Members in Attendance:
John Charles, Vice President for Information Systems and Technology
Professor Denny Freeman, Dean for Undergraduate Education
Professor Karen Gleason, Associate Provost (Co-Chair)
Professor Frans Kaashoek, Electrical Engineering and Computer Science
Anthony P. Sharon, Deputy Executive Vice President (Co-Chair)

Guests:
Professor Robert Redwine, Director of Bates Linear Accelerator Center
Mark Silis, Associate Vice President, IS&T

Approval Items
I. 9.23.14 Meeting Minutes approved.

Update Items
II. Information Technology Policy Committee (ITPC)

- Professor Redwine summarized recent discussions and outcomes related to the ITPC. There were new committees with overlapping responsibilities including a Working Group on the Review of MIT Policies for the Collection, Provision and Retention of Electronic Records; Ad Hoc Committee on Privacy of Student Records; and the Committee on Student Information Policy. It was decided to take a step back and let senior administration decide how to proceed. The recommendation was to move forward with one committee – the ITPC. This is a faculty committee with key representation and students and staff may be invited to join on specific issues.

- The Committee’s first meeting occurred on December 18. They reviewed their charge and several relevant reports including the Working Group on the Review of MIT Policies for the Collection, Provision and Retention of Electronic Records; Ad Hoc Committee on Privacy of Student Records; and Evaluating the Need for the Committee on Student Information Policy. It was decided that the ITPC would formally report to the IT Governance Committee.

- The Committee discussed a request from Israel Ruiz, Executive Vice President and Treasurer concerning a visiting professor in CSAIL. He expressed concern that MIT records information on people when they swipe their access cards when entering the building during off-hours. This data is maintained for two weeks. These policies will evolve and it doesn’t seem unreasonable for MIT to record this data but we should be clear that we are doing this and how long we keep the data. It would be helpful to have a web page with all of this information.

- The ITGC agreed that the purpose of the ITPC is to be a resource for complicated issues and to deal directly with people at MIT who deal with policy issues.

- The group chaired by Israel Ruiz, Executive Vice President and Treasurer last year put in place a number of policies related to electronic records. Committee members will educate themselves on existing policy and will gladly help evolve policy as needed but do not plan to redo the work the group. The Committee will provide a largely faculty perspective but understands that other perspectives will be important. They also expect to be a resource, as
needed, for the Learner Data Trustee (Lydia Snover) with the responsibility for governing student data generated from on-line learning initiatives. This is not expected to be a major effort.

- The ITGC agreed that the ITPC is heading in the right direction.

III. Duo Two-Factor Authentication Demo

- Mark Silis presented a demo of Duo Two-Factor Authentication. A “factor” is something used to prove identity. The first “factor” could be a password, fingerprint, or smartphone. The second “factor” could be a smartphone app, landline phone (voice call), text message, or hardware token.

- Historically, access control had been focused on passwords. MIT stood up a public key infrastructure using dual authentication that was progressive at the time. Today most passwords are probably going to get cracked at some point. CSAIL students constructively tried to crack passwords and proved it was easy to do using cloud computing resources and other tools easily available to them. We need to raise the bar and look beyond single password security.

- Boston University’s direct deposit system has an online component for employees to manage their direct deposit – staff can sign in and manage their bank account. Phishing scammers started collecting passwords at Boston University and saw the online banking applications. They were able to login with the stolen passwords to redirect paychecks to other accounts. Boston University starting getting calls to see if there were issues with payroll. As they dug into the matter they realized they had been the victims of a systemic effort. The scammers figured out the day Boston University made the deposits and changed accounts and then changed them back. Passwords have become vectors for these kinds of attacks. What Boston University realized as they looked at passwords was that they were effective for some applications but other applications may need a level of security that is slightly higher.

- Two-factor authentication is not unique. If you use Twitter, Facebook, etc., they are doing two-factor authentication through your phone. It is becoming much more prevalent. IS&T is piloting two-factor authentication and integrating with touchstone. There is a mobile app you can install on your phone that prompts you for authentication. It can also call you on the phone (landline), send text message, or use tokens.

- It is integrated with VPN, Kerberos, and remote access systems. As IS&T beings to roll out cloud services that are federated we need to provide authentication that allows for two-factor authentication. If you would like to enroll there is a portal with an easy to use wizard that takes you through the process. Duo two-factor authentication will position MIT well for the days that come when passwords will not be enough. IS&T will encourage the community to opt-in in the New Year.

IV. IPv4 and IPv6

- MIT has more IPv4 capacity than can be used at this point. There is interest from Amazon to buy our unused space. Any potential sale needs to be handled in a way that is sensitive to MIT’s culture.

- There are many reasons to go to IPv6; there is more address space there for everybody. MIT needs to work effectively in the global space and having a direction around IPv6 is important. IPv6 also has benefits in the security space – there’s a lot of plug and play, no manual tasks, and even some of the new cell phones being used internationally are on IPv6.
• There may be bigger wins associated with donating back some IPv4 addresses to get the IPv6 addresses to meet some of the international needs.
• ITGC agreed that it would be valuable to have the study group develop a high-level plan to address the disposition of IPv4 addresses along with the acquisition of IPv6 addresses. The plan could then be presented to the Executive Vice President and Treasurer and the Office of General Council for review.

IT@MIT Strategic Plan
• John Charles presented an overview of the IT@MIT Strategic Plan. Three major constellations of needs drove the development of the overall strategy: the need for increasing agility within IS&T and the DLCs; modernizing and advancing business process excellence; and enabling innovation within the community.
• Two capabilities groupings are required for achieving these goals – an Emerging Solutions set of capabilities, plus an Enabling Services set of capabilities.
• On the Emerging Solutions side, we needed to be able to work with innovation teams – the nature of this work is focused on think big, start small, fail fast, learn and iterate rapidly using agile methodologies. Once projects are ready to be deployed at scale they need to be managed through their entire life cycles – which will be accomplished by handing off ongoing maintenance and support responsibilities to the Enabling Services group. Many of the same skill sets are required in both Emerging Solutions and Enabling Services but there is a different mindset. The Planning & Administration capabilities group provides operational support across the organization.
• An assessment of IS&T’s current capabilities identified a number of areas where more foundational or basic level capabilities need to be elevated to advanced or expert levels. Plans for the required up-skilling/training of staff are being developed, and more experienced staff and consultants will be recruited to rapidly close gaps were nascent or limited capabilities currently exist.
• There is a great deal of competition for top talent and it’s not possible to compete against Amazon and Google but IS&T can target people who have “gone to school” on these types of transformations at other places. Many companies within the insurance and financial services industries have made the transition to platform-based API-centric architectures and agile processes and tool sets, so there are people out there that have the relevant experience.
• Although there is excitement around the new ways of working, the move from 7 functional areas to 3 capability groupings and from 37 teams to 14 teams is anxiety producing for staff. Key messages for staff are that everyone will have the opportunity to make the transition, there is plenty of work for everyone to do, and training will be provided to help them.
• The transition process is targeted for kick-off in mid-January, and a change management team has been put in place to help facilitate the initial structural transition.