

# IT Briefing

August 19, 2009



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## Agenda

- Wireless 802.11n Evaluation
- Changes to ESD and Downstream Applications Due to Compass
- IT Alert Process
- Stan Brooks
- John Ellis
- Todd Burroughs

# Next Generation Wireless: Adventures in 802.11n Evaluation & Testing

**Stan Brooks**

CWNA/CWSP

# 802.11n Wireless

## What the heck is it?

- In the beginning...
  - There was 802.11b (2.4 GHz) (11Mbps)
  - Then came 802.11a (5 GHz) (54 Mbps)
  - Then came 802.11g (2.4GHz) (54 Mbps)
- 802.11n Draft Standards
  - Will be ratified soon (mid-Sept 2009)
  - Draft 2 equipment available now
    - Ratified Draft will be 11 or 12
    - Current equipment *should* be compatible with Standard

# 802.11n Wireless

## Basic Features

- **Faster**
  - Up to 300Mbps (~150-200 Mbps throughput) with current hardware
    - Up to 600 Mbps with ratified standard hardware
    - Versus 54 Mbps (~22 Mbps throughput) for 802.11g
- **Better Range**
  - May extend reach of 5 GHz band to distances of 802.11g (2.4 GHz) today (802.11g)
  - Use of MIMO and other technologies to reduce interference and get better range & speed
- **Can Use More Spectrum**
  - 40 MHz channels vs. 20 MHz channels
    - Only three 20MHz channels available in 2.4 GHz band

# 802.11n Wireless

## Do we have it at Emory?

- We have a handful of Aruba AP125s for evaluation
- 4 deployed on the Academic network at NDB (3<sup>rd</sup> & 5<sup>th</sup> floors)
- 3 at Materiel Center
- 2 APs at SoM – uninstalled after 3 months
- Plan to put a couple at Woodruff Library ECIT area

# 802.11n Wireless

## Requirements for Deployment

- APs need GigE connections to handle up to 300+Mbps traffic
- APs *may* need special power supplies for Power over Ethernet (PoE)
- Controllers need multi-Gigabit connections to handle traffic
- AP costs are currently 4x to 6x current AP costs

# 802.11n Wireless

Bake-Off/Smack Down/Throw Down/Proof of Concept





# 802.11n Proof of Concept

## The Vendors



- Woodruff Residential Center (WRC)
- 70 APs at WRC (previously 30 APs)
- APs in rooms and hallways
- New Cisco 10/100/1000 Ethernet switches
- New 10Gig core links
- Redundant hardware
- Identical network connectivity but no roaming with the rest of campus
- Managed autonomously



- Evans & Few (Freshman 2 & 3)
- 54 APs - 25 in Few, 29 in Evans (previously 54 APs)
  - 2 non-resident floors in Few not covered with 802.11n
- APs in hallways only
- Existing Emory 10/100/1000 Ethernet Switches and 10Gig uplinks
- Redundant controllers
- Identical network connectivity and roaming with the rest of campus
- Managed autonomously

# 802.11n Proof of Concept

## Vendors' Hardware – The APs



- Deploying model 1252 for PoC



- If selected, will deploy model 1142



- Deploying model AP125 for PoC



- If selected, will deploy model AP125



## Evaluation Timeline

- Vendor equipment (APs & Controllers) installed & active now (?)
- Proof of Concept evaluation period:
  - Fall 2009 semester
- Monitor both vendors' hardware functionality & user experience
- Equipment returned to vendors
  - Winter Break 2009
- Decision for future deployment
  - after Proof of Concept complete

# 802.11n Proof of Concept



## Notes for Move-in Weekend

- Not publicizing the evaluation (yet)
  - Wireless users in other Res Halls may be jealous
- APs in rooms for some WRC residents
  - No health risk
    - some residents may object to the hardware in rooms
- APs only in hallways for Evans & Few Residents
- Both dorms will be transitioned back to “existing” 802.11b/g technology over winter break

# 802.11n Proof of Concept

## Clairmont Campus Wireless Changes

- APs moved from breezeways into living spaces
  - Living rooms only – not in bedrooms
- Fewer APs = much better coverage
- Antennas should be horizontal
  - Only place on campus this is true
  - Normally, antennas should be vertical

A large, bold, orange question mark is centered on the slide. It is partially overlaid by the word "Questions" in yellow. In the background, there is a faint, light gray watermark of the Emory University crest.

