

# University Technology Infrastructure Group

# **Accomplishments**

# Daily operations

- email, servers, mainframe, phones, labs, network, ...
  - 3 million emails a day, >100K “clean”
  - Average 700K [www.wiu.edu](http://www.wiu.edu) hits a day
  - ~5,000 campus and ~5,000 ResNet network users
  - ~6,500 phone numbers
  - 1472 out of 3115 (47%) of Spring 2009 classes have some component on Western Online
- = 99.9% systems uptime (mainframe, Zimbra, Western Online, Internet, etc.)

# Upgrades

- Zimbra - several versions
- Western Online - service packs
- IBM z/OS 1.9
- Transaction Server (CICS) 3.2
- PRI trunks
- Core Network switches
- Corbin Hall switches (private VLAN testing)

*Enhancing Infrastructure and Security as specified in the Strategic Plan for Technology*

# Fiber plant Maintenance

- Fire alarms
- Cable TV
- Phone system
- Others
  - Illinois Century Network
  - McDonough Telephone Coop/Macomb Schools
  - OPS

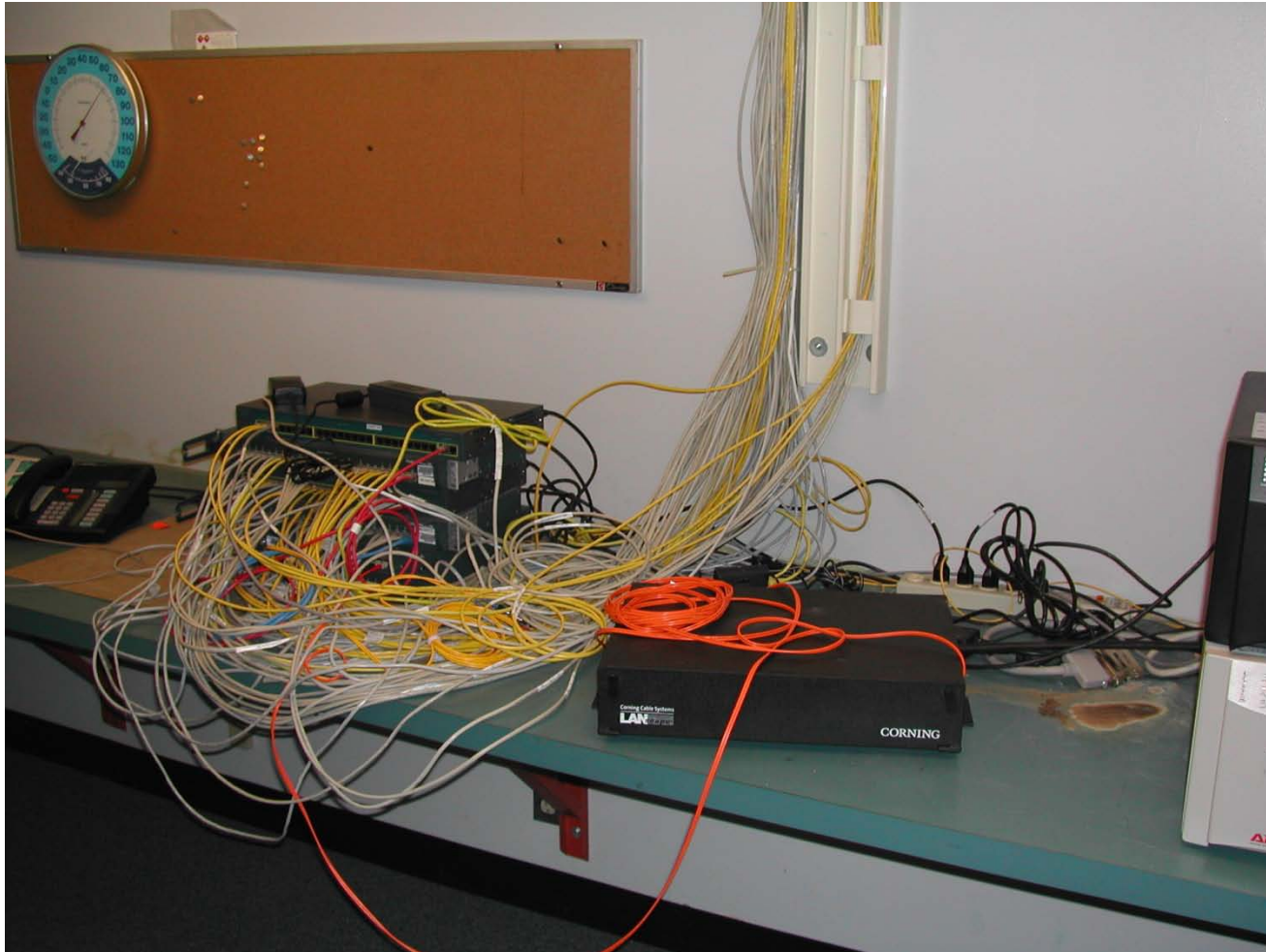
*Enhancing Infrastructure and Security as specified in the Strategic Plan for Technology*

