own menu of information choices for your callers)
- Voicemail Distribution lists (create ea list of extension you want to send the voicemail to)
- Announcement Only mailbox (Have an announcement only without receiving any voicemails)
- Interactive Voicemail (created a questionnaire in voicemail and have the recorded answers sent to you in an email)
- Personal Assistant (If you cannot answer you can have to call going to another extension by asking the caller to press 0)

UCI Lightpath

– a dedicated network for big data transfer



TECHNO EXPO 2019

NEW TELECOMMUNICATIONS FEATURES COMING IN THE NEAR FUTURE:

- **Team** (Similar to Microsoft Teams)
  - Participate in real-time meetings
  - Create collaboration channels (chat/IM streams)
  - Hold chat/IM sessions
  - Invite guests to participants in chat/IM groups

NEW TELECOMMUNICATIONS FEATURES COMING IN THE NEAR FUTURE:

- **Client** (softphone application with same functionality as to your deskphone)
  - PC Client for Windows (Windows 7 and 10 only)
  - Web client for PCs (Windows and Mac only)
  - Mobile clients (iOS and Android only)

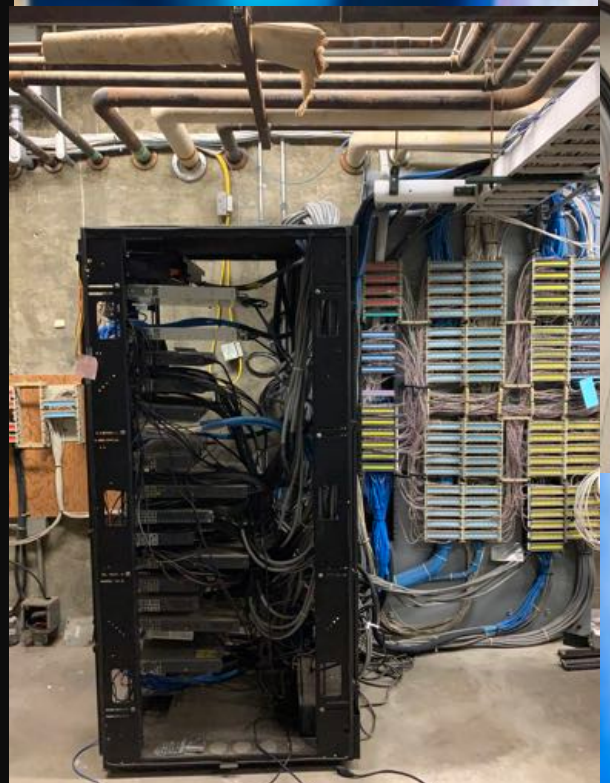
NEW TELECOMMUNICATIONS FEATURES COMING IN THE NEAR FUTURE:

- **Audio and Video Conferencing** (Similar to Zoom or ReadyTalk)
  - Audio, Web and Video Conferencing allows users to schedule and create conferences. A web-based interface is used to schedule conferences, and to view conference calls.

NEW VOICEMAIL UNIFIED MESSAGING FEATURES COMING IN THE NEAR FUTURE:

- **Web Interface** where you can login to listen, record, save,or delete voicemail messages via a web interface (Firefox, IE,Chrome etc) instead of using the phone
- **Mobile Client Application** for iOS and Android where you can login to listen, record, save, or delete voicemail messages using an application on your smartphone instead of your desk phone
- **Outlook/Exchange/Office 365 and Gmail integration** where you listen, record, save, and delete voicemail messages from your email application instead of your phone