# Questions

# Changes to ESD and Downstream Applications Due to Compass

**John Ellis**

**Director, Integration**

# ESD and Applications



## Review

<https://wiki.service.emory.edu:8443/x/GgdZ>

<https://wiki.service.emory.edu:8443/x/fxFZ>



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Questions

# IT Alert Process

**Todd Burroughs**

**Continual Service Improvement Manager  
IT Service Management Office**

# IT Alert Process

## CSI Manager Roles & Responsibilities

- Develop processes based upon the ITIL framework, concentrating on processes included in the Continual Service Improvement area of ITIL v3, including Service Measurement, Service Reporting, and Service Improvement.
- Create documentation and regularly train staff on new and existing processes.
- Ensure monitoring tools are in place to gather sufficient detail to proactively monitor services.
- Define reporting requirements and develop detailed and executive dashboard reports based upon key performance indicators.

# IT Alert Process

## CSI Manager (Cont.)

- Work with Service Owners to identify and prioritize improvement opportunities.
- Ensure baseline data is captured to measure improvements and identify trends.
- Thoroughly review and analyze the data presenting summaries and recommendations to Senior Management and Service Owners.
- Work with the Business Relationship Manager to incorporate the appropriate measurement data in all SLAs and provide reports to the BRM and customers.
- Identify, initiate, and lead appropriate action plans to improve service levels (Service Improvement Plan).

# IT Alert Process

## Process Improvement Goals

- Proactively communicate Service Impacts to the community
  - Before customers begin calling the Service Desk
- Use the Service Desk as the front door and single source for communicating Service Impacts
- Keep the Service Desk informed so they have timely information to support customer calls
- Allow the engineers to focus on troubleshooting versus communicating
- Reporting on Major Incidents

# IT Alert Process

## Goals (cont.)

- Simplify current communication process
- Create a standardized template for communications
- Orient alerts towards customers
- Create consistency
- Integrate the communication procedure into the overall Incident Management process

# IT Alert Process

## Methodology

- Utilize a cross functional team of Service Mangers, Services Owners and Service Desk Management to examine the current process
- Determine customer challenges and solicit customer feedback
- Audit of existing process and past IT-Alerts

