

Network status March 8, 2006 - IEEE 802 2006 Denver

Image 1: AP layout - 2006 Denver 3<sup>rd</sup> floor.

55 Access points are deployed on 3<sup>rd</sup> floor. At the bottom of the image I have SNMP and or simple pings watching the key network hardware. When a network outage happens the green turns to red and the application sends a page to my cell phone.

We monitor the hotel connection from Portland OR to make sure it stays up as well. When it loses connection a page is sent to my cell phone (night or day).

I took this screen dump when Morgan and Shereen went to fix three AP that had alarms. X.X.X.117 was in alarm from member who bumped the AP power plug. X.X.X.127 and 128 were in alarm from the switch being off from a power strip. Each of these outages were fixed within 2 min of the alarm.



Image 1

Image 2: AP layout - 2006 Denver 4<sup>th</sup> floor.

Network layout are designed for 50 people per AP. We design the network with the goal of not moving it when air wall change the layout.

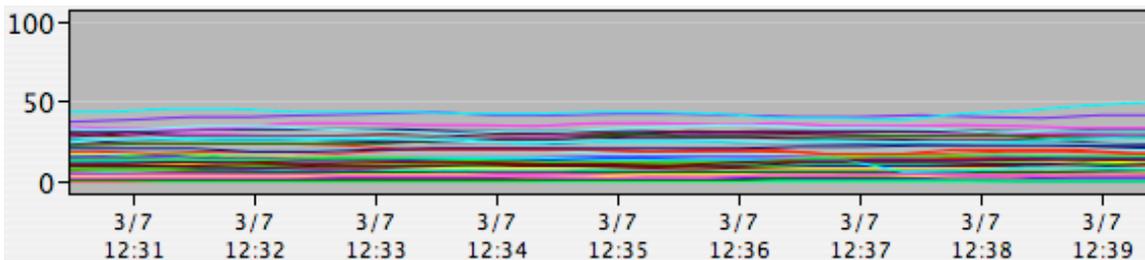


**Image 2**

Image 3: User count per AP - 2006 Denver 3<sup>rd</sup> floor.

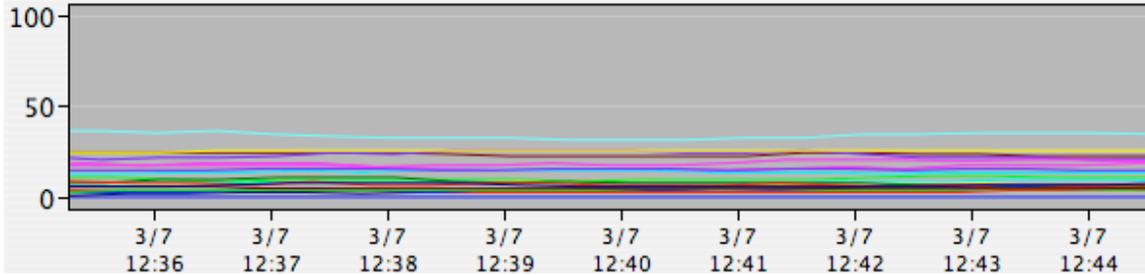
We monitor the number of clients on each AP and graph the usage. When we see the number of client go over the set max, then members will see us in the rooms adding more AP to keep the network.... WORKING.

Each of the following images are data from SMTP that is plotted every (1) minute. Each line color shows a different AP. What is not shown is our additional tools to see what AP needs attention due to the client association being higher than our design.



**Image 3**

Image 4: AP user count per AP - 2006 Denver 4th floor.



**Image 4**

Image 5: Bandwidth usage - 2006 Denver 4th floor.

During the meeting we can see the usage for the day. Other tools are used to control how the bandwidth is used. We protect different port to provide a QoS.

Traffic statistics - Wed Mar 8 19:43:31 2006								
Interface	Period	Direction	Current rate	Hour	Day	Week	Month	
EXTERNAL	Current	In	55.1 Kbits/s	105.5 MB	46.0 GB	156.0 GB	157.3 GB	
		Out	17.1 Kbits/s	14.3 MB	13.8 GB	40.6 GB	40.7 GB	
	Previous	In		786.8 MB	58.1 GB	0.0 KB	0.0 KB	
		Out		180.0 MB	13.2 GB	0.0 KB	0.0 KB	
INTERNAL	Current	In	17.3 Kbits/s	14.7 MB	13.9 GB	41.0 GB	41.0 GB	
		Out	54.6 Kbits/s	105.5 MB	46.1 GB	156.1 GB	157.5 GB	
	Previous	In		181.7 MB	13.3 GB	0.0 KB	0.0 KB	
		Out		787.1 MB	58.1 GB	0.0 KB	0.0 KB	

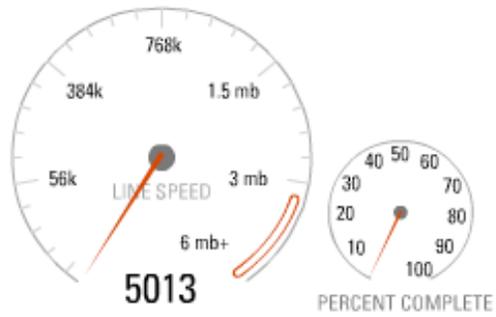
**Image 5**

Image 6: Speed test during opening - 2006 Denver 4th floor.

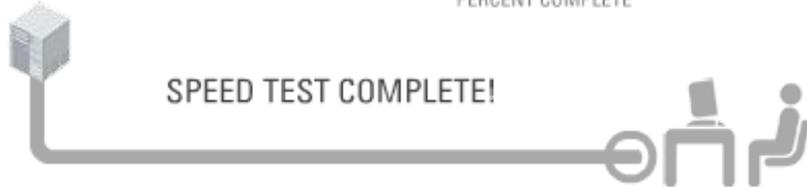
We only run the speed tests on the outside when I see the network may be having problems. This is a good way to show that even with everyone is using the network during the day the network is still usable.

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BEGIN THE SPEED TEST
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BEGIN THE SPEED TEST
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BEGIN THE SPEED TEST
- >>> CHICAGO, IL**  
BEGIN THE SPEED TEST
- >>> ATLANTA, GA**  
BEGIN THE SPEED TEST
- >>> NEW YORK CITY, NY**  
BEGIN THE SPEED TEST
- >>> WASHINGTON, DC**  
BEGIN THE SPEED TEST



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**Image 6**