Faculty Computer Committee (FCC) - 2022-2023 report

Last updated May 15, 2023

The Committee's Charge:
[Source - from the Provost's Office webpage]
The Faculty Computer Committee consists of three faculty members appointed by the Faculty Executive Committee for two-year terms and one student member elected by the student government. In addition, the Chief Information Officer (IT), the Director of Academic Technology Services (ATS), and the Director of the Library are ex officio members without vote. One of the faculty members serves as chair. The committee advises the CIO and the Director of ATS on topics related to the use of computer technology in support of research and instruction and on other IT issues affecting the academic life of the College.

The Faculty Computer Committee for 2022-2023 included Professor Nicholas Holschuh, Professor Nicholas Horton (chair), Professor Will Rosenbaum, Director of the Library Martin Garnar, ex officio, Chief Information Officer David Hamilton, ex officio, and Jaya Kannan, Director of Academic Technology Services, ex officio. Jack Cheney, Associate Provost and Associate Dean of the Faculty attends meetings in an ex officio fashion. We did not have a student member this year.

We believe that the FCC continues to provide a useful bridge between IT and faculty, that it provides an opportunity to shape how we provide these services, and that it works in partnership to enhance the digital environment for teaching, learning, and research at the college. The committee met ten times this year (see "workload" discussion below) and discussed a number of issues and topics related to our charge and a number of a broader nature.

Workday Student:
We spent considerable time discussing some of the challenges and limitations of Workday Student. To better understand these issues, in the fall we carried out an informal survey of the faculty, the results of which were shared in December, 2022. (Our response to the faculty is included as an attachment at the end of this report.)

Key findings:
1. Most aspects of the workflow are working despite the bumps and kinks. Registration has been going fairly well overall for several semesters. Glitches when they arise have been addressed using the "AskIT" support ticketing system.
2. There has been some additional functionality added this year to Workday Study, including fixes to eligibility and the ability for advisors and students to download unofficial transcripts.
3. Many issues and frustrating workflows remain which have complicated advising: these issues—largely known during the design phase—are particularly challenging for advisors with many advisees. Unfortunately, many of these are

not easily fixable without changes to the underlying system by Workday. A number of requests for such changes have been made. We believe that one productive approach would be to coordinate advisor training and encourage more cooperation between advisor oversight (in the Provost's office) and the Workday Student team. (We noted that the advising manual available on the Provost's website needs updating, https://www.amherst.edu/academiclife/provost_dean_faculty/academic-advising/advising-resources-for-faculty/advising-manual

4. The lack of systems to support our previous bespoke and unmaintainable course evaluations for non-tenured and tenured faculty remains an issue. In order to support the ADCs who administer the non-tenured course evaluations, the ATS team created multiple resources - a revised step-by-step guide, direct communications with the ADCs group, and 1:1 consultations. Some ADCs have reported that this interim measure has been helpful, though further improvements are needed.

5. It is not clear what additional functionality (e.g., rules based degree auditing) is on the horizon.

6. We continue to encourage regular communication from the Workday Student team to the faculty (coordinated with the Provost's office). Such updates would be helpful to alert faculty of changes, issues, new functionality, and best practices.

High performance computing cluster:
- The FCC has been liaising with the ad-hoc high performance computing advisory board (chaired by Amy Wagaman and Lee Spector, Nick Holschuh liaison) which was established by the NSF grant that funded the cluster. Steffen Plottner is now the official High Performance Computing administrator. More information can be found at https://hpc.amherst.edu/ (note: you must be on campus or within the VPN to access).
- So far, 12 faculty members have been onboarded and are using the cluster. In a spirit of continuous improvement, a spring 2023 survey has gone out to 12 faculty and 183 students to evaluate the usefulness of the new HPC system. We will report the results later in the summer.
- The HPC project was showcased at the "Life of the Mind" celebration in April 2023.
- To build capacity to the staffing, a second HPC User support specialist will be added to the ATS team. We are currently developing the job description for this new and unique position.