BEHIND THE SCENES



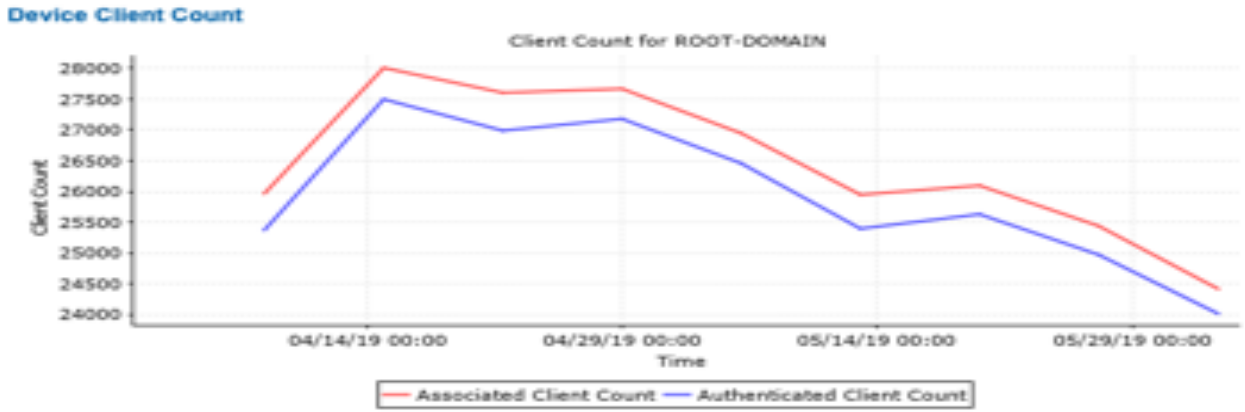
NETWORK EVERYWHERE

OBJECTIVES	HOW WE DO IT
Network Everywhere	Provide network access no matter where you are, classrooms, libraries, offices, labs, dorms, clinics, bookstore, coffee shops, etc., Connects everything from computers, mobile devices, servers, phones, digital signage, security camera, Alertus, alarms, projectors, etc.,
High Availability	All major buildings on campus have two diverse physical paths out to the internet so that an accidental fiber cut is transparent to users. Two physical paths from campus to the Internet Service Provider CENIC. Redundant network devices in critical locations to minimize impact to users in case of hardware failure. Uninterrupted Power System in critical locations.
High Bandwidth	100 Gbps around the campus. 10Gbps uplink speed from major buildings, 40Gbps for new buildings. 1 Gbps to desktop for users with high speed requirement.
Future Proof	Dark fibers all around the campus for future use. New building construction ready for cables graded for 10Gbps to desktop.
Security	Users must register devices prior to connecting to UCInet. Users violate security policies are not allowed on UCInet. Networks devices in secured closets and only accessible to authorized administrators.

NETWORK EVERYWHERE

Fun Facts About Wireless at UCI

- Over 3000 Access Points throughout the campus
- During the school year there are on average 26,000 wireless users, and 65 terabytes of data downloaded on any given day



NETWORK EVERYWHERE

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NETWORK EVERYWHERE

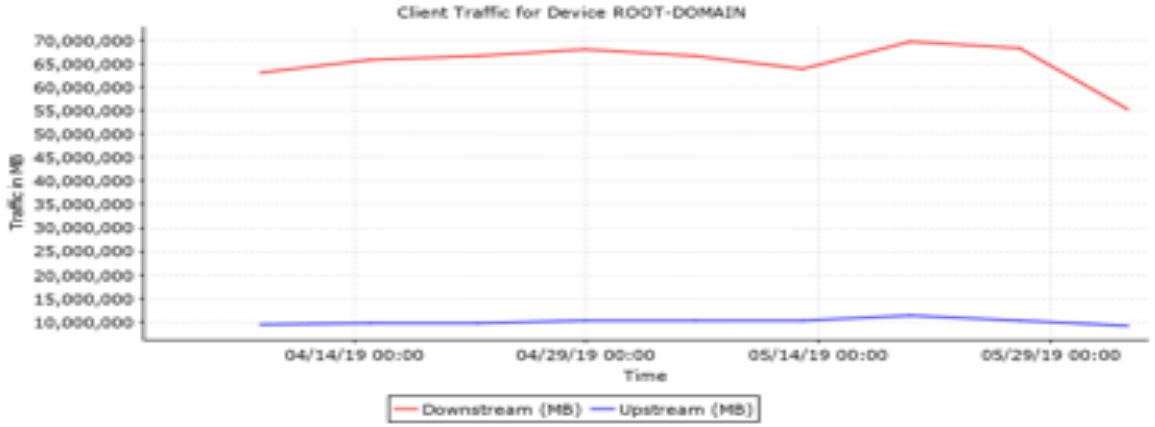
Fun Facts About Wireless at UCI

Each Access Point on campus is capable of 1Gbps throughput (5Gbps in new buildings) and can concurrently support up to 100 users at the same time surfing Youtube!
68% of wireless devices are Apple

