

# Duke Office of Information Technology

## Minutes

**April 13, 2006**

Members present : Ed Anapol, Pakis Bessias, John Board, Shailesh Chandrasekharan, Tammy Closs, Dick Danner represented by Ken Hirsch, Brian Eder, Michael Gettes, David Jamieson-Drake represented by Bob Newlin, Roger Loyd, Kyle Johnson, George Oberlander, Lynne O'Brien, Mike Pickett, Rafael Rodriguez, Dalene Stangl, Molly Tamarkin, Christopher Timmins, Tom Wall, Robert Wolpert

Guests: Matthew Drummond, DukeCard Office; Kevin Miller, OIT

Start time : 4:03 PM

### **I. Review of Minutes and Announcements:**

? Nicholas School Assistant Dean for IT

Mike Pickett says the Nicholas School has hired an Assistant Dean for IT. Her name is Susan Gerbeth Jones, and she is the current leader of computing in Biology in Arts & Sciences. She will start her new role July 14. She will have a joint report to Julian Lombardi and will have a position in OIT much as Molly Tamarkin does.

? Scholarly Communications Officer

Lynne O'Brien says Kevin Smith will be starting June 1 as the new Scholarly Communications Officer. He will also be coming out on April 27 for the Instructional Technology showcase. He has a law degree, a library degree, and a divinity degree. I welcome all of you to send me the kinds of issue or questions you have been wondering if this individual could help with.

? Ken Hirsch says the Center for the Public Domain has released a comic book called "Bound by Law? Tales from the Public Domain" designed to inform laypersons, particularly the creative people themselves, about fair use. This has been getting national press. I invite you to look over it and order copies if you like. It's also available on the web at <http://www.law.duke.edu/cspd/comics/zoomcomic.html>.

? Lynne O'Brien says the sixth instructional technology showcase will be April 27. It's a mixture of people giving presentations about projects they've done. Instead of a keynote speaker, this year we are going to have a panel on gaming. Also, if you're at the showcase you will get a free copy of the comic book mentioned above.

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## **II. Update on campus services: DukeCard and electrical power - Kemel Dawkins, Vice President for Campus Services**

Kemel Dawkins says let me introduce Matt Drummond, who heads up the DukeCard office. I'll make some overarching comments and address some of the questions you asked up front. Sticking with Utilities first: utilities are delivered, and responsibility for that rests with the Facilities Management Department (FMD). That department is now headed by John Noonan, who is a relatively recent arrival from Brown University. In FMD there are many operating groups, and one is Utilities. Utilities is further broken into other groups: chilled water, steam, etc. All of that is produced on campus. Electricity is not produced on campus. It comes from Duke Power, and we redistribute it around campus. We maintain all the utility lines.

The number of outages we've had so far this year: three-to-four. In 1994 we were averaging about one outage a year, and outages were typically relatively short in duration. The most recent outage here was caused by an animal. The issue is that our systems are susceptible to small animals getting in. We are aware that these are significant issues, and we are looking at ways to make the openings ridiculously or impossibly small. The record over a long period of time is incredibly good: almost too good. We get lulled into complacency. I'm concerned about the system because of our run of good luck, but also because some of the places I've been have additional redundancy built into their system that we don't have here at Duke. At the University of Pennsylvania, the campus is served by two different production facilities. Duke is served by one. If that facility goes down, you're down. When I was at Yale, we had our own cogeneration plant. When a few years ago much of the northeast went out, we saw it coming, and we were able to be up when most others were not.

We have come up with a utilities master plan that takes into consideration our steam and heat needs, water and cooling needs, and electrical needs. We've done models about rates and investment in infrastructure and equipment and done a projection for over the next 20 years. We're also looking at ways to produce energy cheaply but also in a more environmentally friendly fashion. Currently, most energy produced on campus done by burning coal. It is cheap, but it's not as environmentally friendly as oil or gas. We constantly monitor the potential costs to make sure we're managing well and looking at some strategies in case of sudden changes.

John Board asks is there any way to increase the redundancy in our system?

Kemel Dawkins says I raised that issue with Duke Power, and their people said, "Why do you need this? You have no record of outages." We're going to try to keep talking to them about that.

John Board asks how would you characterize the state of the on-campus distribution network?

Kemel Dawkins says the infrastructure has kept up. We try to anticipate issues, sometimes well in advance, sometimes not as well in advance. The electrical distribution is good, so I feel relatively good about that.

