Upcoming Meetings

- June 20 (LOA, IDS and 2-Factor)
- July 11
- August 15
- September 19
- October 17
- November 7 (Final Rate Setting)
- All meetings in 337A from 1:30-3:00pm
Agenda

- Update on Network SLA improvement projects
- Wireless update
- Strategies for full campus wireless
- Potential funding model changes
- Upcoming topics/strategies for FY’13
Network SLA Improvement Projects

- Network maintenance dashboard
- ProDesk email SLA
- ProDesk triage/intake process
- Network repair tickets
- PennNet priority dispatch service
- PennNet SLA performance (P1-P4)
Project 1
Network Maintenance Dashboard

- www.upenn.edu/computing/isc/networking
  - Select network maintenance dashboard
  - Unplanned and planned PennNet network maintenance are displayed (except security tickets)
  - Plan to remove individual low priority tickets (telephones, call center changes, broken wall plates)
- All incidents are displayed for all organizations
  - All full time staff to have access to service
Project 2
ProDesk SLA

- Email to ProDesk is now being routed to the ACD, where it is queued with phone calls to speed response and assist with performance metrics.
- ProDesk is now targeting a 1-hour turn around for email.
- Additional back office integrations are being explored to generate metrics needed for measuring performance.
- Issues needing rapid response should still be submitted by phone which will always be given precedence over email.
ProDesk has updated its guidelines for triaging Network trouble reports.

Processes have been updated to make exceptions for the types of data collected prior to escalation to the NOC, when high profile or widespread outages are reported.
Project 4
Network Repair Tickets

- PennNet and AirPennNet Remedy Web Services
- [www.upenn.edu/computing/isc/networking](http://www.upenn.edu/computing/isc/networking)
  - Select “Report a PennNet Problem”
  - Select “Report an AirPennNet Problem”
Project 5
PennNet Priority Dispatch Service

- Intended for ticket escalation and priority dispatch during critical outages or urgent issues
- When reporting the problem to the ProDesk, please indicate that this is a local priority and immediate on-site support is requested.
  - Please provide a local point-of-contact.
- ProDesk will immediately contact the NOC who will follow up directly with the local contact to coordinate onsite response
Processes have been updated so that within Remedy, we may track our P1-P4 network wired and wireless SLA performance

- Public monthly metric reports are planned for FY’12
## Current Network SLA

<table>
<thead>
<tr>
<th>SLA Commitments</th>
<th>6am to 9am</th>
<th>9am to 5pm</th>
<th>5pm to 11pm</th>
<th>11pm to 6am</th>
</tr>
</thead>
<tbody>
<tr>
<td>NOC Hours of Operation</td>
<td>NOC Open</td>
<td>NOC Open</td>
<td>NOC 2nd Shift Open</td>
<td>NOC On call</td>
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<tr>
<td>ProDesk Hours of Operation</td>
<td>ProDesk Open</td>
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<td></td>
<td></td>
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<tr>
<td>NOC Response Time P1</td>
<td>Near Immediate</td>
<td>Near Immediate</td>
<td>Near Immediate</td>
<td>Within 30 Minutes</td>
</tr>
<tr>
<td>ProDesk Forward to NOC Email/Phone</td>
<td>Email up to 4 Hrs/Phone Immediate</td>
<td>Email NBD/Phone NBD/VM Page</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOC Response Time P2</td>
<td>Within 1 Hr</td>
<td>Within 1 Hrs</td>
<td>Within 1 Hr</td>
<td>Within 2 Hrs</td>
</tr>
<tr>
<td>ProDesk Forward to NOC Email/Phone</td>
<td>Email up to 4 Hrs/Phone Immediate</td>
<td>Email NBD/Phone NBD/VM Page</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOC Response Time P3</td>
<td>Within 2 Hrs</td>
<td>Within 2 Hrs</td>
<td>Within 2 Hrs</td>
<td>Within 4 Hrs (6hrs after 12am)</td>
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<tr>
<td>ProDesk Forward to NOC Email/Phone</td>
<td>Email up to 4 Hrs/Phone Immediate</td>
<td>Email NBD/Phone NBD/VM Page</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOC Response Time P4</td>
<td>Within 4 Hrs</td>
<td>Within 4 Hrs</td>
<td>Within 4 Hrs</td>
<td>Next Business Day</td>
</tr>
<tr>
<td>ProDesk Forward to NOC Email/Phone</td>
<td>Email up to 4 Hrs/Phone Immediate</td>
<td>Email NBD/Phone NBD/VM Page</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NOC Repair Time P1</td>
<td>&lt;---------------------- Work Until Resolved ----------------------&gt;</td>
<td>&lt;---------------------- Work Until Resolved ----------------------&gt;</td>
<td>&lt;---------------------- Work Until Resolved ----------------------&gt;</td>
<td></td>
</tr>
<tr>
<td>NOC Repair Time P2</td>
<td>Within 24 Hrs</td>
<td>Within 24 Hrs</td>
<td>Within 24 Hrs</td>
<td>Within 24 Hrs</td>
</tr>
<tr>
<td>NOC Repair Time P3</td>
<td>By Start of NBD</td>
<td>By Start of Next Business Day (NBD)</td>
<td>By Next Business Day (NBD)</td>
<td>Next Business Day (NBD)</td>
</tr>
<tr>
<td>NOC Repair Time P4</td>
<td>By NBD</td>
<td>By Next Business Day (NBD)</td>
<td>By Next Business Day (NBD)</td>
<td>Next Business Day (NBD)</td>
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<tr>
<td>Communicate Time/Freq. P1/Target Campus</td>
<td>First Communications Campus-Wide Announcement within 2 hrs if Outage Severity Warrants.</td>
<td>Update Interval in Message --- &gt;</td>
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<tr>
<td>ProDesk Communications - Pro Alert or Email</td>
<td>&lt;---------- Same As NOC P1----------&gt;</td>
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<tr>
<td>Communicate Time/Freq. P2/Target Area LSP</td>
<td>&lt;--First Communications IT Support Staff or LSP within 4 hrs if Outage Severity Warrants --&gt;</td>
<td>Update Interval in Message --- &gt;</td>
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<td></td>
</tr>
<tr>
<td>ProDesk Communications - Phone or Email</td>
<td>At Start of Business Day</td>
<td>&lt;---First Communications Ticket Requestor within 4 hrs. Update by end of Shift (in ticket) --&gt;</td>
<td>Update By Start of Next Business Day</td>
<td></td>
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<tr>
<td>Communicate Time/Freq. P3/Target Ticket Red</td>
<td>&lt; -First Communications Ticket Requestor within 4 hrs. Update by end of Shift (ins ticket) -&gt;</td>
<td>Update By Start of Next Business Day</td>
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<td>&lt; -First Communications Ticket Requestor within 4 hrs. Update by end of Shift (ins ticket) -&gt;</td>
<td>Update By Start of Next Business Day</td>
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<td>Update By Start of Next Business Day</td>
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<tr>
<td>ProDesk Communications - Phone or Email</td>
<td>At End of Business Day</td>
<td></td>
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Wireless Updates & Improvements