Client Summary by Vendor

Vendor	Average Number of Sessions	Maximum Number of Clients	Average Number of Clients	Total Session Time (Hours)	Total Traffic (GB)	% of Sessions	% of Clients	% of Session Time	% of Traffic
Apple, Inc.	279216	47174	22630	1.56794644E7	1081721.68	72.79	69.45	65.05	68.49
Murata Manufacturing	16669	2735	1395	962561.18	34390.05	4.35	4.28	3.99	2.18
Intel Corporate	13540	6036	2549	1912011.78	204224.67	3.53	7.82	7.93	12.93
Hon Hai Precision In	7970	1188	531	635449.23	35074.9	2.08	1.63	2.64	2.22
Unknown	5544	1419	516	347399.13	25093.04	1.45	1.58	1.44	1.59

Device Client Traffic



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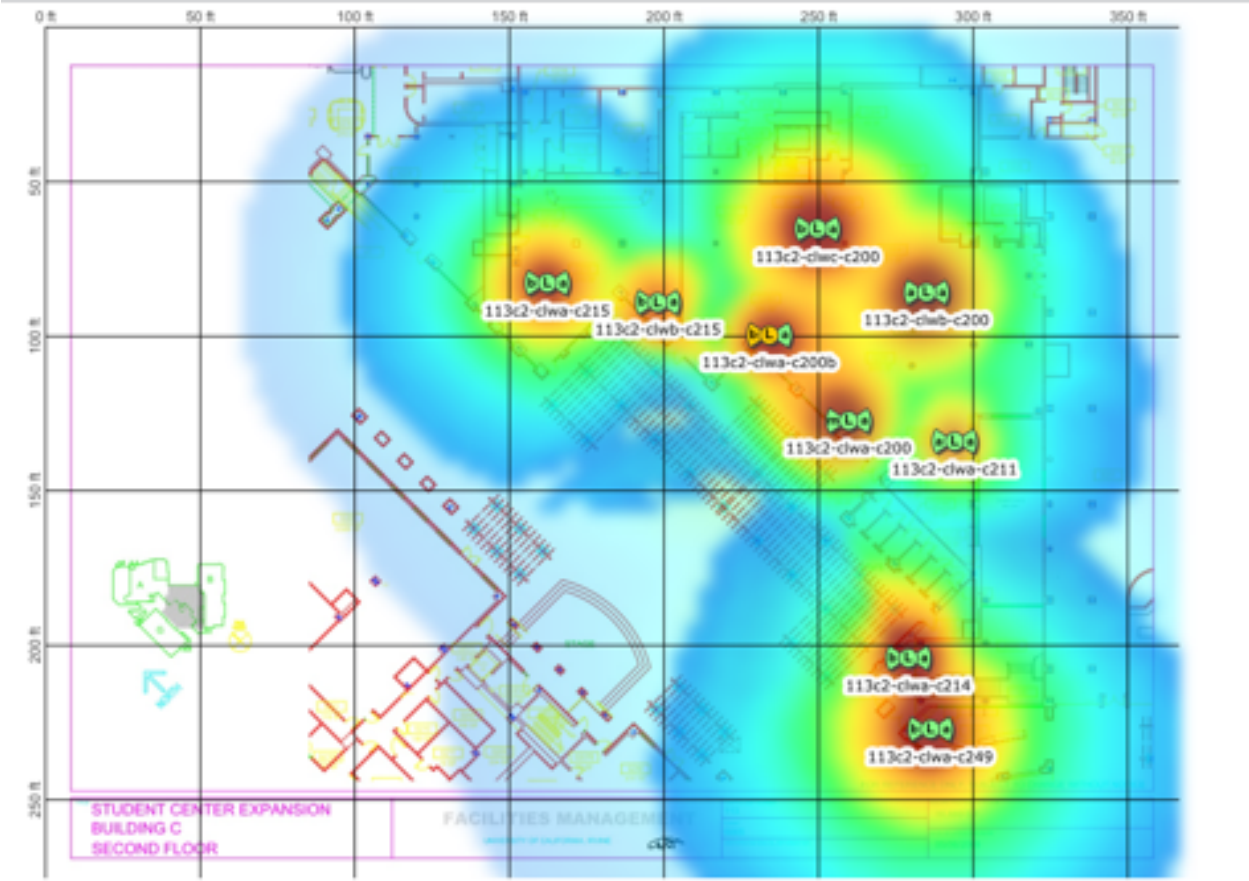
NETWORK EVERYWHERE

