

EPIC

Enterprise Infrastructure Compendium

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NC STATE
UNIVERSITY

Communications Technologies

2020 **BICSI FALL**
Conference & Exhibition

BicSI

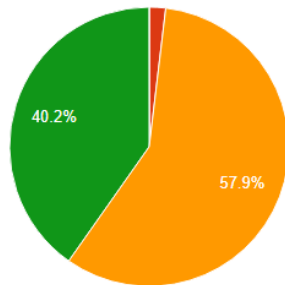
EPIC

What is it?

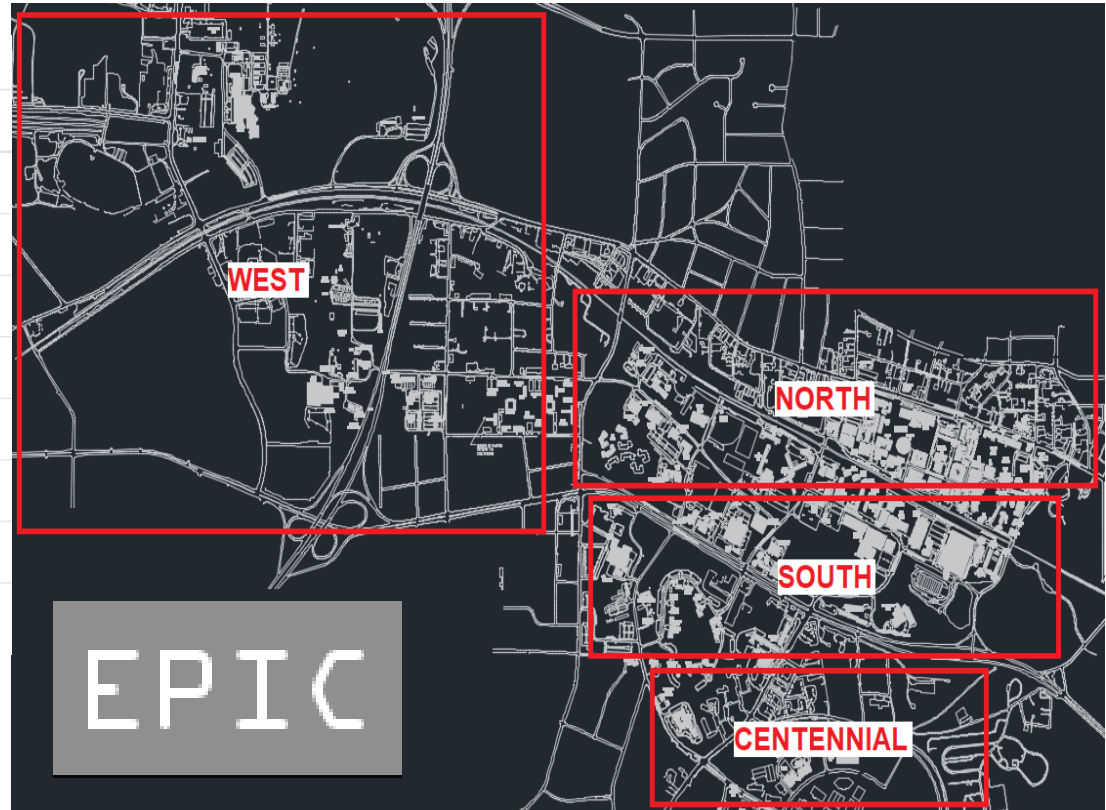
- **Primary Repository for IT Infrastructure Data**
- **Consolidates data from multiple sources**
- **In-house custom database**

EPIC Inventory

Item	Count
Buildings	278
Rooms	23,157
Closets	IDF:376/ BDF: 237
Racks	1,563
Outlets	44,693
Jacks	131,124
Switches	2,246
Ports	85,468



- Cat5
- Cat6
- Cat6A
- Other



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Before

- Unregulated LAN Admin's
- Random patching
- Random port activations
- Undocumented cabling standards
- Always dispatching Technicians
- Life cycle planning difficult

After

- Consolidated LAN changes
- Controlled & documented patches
- Active ports controlled & known
- Complete cabling catalogue by building
- Fewer dispatches
- Better customer support
- Shorter time to resolve tickets
- Improved life cycle planning

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Data Collection Process

- **Formal Change Management Established**
- **Closets Re-keyed**
- **Mixture of Student and Temp Labor**
- **Database development**
- **Manual Tracing**
- **Froze Changes one building at a time**
- **Almost 2 years to complete**

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Change Management:

- **Paper forms - Contractors & Technicians**
- **Online forms - Network Operations**



NC STATE UNIVERSITY
 Office of Information Technology
 Communication Technologies
 Infrastructure Records Change Form

*****INTERNAL USE ONLY*****
 Drawing Notes:

DWG REV # _____

Records completed by: _____ On _____ DWG by _____ On _____ Internal Work Order# _____