John Board says one of the recent issues was in the hospital, and it was assumed that the system was hot because it was being run at or near capacity.

Kemel Dawkins says that's a local issue. As I recall, there was construction activity in the vicinity that contributed to the trip that occurred.

Robert Wolpert says reliability is an issue because we have to decide to invest in UP, which has significant costs and introduces its own failure modes, rather than just plugging into the wall.

Kemel Dawkins says what we've experienced is probably some random variation around a given norm. None of these systems are perfect. Given the hours the power is running, and you have two hours of outage over a year, that's not a lot of time. There is an industry standard for reliable power, but it doesn't assume you're 100 percent perfect 100 percent of the time; outages are built into that

Tracy Futhey says you talked about reliability and uptime and outages. A lot of us around here are concerned with telephone expectations, so one of the challenges I think we'll have is that many people now have phone service delivered through digital phones. Now it's not an issue that a phone center is still up, but that my headset won't work, and delivering a signal over a network comes into play. Do you have any idea of what level of reliability for power systems should be in place?

Kemel Dawkins says that a good question, though I'm not sure I have precise answer. When I was at Yale, for certain critical operations we had redundant phones with an additional power supply. You don't want to over-invest in those systems, because when the power is down they are useless.

Molly Tamarkin says all of us who manage IT operations have gold standards of certain amount of time to recover. Is it useful for us to know what you're building your standard around so we know what we need to do to recover?

Kemel Dawkins says typically we talk about a system standard, so we don't have a building-to-building standard. It may be worth having that discussion.

Robert Wolpert says with the DukeCard, the specific issue is pricing. Now, I understand pricing is determined by auxiliary services in order to maximize the profit to auxiliaries without recognizing the cost that creates to other parts of the university. I don't know if the cost is related to the cost of delivering the service or if it is inflated to reduce demand and having to provide these to even more places on campus.

Tracy Futhey says this is a recurring theme. We heard from Matt Drummond about this and when Tallman Trask was here the question posed to him, and he talked about a history of auxiliaries where it created a situation where there were some issues of using the DukeCard for things that were not entirely appropriate. It comes around to a theme of access.

Kemel Dawkins says I understand the underlying issue you raise. We're trying to provide more security and more tracking ability on use. The current fee structure prevents us from doing all we might do. I'm willing to look at the specific cost of providing that service. I also want to point out that Auxiliary Services as a unit and the DukeCard as unit are odd ducks in terms of how they work. These are organizations that largely produce enough revenue to offset their expenses. In most of my memory of being at Duke, that has been seen as good. The difficulty in the short term is that many things cross-subsidize other relations, so some money through the DukeCard also subsidizes dining. Some subsidies go to a variety of other places. From my perspective, we are ultimately interested in providing as much in terms of security by way of access and providing as much ability to monitor as possible.

Robert Wolpert says maybe we could have a two-tiered service since some things don't require 24-7 assistance like dorm rooms.

Matt Drummond says we're the only office that is 24-7. A lot of schools don't monitor their doors, so it's hard to say how we compare because all schools have different funding models.

Kemel Dawkins says I would guess our costs are relatively low; it's how we charge our costs that's an issue.

Kyle Johnson asks has there been a discussion about folding access issues into the identity management discussion?

Matt Drummond says when we first started talking about that, we took OIT at ATC as example. There are about 20 or so doors in that area, and we have found that it is very difficult to group people.

Rafael Rodriguez says perhaps the model should be different. Whoever has the access list should be the person responsible for that facility.

John Board says to combine two topics, in one of the recent outages the DukeCard system lost power, and people were locked out of buildings.

Matt Drummond says the DukeCard system never lost power, but when a building loses power the DukeCard reader goes into automatic lockdown.

John Board says we don't necessarily stop teaching when the power goes out.

Kemel Dawkins says it makes sense to review the policy.

### **III. IT Strategic Plan update -Tracy Futhey**

Tracy Futhey says we have the consolidated plan, and I have circulated it to the leads for various groups. Now we have version 1.1 of that consolidated plan. Mike Pickett has been busy putting it on the ITAC webpage. It will be put behind a webauth that you all will be able to get to. We will soon get the link to the webauth page that will let you get to the PDF of a page that contains background info, general goals, and specific strategies within those. The university plan continues, and the date they are talking about is the first week or so in May to start to have drafts of a consolidated university plan.