Heat Map of Student Center Food Court Area



NETWORK EVERYWHERE

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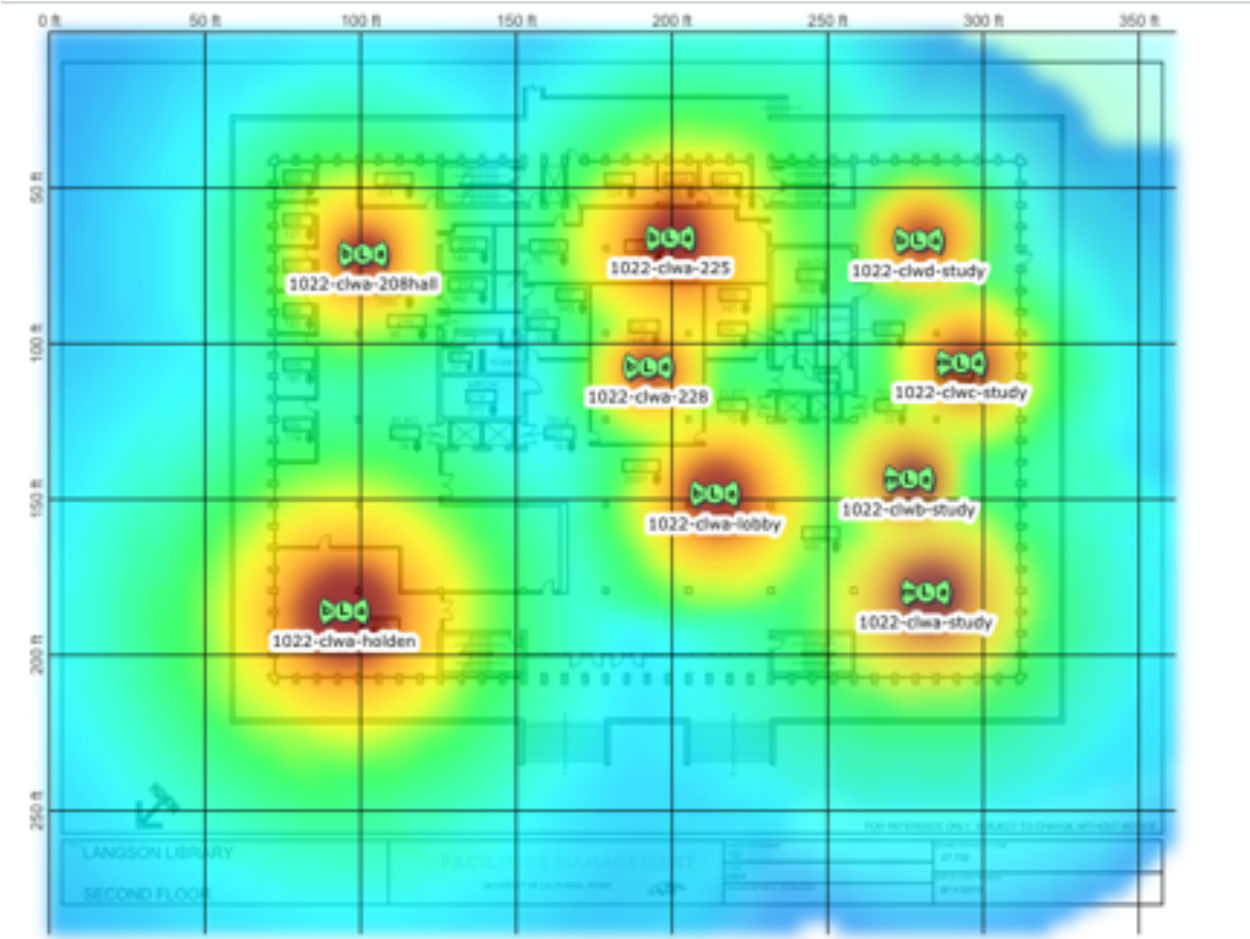
NETWORK EVERYWHERE