Building Name/Number: 782A Date 7-17-20

Field Technician Name: MOON Technician work order #: 14552

Technician Notes:



OUTLET	ROOM	JACK	ADD/ REMOVE PATCH	ADD/ REMOVE OUTLET	SSI CEILING WALL FLOOR	WAS WIRING REMOVED TO BLOCK YES/NO	SWITCH NAME & IP	PORT
Example 217-45	Example 125	Example RED	Example REMOVE	Example ADD	Example SSI	Example YES	Example cac-217-3500p-1 10.253.24.1	5
<u>2095-250</u>	<u>20886</u>	<u>V1</u>	<u>Add</u>	<u>Add</u>	<u>AP</u>		<u>201-2076-36305 p14-1</u> <u>10.252.2.3</u>	<u>35</u>




NC STATE UNIVERSITY (INTERNAL USE: Records completed by: _____ On _____)

Office of Information Technology
Communication Technologies
Infrastructure Records AP Change Form

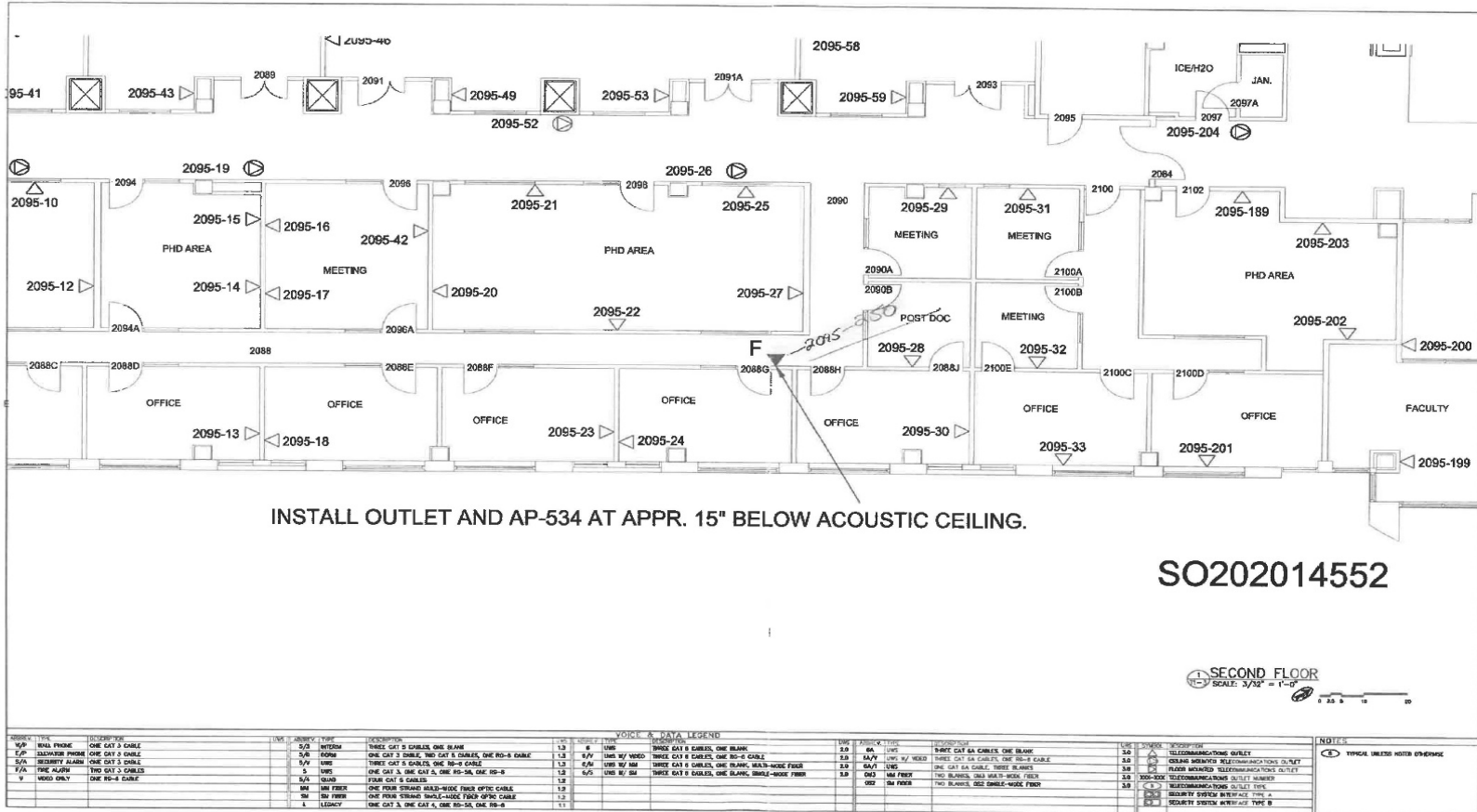
Building Name/Number: 782 A Date: 7-17-20

