Power over Ethernet (PoE)

Preparing the IT rooms for rolling out PoE services

Description of PoE

◈ Power over Ethernet (PoE) describes any of several standardized or ad-hoc systems which pass electrical power, along with data, through the Ethernet cabling. This allows a single cable to provide both data connection and electrical power to devices. IEEE standards 802.3 is developing standards for power distribution. IOT devices are making more demands of this type of service. ITS currently has limited the use of PoE for surveillance cameras and Wireless Access Points.

History of IT Rooms

◈ 1990s Campus Communication Utility Project (CCUP) installing the Cat 5 cable adding fiber optics and securing IT rooms in buildings

◈ 1999 Power panels, cooling and space requirements for design standards 10x12 room size

◈ 2000 Changed category cabling to 5E

◈ 2005 Standard Update to upsize telecom rooms to 10x15

◈ 2011 Changed category cabling to 6 and using a patch panel solution

◈ 2019 Changed category cabling to 6A for Wireless Access Points (WAP) and Cameras

Supported Devices (not all inclusive):

- Voice over IP (VoIP) Phones

- Audio Visual Equipment (Encoders and Decoders)

- Intrusion Detection Devices (Motion Detectors and Door Alarms)

- Door Locks

- Timecard Clocks

- Digital Signage

Standard	Power at Switch	802.11a/n	802.11ac	802.11ax and beyond
PoE 802.3af	15W			
PoE+ 802.3at	30W			
PoE++ 802.3bt*	60W (4-pair)			
PoH 802.3bt*	90W (4-pair)			

Power over Ethernet devices

IT rooms Refresh of Network Equipment

◈ List of Building that ITS has already refreshed

◇ 25%

◈ Including: Calvin Hall, Blank Honors. Mossman. North Hall, Phillips Hall, PCO, Sciences Library, Stuit Hall, MRC, MEB,

◈ Trowbridge Hall, Theatre, EMRB, Halsey, Dental Science, CMAB, Clinton St. and CRWC

Technology changes

" IT Rooms upgraded to new 9400 switches "

61 out of the 262 IT spaces have been refreshed with new 9400 series switch

"

Building Coordinators role come into play

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Outages for Buildings to refresh the electronics

30 minutes to 2 hours to refresh

List of Buildings that we will refresh in the next couple of months

MRC, MEB, PBB, Van Allen, Med Labs, BSB and MacLean Hall

What does outage mean

◈ Network Connectivity is disconnected

◈ Usually 45 minutes to 2 hours down time

◈ Nothing changes for end user

◈ Schedule in morning starting about 5:30am - 6 am

◈ Back in operation by 7:30

◈ All work done inside telecom room

Questions