Reed Strategic Technology Goals 2005-2009
Mid-Term Status Report
Draft for 5/1/07 release

1. Equipment replacement
   • A $1.5 million item has been included in the Centennial Campaign to permit the computing equipment replacement cycle average to be reduced to 5 years for laptop/desktop computers and 3 years for servers and lab computers.

2a. Network security
   • The Bradford Campus Manager security system has been installed to tighten security and provide automated guest access for the residence hall, Library, wireless network, and portions of the academic network. The system will be extended to the remainder of the academic network by fall 2007.
   • A Bradford implementation for the administrative network is ready for testing. If testing is successful it will be deployed by fall 2007. The Campus Events office has a pressing need for wireless access to their Event Management System (EMS) and will utilize Bradford’s security protection as soon as it becomes available on the administrative network.
   • TIS is testing role based access and the Bradford client assessment tools with an expected pilot roll out by fall 2007. We are studying the feasibility of using Bradford with role based access rules for port security on the administrative network.
   • A subnet was created to increase security for administrative servers.
   • A subnet will be completed during summer 2007 to isolate the Bon Appétit computers from the rest of the network.
   • An intrusion detection system, a honeypot system, port scanning for known vulnerabilities, and improved firewall log analysis tools have been added to improve our ability to detect intrusions and infected client systems.

2b. Network speed
   • Internet bandwidth was upgraded from 7mb to 35mb during the summer of 2005. The bandwidth was upgraded to 55mb in January 2007 and will be upgraded to 100mb in May 2007.
   • All campus switches were replaced with fast Ethernet switches with gigabit fiber uplinks in summer 2006. The main academic router was replaced with a faster Foundry layer 3 switch with considerable expansion capacity and 10gb capability.
   • The 11mb 802.11b wireless infrastructure has been upgraded to 54mb 802.11bg.
2c. Off-campus access to campus network resources

- A VPN has been added to provide off campus access to campus-based services. This is used by selected administrative users. A new Library proxy was implemented during the summer of 2006 and is heavily used.

3. Cross-platform services

- End-user Windows support for faculty and students is nearly on par with that for Macs with two exceptions: (a) we do not provide hardware support for privately-owned Windows computers, but instead provide referrals to local service providers; (b) due to licensing restrictions, we do not have media to reinstall Windows operating systems and software on privately-owned machines.
- ACS has allocated most of its Windows support to one end-user support position. This allowed us to increase the quality and technical sophistication of Windows support.
- ACS has installed Microsoft's Active Directory for authentication purposes and we plan to use it for controlling access to Portfolio, the general administrative file server.
- While we continue to use Citrix to provide cross-platform access to otherwise Windows-only administrative software, the advent of Intel-based Macs has opened up new possibilities for both academic and administrative applications.
- ACS has developed and is in the process of distributing security procedures and guidelines for both Windows and Macintosh computers.
- CUS is making wide use of the ability of new Intel Macintosh computers to run Windows applications software. Windows-on-Mac workstations are now available in the IRCS and certain departmental labs, and the technology is supported, as needed, for end users.

4. Digital asset management

- Working with the Library and Visual Resources Collection, CIS has obtained more than $600,000 in grants to procure and implement a digital asset management system. CONTENTdm was purchased in April 2006 and the creation of mechanisms for image acquisition, storage and display is underway. The current focus is on images in the Arts & Humanities, but we expect the system to be used by all academic departments eventually. A project website is located at http://web.reed.edu/digital_asset_mgmt/

5. Web support and content management

- A full-time Academic Web Specialist position was created in February 2005 to improve support for the creation and maintenance of academic web pages, applications and systems. The Cascade content management system was acquired in May 2005. Cascade has been successfully deployed for a number of web sites, particularly on the administrative side of the house. We are in the midst of learning the more sophisticated aspects of the system for publications such as the College Catalog.
6. Information access integration

- WSS deployed the IRIS portal in January 2007. IRIS unifies existing web applications under the "Gateway" umbrella – Gateway, ReedLink, Career Services, Incoming Student Forms, Department Information, Ski Cabin Reservations, and miscellaneous web surveys.
- We have had initial conversations about integrating the authentication and authorization of Gateway (IRIS) utilities and utilities currently handled by Kerberos. A Portal working group was launched in early 2007 to develop functional goals for future versions of the Portal.