### **IV. Campus wireless upgrade this summer - Kevin Miller**

Kevin Miller says on average we're peaking around 2,200 simultaneous wireless users across the university. Three o'clock p.m. tends to be the peak every day. At midnight we still have about 750 users. The low point is around 6 a.m., when we have about 200 users. Tuesday tends to be the peak day of the week for usage.

Our wireless network continues to grow in utilization. We get numerous requests for wireless access points in buildings, and that was the primary motivation to ask for more funding for the wireless network. Throughout the academic areas of campus, most buildings have partial coverage. The Fitzpatrick Center we have fully covered.

We are looking at installing about 900 access points over the next few months, and that will require quite a bit of work including installing cable and additional infrastructure on the core network. At this point residential areas have not been added: we're trying to target academic areas for the time being.

Fuqua and the Thomas Center maintain their own infrastructure, as does the hospital; OIT doesn't provide wireless coverage in those facilities. Those groups have pretty

good coverage in those facilities. We have been working with the Health System. They are using the same technology as the university, and there is some interest in having some common facilities.

Kyle Johnson says we have one area of seamless coverage in the student health center. The Health Systems and Student Affairs got together to determine how to do that.

Kevin Miller says we're looking at improving coverage in 50-60 buildings in the next four-to-six months. The first block of planning has already begun, and the cable will be pulled in the next couple of weeks.

John Board asks do you have the labor to get 50-60 buildings up?

Kevin Miller says most of the physical labor will be contracted. We expect to have four simultaneous crews working at the peak of this.

John Board asks in a qualitative sense, how are we doing with bandwidth?

Kevin Miller says we're doing okay – there are no serious concerns. One nice thing about upgrading is that we will have much better insight on a per access point basis on utilization.

John Board asks how about DHCP infrastructure?

Kevin Miller says we did have some issue with it a few weeks ago, but we are upgrading all that infrastructure at the moment. That will resolve all those concerns.

We're on about our fourth generation of wireless access points. The most recent generation is "heavy" access points that have their own operating system and are managed individually. We are now installing lightweight access points that are completely controlled externally. With one click you can push out a change to every access point.

Robert Wolpert asks are you working with the tenants of a given building, or do you just know what is needed?

Kevin Miller says we're not working on an individual basis with tenants since we're trying to provide seamless coverage. I would submit to this group if you have particular concerns, please contact me.

George Oberlander asks how are we doing with available IP addresses?

Kevin Miller says overall we're pretty good. As things continue we will need to continue monitoring it.

## **V. Impressions so far: A&S information technology - Molly Tamarkin**

Molly Tamarkin says moving from the Nicholas School to Arts & Sciences went very smoothly. I want to thank Mike Pickett for making that possible. Getting to know everyone in A&S and OIT has been wonderful. It's good to see how eager people are to work together; right now the only hindrance is a lack of collaborative tools. Because my job is a new one, it's interesting to see how it plays out on the fly. Faculty and administrative staff are very interested in IT in A&S. They have high expectations, they have good ideas, and they are open to change.

The challenges are balancing operational needs with strategic ones; we need to develop some contingency plans; and we're facing server room challenges. I hope to get with OIT on solving those problems. Another operational challenge is how to support

DDI projects. There are issues with local staff being able to help faculty as well as finding server space for the kind of work that comes out of those projects. Strategically, there are questions about how to integrate departmental and central A&S staff. Also, how do we have a funding system for faculty computers that is fair but recognizes that there are very different needs?

John Board asks how are the DDI projects working with collaborative support with A&S and CIT?

Molly Tamarkin says we need to build into the process more interaction with local IT staff. Also, there are specific projects that need a local person aware of that project. It's something we've done in past, but we need to be more directive about it.

Lynne O'Brien says last year CIT staff got in touch with us through Hannah Arps, and we had descriptions of what people said they were going to do. We tried to provide equipment and training to the staff; I think the difficulty is that as something becomes more commonly used, the main time of need is at the beginning of a semester, and it's just another thing to take care of.

Molly Tamarkin says one issue is that it's not like local IT staff now have something they can stop supporting, so their work load is increasing. A&S did migrate a lot of their help desk services over to the OIT Help Desk, and now they are solving 70 percent of requests without referring it to local IT support. Another thing to think about is creating a DDI remedy group so there is a tiered response to those types of issues.

## **VI. Other Business**

At the next meeting in two weeks we will have the end of year send-off for students and a few members.

End time : 5:28 PM

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