# IT Alert Process

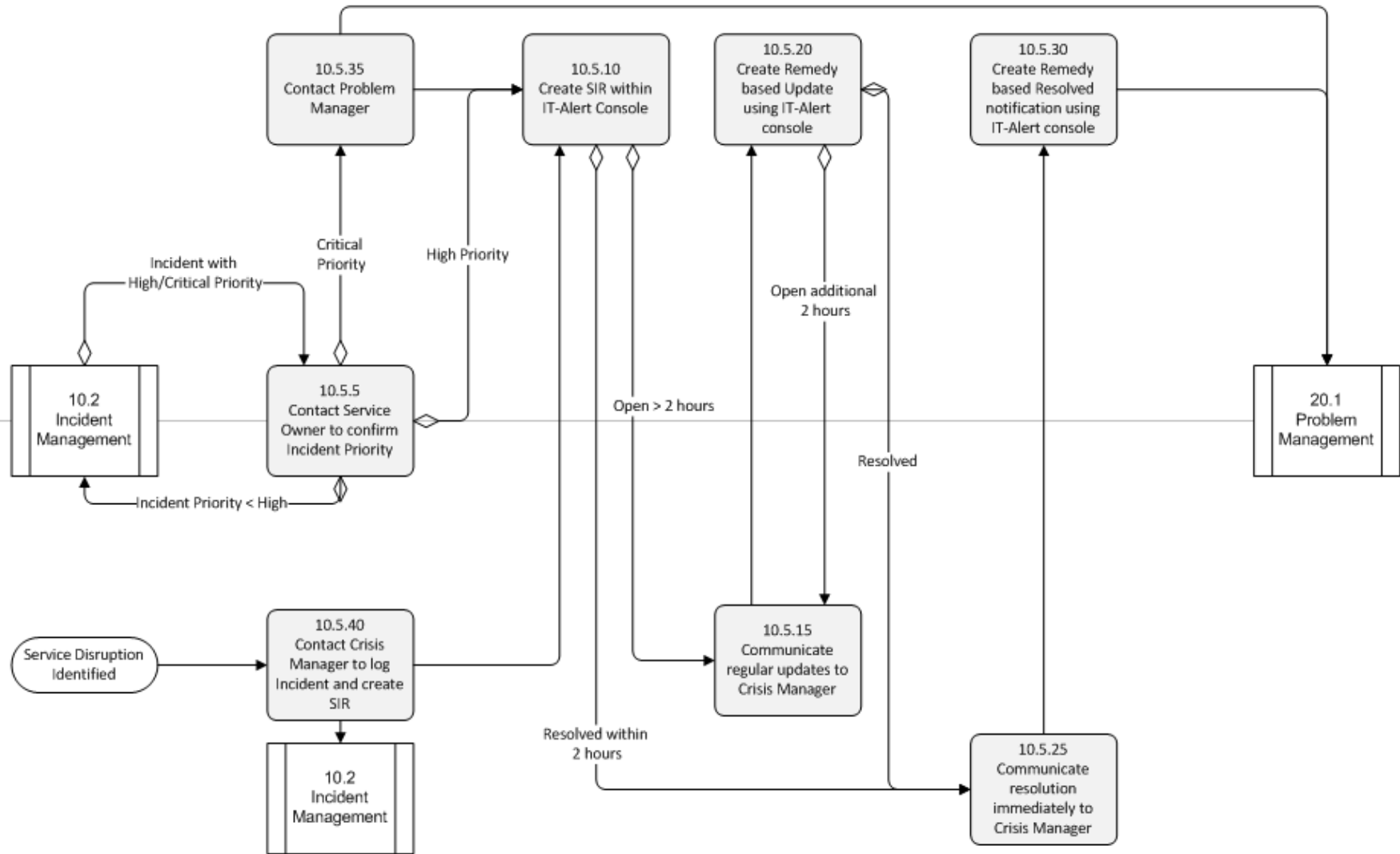
## Initial Draft

- Removing Alert-Info listserv
- Addition of Service Names to SIR's based on new Service Catalog
- Summary information made more meaningful
- Creation of a template for the IT-Alert console to aide the Service Desk with SIR creation
- Improved documentation
  - Standard BPMN (Business Process Modeling Notation) process flows, work instructions and roles and responsibilities documents.





Crisis Manager  
Service Owner



## *Current IT Alert Example*

**Date Reported:** Tuesday, June 2, 2009

**Time Reported:** 3:06:00 PM

|

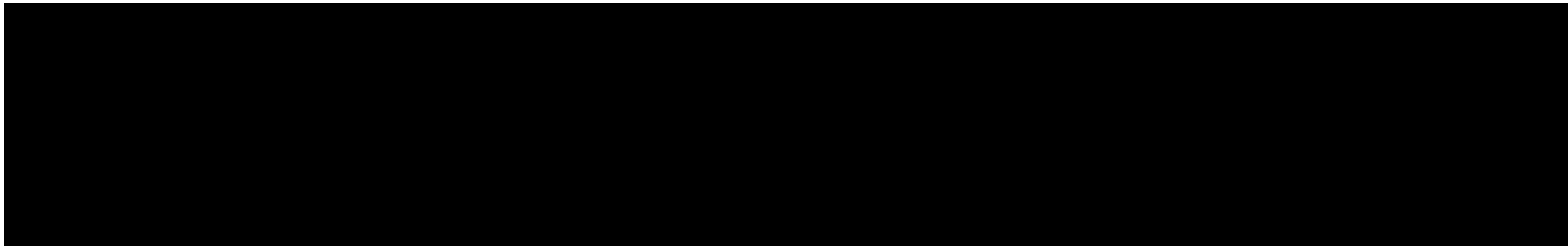
**Remedy:** 451917

**Service:** Switch

**Summary:** Service is unavailable

Additional information can be found at

[http://it.emory.edu/status/popup.cfm?remedy\\_id=000000000001034](http://it.emory.edu/status/popup.cfm?remedy_id=000000000001034)



## IT Alert Examples

### Email

**Date Reported:** Tuesday, June 2, 2009

**Time Reported:** 3:06 PM

**Remedy:** 451917

**Service:** Internet (World Wide Web)

**Summary:** Internet connectivity is down at Oxford College. This affects customers in the Student Center, Seney Hall, and Pierce Hall. Internet connectivity is currently unavailable. The next update will be made available on the system status page at 5:06 PM.

Additional information can be found at <http://it.emory.edu/alerts/451917>

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## Web

**Date Reported:** Wednesday, August 5, 2009

**Time Reported:** 10:52 AM

**Remedy:** 467258

**Service:** Internet (World Wide Web)

**Summary:** Internet connectivity is down at Oxford College. This affects customers in the Student Center, Seney Hall, and Pierce Hall. Internet connectivity is currently unavailable. The next update will be made available on the system status page at 5:06 PM.

**Details:** Due to power work being performed by FMD, there are multiple Switches down at Oxford. Users will not have access to internal or external network resources. Location is Oxford Campus. No ETA.

# IT Alert Process

## Next Steps

- Collect feedback from local support-  
Contact Me !!
- Gather feedback from Users/Customers
- Create Template within Remedy
- Rollout to Service Desk and UTS

# IT Alert Process

## Contact Information

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**Emory University**

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# IT Alert Process

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Questions