7. CURRICULAR & RESEARCH SUPPORT

7a. More support for use of web resources in classes

- We have implemented the Moodle system as the cornerstone of Reed's courseware toolkit. An initial pilot of Moodle was completed in fall 2006 and a larger pilot is currently underway. Over 20% of the campus community has used Moodle already. A half fte was moved from WSS to CUS to create a part-time Instructional Technologist position whose primary responsibility is support for Moodle users.
- WSS, TIS, and CUS are collaborating on the Reed customizations for Moodle and the design and implementation of linkages between IRIS, Moodle, CONTENTdm, and other utilities.

7b. More classrooms with reliable and easy to use computer projection capabilities

- CUS has worked with A/V services and other departments to roll out more projection classrooms and better support, and works with that office to provide training and support for faculty in the use of the facilities.
- Technical changes have been made to substantially improve the reliability of classroom computers.
- CUS has implemented a procedure to respond quickly when problems do occur. Spare computers are kept for immediate delivery and a dedicated phone number is maintained for reporting in-class technical problems (answered at high priority during class hours).

7c. More assistance with image scanning, video, audio, and other multimedia

- In fall 2004 we established a half time digital media specialist position in WSS to increase support for the instructional use of digital images, audio, and video.
- WSS collaborated with CUS and the Library to provide iPods to students in music classes. Listening to assigned music selections outside of the Instructional Media Center has been popular with students.
- WSS has investigated strategies for delivering audio via iTunesU as well as locally-hosted options. Possible content includes audio clips for music study, foreign language exercises, public lectures such as visiting writers, and the public policy lecture series.
7d. Access to image libraries, specialized software, and preference settings from anywhere on Reed’s network

- Access to image libraries is being addressed via the Digital Asset Management initiative described in item 4.
- CUS is planning to release a web-based software repository in summer 2007 to replace three existing tools for making software available: Academic Software, WinTools, and Toolchest. The new repository will be available from anywhere and will be constructed so that it can be integrated into IRIS.
- We are investigating the feasibility of providing roaming preferences.

7e. More wireless access in labs

- The wireless network has been upgraded to 802.11b/g. Some lab computers are too old to take advantage of this upgrade, limiting the use of wireless in some labs. We are evaluating new technologies that will improve wireless service by allowing a denser placement of, and load sharing between, wireless access points.

7f. Technology enriched spaces for the performing arts

- TIS added wireless to the Theater and areas of the sports center where dance is rehearsed. A fiber link was installed to allow simulcast of Kaul auditorium performances in Vollum auditorium.
- A video interface that triggers audio in response to movement is being used in the spring 2007 Dance and Technology course being supported by WSS.

7g. Better off-campus access to library resources

- As mentioned in item 2, the new Library Proxy has been very successful. CUS and TIS collaborated on the design and testing of this service. We are not aware of any unmet off-campus library access needs.

7h. More access to student programmers

- We are assessing the need and practicality for more student programmers. In some cases, such as the PopBio simulation software and the proxy server mentioned in 2c, we have chosen to contract with professional programmers, rather than students.

7i. Assistance with specialized software support for their students (e.g., for statistics packages)

- CUS provides support on demand for most software packages. Gaps remain in areas where we are limited by a lack of subject expertise (e.g., statistical analysis). We are developing a close working relationship with the tutoring program in order to eliminate these gaps; more remains to be done.
- CUS staff are being trained in the highly specialized packages ArcGIS and JMP. We are also exploring the feasibility of buying support services for these tools.
7j. More collaboration among academic support units such as CIS, the Library, Audio-Visual Services, and the Quantitative Skills Center.

- CUS has created a "technology-support exchange" listserv that includes staff from the Library, A/V services, CIS, and other offices to promote better communication and collaboration on technology-related support issues.
- CUS has undertaken more extensive collaboration with the Library in areas such as support of the Foreign Language Lab, bibliographic software tools, support for thesis formatting, and technical support for e-reserves.
- ACS developed a database for the Quantitative Skills Center to track the nomination and work of its student tutors. A second generation solution is being developed by WSS to provide web access and address QSC’s additional data needs.