# Security

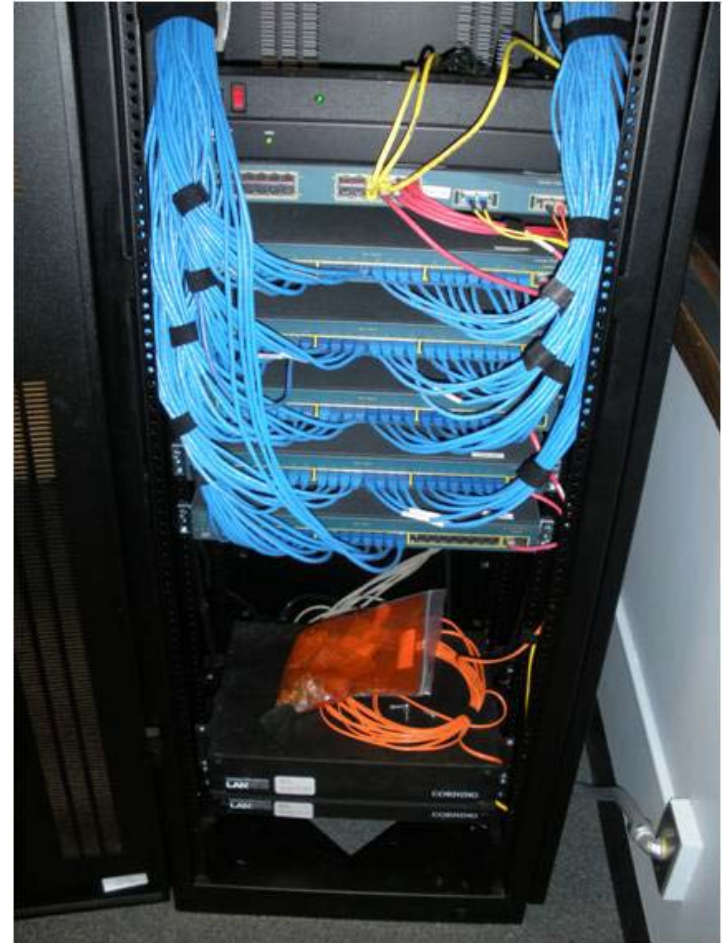
- Support
- Email – phishing, virus
- Server access lists/firewalls
- Encrypted services