Fun Facts About Wireless at UCI

Heat Map of Langson Library 2nd Floor



NETWORK EVERYWHERE

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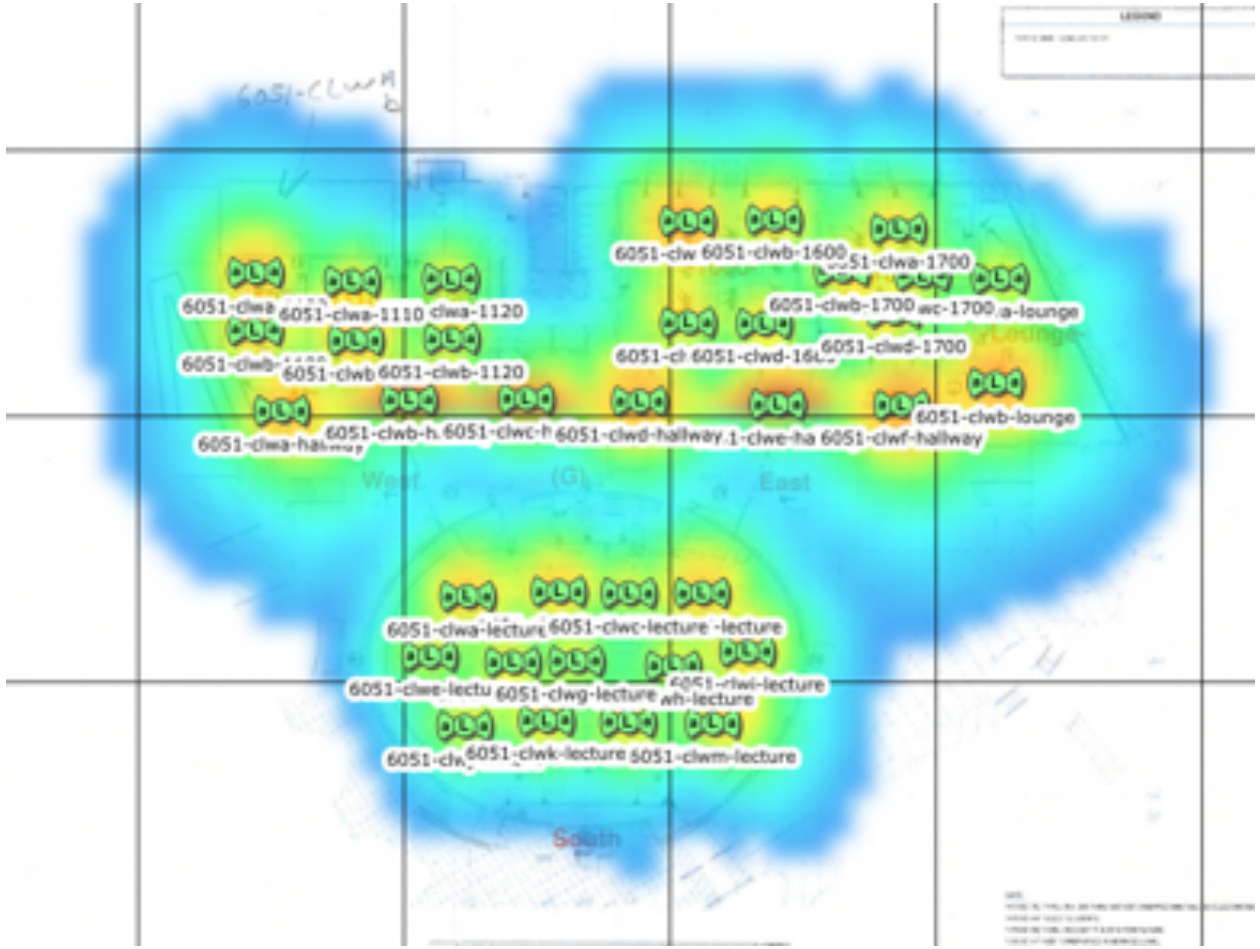
NETWORK EVERYWHERE

Fun Facts About Wireless at UCI

Heat Map of ALP First Floor



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QUESTIONS ABOUT YOUR NETWORK? WE CAN HELP!

Wired Connectivity?

Wireless Connectivity?

IP Address Management?

Domain Name Management?

Security?

THANK YOU

Oit@uci.edu