- Communications
- Support/training
- Surveys
- Technology
  - Vendor
  - Capacity
  - Security
  - Coverage
Wireless Communications Improvements

- AirPennNet-SIG Meeting
  - The next AirPennNet-SIG meeting is scheduled for 6/6/2011
  - Subscribe to Airpennnet-sig@lists.upenn.edu

- AirPennNet Support Provider Training
  - Register at http://knowledgelink.upenn.edu/ and search for AirPennNet. Training scheduled:
    - July 20, 2011 @ 12:00-1:00
    - August 17, 2011 @ 12:00-1:00

- Website fixes in progress
Wireless Technology Improvements:

Surveys

- We are capturing baseline survey data in FY’11 and will compare to FY’12 data after improvements have been made.
- College House Computing
  - 25% of students reported having wireless problems.
  - We are aware that there are coverage holes in a number of areas in residence halls.
  - Improvements in progress through the ResNet wireless phase II project.
- Law School student experience improved in recent survey
  - 86% approval ratings on AirPennNet since adjustments made to wireless settings (with no AP’s added).
  - Likely need to address HD areas.
- Wharton, others?
- We would like to do a campus-wide survey in late fall.
Wireless Technology Improvements

High Density

- Wharton School classroom 351 Test on 04/27
  - Over 100 people with over 188 wireless devices
  - Vendors on site to monitor and make configuration adjustments
  - Some users with problems were addressed (configurations)
  - Testing was successful and can be used as a blueprint for other areas
- Installing HD wireless configurations
  - Projects in progress with Wharton School Huntsman classrooms
  - GSE HD projects in progress
  - Meetings with SAS and Nursing planned for June
- ISC recommends addressing the higher density very soon for fall semester
Wireless Technology Improvements

Security
- 802.11N is enabled campus-wide
  - ISC disabled WPA-TKIP on 5/17/2011
  - AES has better encryption
- 802.11N is not enabled on AirPennNet-Guest

Vendor
- Weekly calls to eliminate technical issues

Other
- NOC continues to monitor IP usage
  - Some proactive range adjustments have already been made
  - Contact schools/centers where appropriate
- Guest wireless alternatives – June ITR
Wireless Technology Improvements

Coverage

- **ResNet Wireless**
  - Residential hall predictive survey complete
  - About 400 additional APs scheduled
    - After final testing more will be added if necessary to meet technical requirement of 48Mbps per access point
    - This is roughly one access point per 8 students
  - Wiring will be completed by end of June
  - Targeting 8/1/2011 turn up

- **GreekNet Wireless Project just approved**
  - About 110 access points in 15 buildings
  - Project will be completed in August

- **Full Campus-wide wireless**
  - Project design and costs planned for Fall
  - ISC will contact schools/centers for additional high density locations
Strategies for Full Campus Wireless

- Finalize design and get full costs in Fall
- Assume full campus wireless by August 2013
- Obtain peer data (Ivy Plus)
- Seek central funding
- Seek faculty and student support
- If no central funding approved, then what alternatives do we have?
Potential funding model changes

- Wireless IPs charges frozen at February 28, 2011 levels
- Subsidize wireless IP addresses for AirPennNet and Wireless Guest Network
- Eliminate IP charges all together and just have a headcount model for the central infrastructure fee
- Wireless access points and/or ongoing monthly fees in the central infrastructure fee bundle
- Several peers ahead of us in wireless have bundled infrastructure fees that include IPs, ports and APs
- We are beginning analysis on all of these options
  - Need to establish a small funding model team soon if we want to make any changes for FY’13
Upcoming topics/strategies

- What do we need to do in FY’13?
- I will be coming around in the next 4-6 weeks and having our regular, relationship management meetings with each of you.