*Enhancing Security as specified in the Strategic Plan for Technology*

# PP LAN cleanup - old



# PP LAN cleanup - new

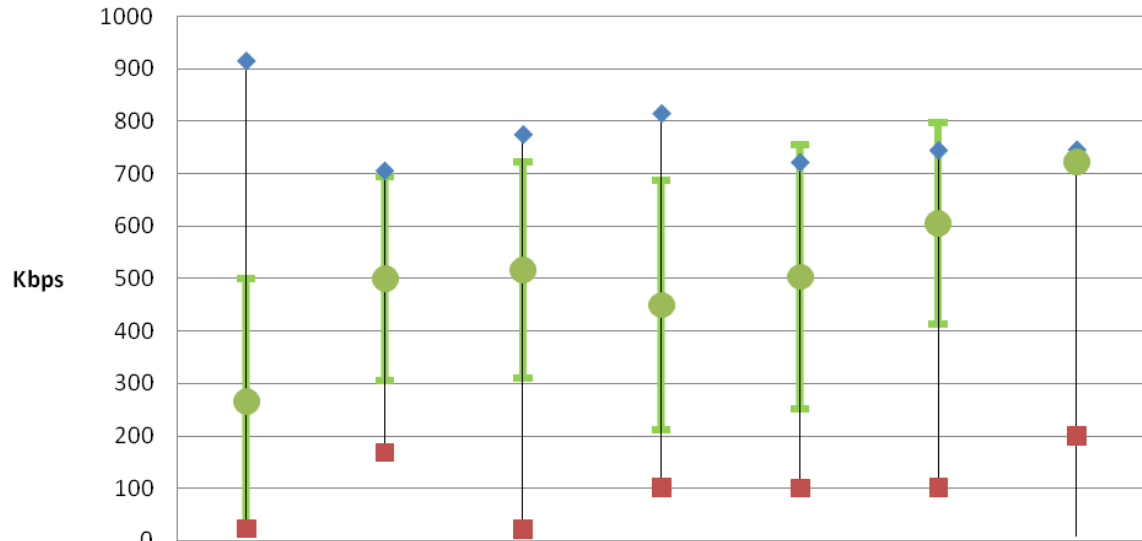


# University Data Center Enhancements

- UPS
- Generator
- Card Access

*Enhancing Infrastructure and Security as specified in the Strategic Plan for  
Technology*

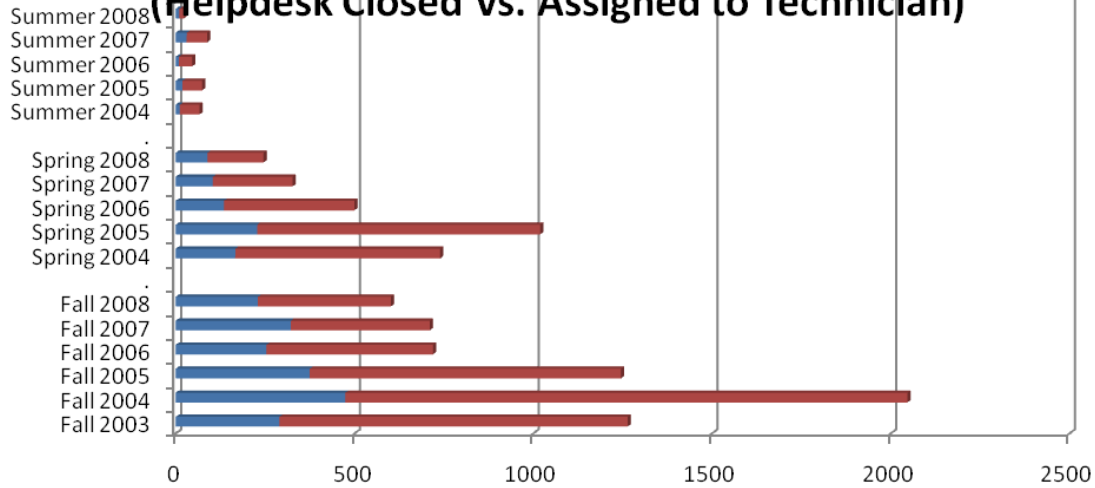
## Individual ResNet Download Speeds



|            | Fall 2005 | Spring 2006 | Fall 2006 | Spring 2007 | Fall 2007 | Spring 2008 | Fall 2008 |
|------------|-----------|-------------|-----------|-------------|-----------|-------------|-----------|
| ◆ Max Down | 915       | 706         | 775       | 815         | 722       | 745         | 746       |
| ■ Min Down | 23        | 168         | 21        | 101         | 100       | 101         | 200       |
| ● Avg Down | 265       | 499         | 516       | 449         | 503       | 604         | 722       |
| STDV Down  | 235       | 195         | 207       | 237         | 252       | 192         | 8         |

## Number of ResNet Tickets Received

(Helpdesk Closed Vs. Assigned to Technician)



|             | Fall 2003 | Fall 2004 | Fall 2005 | Fall 2006 | Fall 2007 | Fall 2008 | Spring 2004 | Spring 2005 | Spring 2006 | Spring 2007 | Spring 2008 | Summer 2004 | Summer 2005 | Summer 2006 | Summer 2007 | Summer 2008 |
|-------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| ■ HD Closed | 290       | 475       | 375       | 254       | 322       | 230       | 167         | 228         | 135         | 104         | 89          | 12          | 19          | 9           | 31          | 10          |
| ■ Assigned  | 975       | 1572      | 871       | 466       | 389       | 372       | 573         | 792         | 365         | 223         | 157         | 55          | 55          | 37          | 57          | 13          |
| % FCC       | 23%       | 23%       | 30%       | 35%       | 45%       | 38%       | 23%         | 22%         | 27%         | 32%         | 36%         | 18%         | 26%         | 20%         | 35%         | 43%         |
| % Assigned  | 77%       | 77%       | 70%       | 65%       | 55%       | 62%       | 77%         | 78%         | 73%         | 68%         | 64%         | 82%         | 74%         | 80%         | 65%         | 57%         |