Field Technician Name: MOON Technician work order #: 14552

Technician Notes: Added one 534 AP

Room	AP Name	Add/Remove	Outlet	Jack	Serial # Mac Address	Switch / IP	Port
2088G	eb1-2088G-534-1	Add	2095-250	V1	 <small>REMOVE THIS ENTIRE LABEL USE AS NEEDED.</small>	<u>eb1-2095-3650p24-1</u> <u>10.252.2.37</u>	35

*****Please submit this form and floor plans with AP locations*****



SO202014552

SECOND FLOOR
 SCALE: 3/32" = 1'-0"

VOICE & DATA LEGEND				NOTES			
SYMBOL	DESCRIPTION	UNITS	QUANTITY	SYMBOL	DESCRIPTION	UNITS	QUANTITY
SYMBOL	DESCRIPTION	UNITS	QUANTITY	SYMBOL	DESCRIPTION	UNITS	QUANTITY
SYMBOL	DESCRIPTION	UNITS	QUANTITY	SYMBOL	DESCRIPTION	UNITS	QUANTITY
SYMBOL	DESCRIPTION	UNITS	QUANTITY	SYMBOL	DESCRIPTION	UNITS	QUANTITY





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Infrastructure Records UPS Change Form

Building: 782E Records completed by _____ On _____

Date: 7/2020

Technician Name Tech

Rack	Rack Unit	Name of UPS	Model # of UPS	Install/Remove/Replace UPS	Install Chassis Date	Battery Replacement Date	Connected To switch/IP	Port
782E-1143-1	4	fwh-1143-UPS1	S422001	Install	7-8-20		fwh-1143-9300-(sw)	23
782E-1143-1	5	fwh-1143-UPS-1	S42200	Install	7-8-20		fwh-1143-9300-(sw)	24

Rack layout is on reverse side please fill out where appropriate

45
40
35
30
25
20
15
10
UPS-2
UPS-1

ComTech **NC STATE UNIVERSITY**
 Office of Information Technology
Communication Technologies
Infrastructure Records Change
Form

Building: 782E
 Date: 7/2020
 Technician Name: Tech
 Rack Number: 782E-1143-1
 Rack Unit: 4+6
 Notes: UPS-1 + UPS-2

Internal Use: Records completed by _____
 Date _____

Entrance/Riser/Horizontal Fiber Change Form

Technician: _____ Date: _____

Notes: _____

	Cable #	Indoor / Outdoor	SM / OM3 / MM-62.5	# Strands	Ent. / Riser / Horiz.
Ex.	OF-CMDF/TEX-1	Outdoor	SM	36	Ent.
1					
2					
3					

	From Building	Room #	MDF / BDF / IDF / X-con	Connector Type	Strand	Panel #	Housing #	Rack#
Ex.	Partners 1	1450	MDF	FCU	F1-F36	P1-P6	H-81-C	81
1								
2								
3								

	To Building	Room #	MDF / BDF / IDF / X-con / Outlet	Connector Type	Strand	Panel #	Housing #	Rack#
Ex.	Textiles	G113B	BDF	FCU	F1-F36	P1-P6	H-1-A	700-G113B-1
1								
2								
3								

Page ____ of ____



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Office of Information Technology
Communication Technologies
Infrastructure Records Switch Change Form

Building Name/Number: _____ Date: _____

Field Technician Name: _____ Technician work order #: _____

Technician Notes:

SWITCH NAME & IP	ADD/REMOVE SWITCH	RACK NUMBER	RACK UNIT
EXAMPLE abc-123-3650-1 10.253.25.1	Remove	012-123-1	12

Rack layout is on reverse side please fill out where appropriate*

Online Form Example:

What would you like to do?

- Replace Switch
- Add Switch
- Remove Switch
- New Patch**
- Change Existing Patch
- Remove Patch
- Configure/Name/Patch UPS
- Rename UPS
- Add/Change Device
- Remove Device



Building*

Enter building name, number or short name.

Switch Name*

ex. afh-117-3650-1

with IP*

ex. 12.23.45.6

Port*

ex. 5

Outlet*

ex. 117-078

Jack*

ex. D1



Access web portal

A screenshot of a web portal interface. On the left is the NC State University logo. To its right is the text 'Public PLA Ground'. Below this is a section titled 'Building Search - view building network infrastructure information'. At the bottom of this section is a search form with a text input field containing the placeholder text 'Building Name, Number or Abbreviation' and a 'Find Building' button to its right.

NC STATE UNIVERSITY

Public PLA Ground

Building Search - view building network infrastructure information

Building Name, Number or Abbreviation

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Available

- Building search
- Floor plans
- Outlet search
- Patching data
- Switch data
- Closets
- Racks
- Metrics
- Sandbox Tools

Future

- OSP Fiber
- Ductbank
- Life Safety

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Demo

- **User Interface**
- **Metrics**
- **Fiber Inventory Data**

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