8. STUDENT SERVICES & STUDENT LIFE

8a. Simplified, unified capture of new student and orientation information via the web

- WSS and ACS have developed a system to allow incoming students to complete their "Getting Started" forms on the web, with reporting tools that display the data to the relevant offices (Business Office, Registrar, and Student Services). In May 2007 we will add forms for the Health Center, Peer Mentor Program, and Orientation trips. Student Services is will dispense with printed forms, except upon special request.

8b. Integrated online web tools for housing, meal plans, financial aid, campus employment, student organizations, campus events, and CSO alert.

- WSS has worked with the Business Office, HR, and Career Services to create a student employment system for on-campus and work study jobs. Job ads and student employee management forms are available via the IRIS portal.

8c. Expanded use of One-Card building and room access

- ACS has added card access to the following locations: Prexy, Sports Center, GCC (exterior and pool room), Eliot Hall (exterior and PPW), Biology (Labs), Art Building (Main Entrance/Digital Media Lab/Darkroom) and Reed Radio Station. Plans are currently underway to expand One-Card access to all the academic buildings including the science buildings. In addition we have developed programmatic solutions that allow us to assign access to students based on class enrollment. We have also developed automated processes to keep each card-reader functional if it goes off-line or otherwise loses contact with the central server due to power outages or other malfunctions. ACS is currently upgrading both the server hardware and the application software. The new software will enhance our ability to more easily configure access groups and plans to campus requirements.
8d. Wireless network access and improved printing resources in residence halls
   • Wireless access is now available in all residence halls though coverage needs to be improved in a few locations. We hope to address these areas as we move to newer wireless technologies that allow for denser placement of access points.
   • CUS has changed print management strategies, resulting in improved reliability of printing in residence halls. CUS has also collaborated with Residence life to improve student understanding of and access to computing services.

8e. Secure database & web interface for Health Center appointment and diagnosis data
   • Initial discussions have occurred with health center staff.

8f. Expanded support for communication tools such as email listservs, blogs, wikis, etc.
   • The Mailman listserv utility has been improved and a refurbished Bulletins utility was built and deployed in 2006.
   • The Moodle system is being used to meet college-wide requests for wikis, and other communication and collaboration tools. CUS is working with TIS and WSS to explore additional tools to support blogging.

8g. More convenient access to off-campus resources
   • TIS is looking into affordable and secure ways to provide residential students with increased bandwidth for recreational uses.

8h. Development of appropriate policies & strategies to promote legal P2P file sharing
   • CIS is working with the Computing Policy Committee and the Student Senate to establish workable policies and strategies to promote and support legal peer to peer (P2P) file sharing and to discourage illegal P2P activities.
   • CUS has collaborated with the Student Senate to educate students about the issues. CUS co-hosted a panel discussion and an online discussion (in Moodle) regarding copyright, and worked with Senate publish student-authored educational articles in the Quest.

9. Planning, development, and collaboration
• A number of faculty and staff teams are using Moodle as a repository for project materials, planning, and collaboration. Among them are Hum 110 program review group, the digital asset management project team, the English department, and the reactor group.

• At the request of Public Affairs, WSS implemented and hosts a project management system called Copper Project. Other members of College Relations use the system, but it has not been adopted more broadly.

• WSS helped create a website for the Dean of Faculty that contains many college policies and governance documents, especially those pertaining to faculty. WSS also worked with the Honor Council to create a new Honor Principle web site.

10. End-user support
• CUS has started making annual preventative maintenance visits to faculty and twice-annual visits to key academic support staff. Increased time spent face-to-face with these users will improve communications and help users solve minor annoyances before they become critical problems. These visits also provide an opportunity to pay special attention to backup and security concerns.

• CUS provides a great deal of one-on-one training as needed, a mode strongly desired by users and so effective that it is generally considered to be the gold standard. CUS will be working over the coming year to make sure that on-demand training is provided to everyone who needs it, and that its availability is widely known.

• In order to improve end-user support for administrative staff, ACS reallocated one of its programming positions to a full-time user support position. Though the remainder of the ACS staff still provides various levels of support, this new job configuration has enabled ACS to focus on, and more quickly address, most end-user needs, thus resulting in a higher level of user satisfaction.