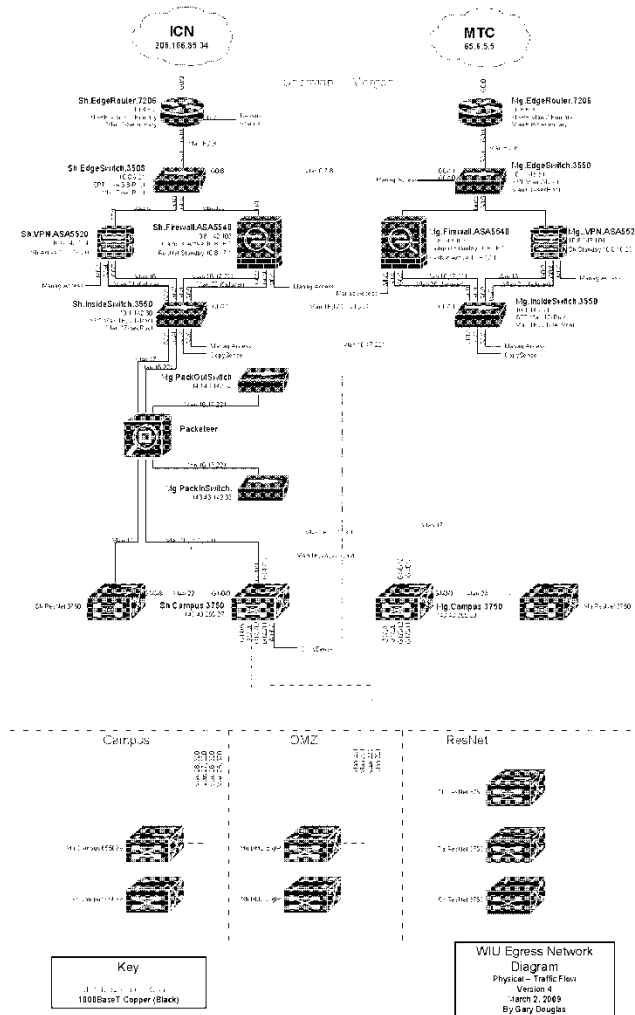
Plans/Projects

# September 2008 Malware Incident

- SMTP authentication – done
- Email subject line marking – done
- SMS deployment
- Symantec Endpoint Protection v11 deployment
- Wireless security

*ELU incident – zero day virus in early March*

# 2<sup>nd</sup> Egress



# ResNet wide wireless

- Mobility effort enabler
- Ports per room model change
- 802.11 N
- 1<sup>st</sup> phase Grote – South Quad

# New SAN implementation

- 58 TB
- Western Online migrated
- Will increase P drive space

# Documentation

- Network diagrams
- GIS maps
- Technical notes
- Data “inventory”
- System diagrams
- Central Repository

# Lab computer purchase

- This summer
- ~ 265 computers
- New Tanner lab
- Mac dual boot systems

# Security Cameras

- Physical Plant and Labs
- Network attached low cost
- Central server
- New uTech service

*Enhancing Infrastructure and Security as specified in the Strategic Plan for Technology*

# F5 BigIP project

- Increase availability and maintainability of services (web servers, email servers)
- Security enhancements (DMZ)
- Joint effort with ESS, AIMS, web support

# VoIP Implementation

- SIP trunking
- Infrastructure (switches and wiring)
- Servers
- Support

*Enhancing Infrastructure and Security/High Speed Core Network as specified in the Strategic Plan for Technology*

# Budget requests

# VoIP Pilot

- Servers
  - Gateways
  - Phones/UCC clients
- = \$150,000

# Infrastructure Upgrades

- Network equipment = \$1,500,000.00
- Network locations = ?
- Building fiber links (first group) = \$100,000



**Library fiber entrance**

# Professional Development

- Training or Conferences  
= \$5,000 per year per employee

*Demonstrate Accountability, as specified in the Strategic Plan for Technology*

# Zimbra renewal

- Software was 3 year purchase
  - Due 8/09
- = \$25,000

# Server Rotation

- Various rotation needs
  - DR/BC impacts
- = \$ 350,000.00

# Test environments

- VMware environment = \$20,000

# Mainframe disk

- Extended maintenance last year
  - Enterprise level with DR capabilities
- = \$500,000.00

# Summary

- These were just some of the many engaging projects the Infrastructure Group were/are involved with
- Infrastructure Group is capable of doing just about any task given them
- Continue to follow *Strategic Plan for Technology*

Questions?