Cybersecurity and cybersecurity training:
We met with Christine Whalley to hear about approaches to improve cybersecurity on campus, noting that there have been incidents in recent years that have had an impact on our operations. There are plans to move forward with the removal of persistent admin privileges on Windows. It was noted that this might have implications for

equipment and devices with embedded computers. The FCC advised that this change in policy be done in a manner that is consultative and as minimally disruptive as possible.

Open access and data sharing:
The FCC met with Stephanie Capsuto (Library) and Susan May (IT) to discuss new initiatives that are underway in the area of data sharing and open access. In advance of the meeting, the committee read the following blog entry: "In a Historic Win for Open Access, U.S. Publicly Funded Research will be Freely and Immediately In a Historic Win for Open Access, U.S. Publicly Funded Research will be freely and immediately available for all":
https://sparcopen.org/news/2022/in-an-historic-win-for-open-access-u-s-publicly-funded-research-will-be-freely-and-immediately-available-to-all/
The Dataverse is being built out using the https://dataverse.harvard.edu/ platform. It is set up with guidelines and processes to use it in development to ensure that this is done in a sustainable and scalable way. We will return to this discussion in the fall.

Classroom tech survey:
We met with Kara McGillicuddy and Will Fournier (IT) to review the findings and implications of the Spring 2022 faculty survey about classroom technology and digital platforms. The survey provided a valuable starting point for making improvements to the classroom and academic technologies across the institution. Overall, the faculty response was positive about IT's services. The summary report from IT includes the key results and the solutions and resources that IT has developed to address some of the key issues.

IT Operating budget:
The FCC devoted several meetings to help explore options to identify cuts in the IT operating budget. David Hamilton shared that this process was extremely difficult and required identifying and specifying the principles about where to cut (e.g., ensuring we could still provide computers for everyone, could address workplace satisfaction and retention of IT staff) and identifying when possible, high dollar/lower impact choices. Many of these proposals involved changes that would have an impact on the faculty, including changes to podium support, tier 2 (older and often obsolete) computer support, and campus Dropbox licensing. [We understand that the proposal to discontinue Dropbox licenses has been withdrawn based on concerns raised by staff and faculty.]

Generative AI and large language models:
The FCC engaged with the Center for Teaching and Learning, Academic Technology Services, and Community Standards to publicize their forum on ChatGPT and to advertise the resources page on "Generative AI in the Amherst College Classroom", https://www.amherst.edu/offices/it/academic-technology-services/tlt/generative-ai, that those groups created. We see our role as serving as a sounding board for the college's efforts in support of teaching, learning, and assessment related to GenAI developments, particularly as this relates to core foundational aspects of teaching and learning.

Planned next steps include a faculty panel in Fall 2023 as a followup to the August 2023 Provost's pedagogy retreat.

Digital accessibility & Inclusive Practices with Technology: As part of a yearlong initiative, ATS coordinated several events this year in support of digital accessibility and inclusion on campus
- Fall 2022 training sessions in creating accessible digital materials
- [Keynote Talk by Dr. Cyndi Rowland,](#) , Executive Director of WebAIM (Web Accessibility in Mind) was attended by 60+ staff (Fall 2022)
- Faculty Sharing Session on "Inclusive Teaching Practices with Technology:Strategies from the Amherst Classroom", showcased the pedagogy work of [Darryl Harper](#), [Pat O'Hara](#)and [Paul Schroeder Rodriguez](#)
- Student information table on Digital Tools for Academic Productivity
- New web page curating [Universal Design for Learning & Inclusive Practices with Technology](#)
- New web article on [Multiple UDL Practices from the Music Classroom](#)
- Published [Self-Directed Learning Resources for Digital Accessibility webapge](#)
- Special project: Inclusive Hiring online course- in collaboration with Office of DEI, developed a self-paced online course for employees on how to mitigate implicit bias during the hiring process.

Review of workload:
The Faculty Computer Committee met ten times during the 2022-2023 academic year with three faculty and four administrator members. To provide a rough estimate of workload and time spent on the committee work this year, we assumed that each member of the committee spent two hours with prep work or follow-up work this year in addition to the committee meetings. In addition, we estimate that the chair, CIO, and Director of ATS devoted approximately one hour in additional prep-work per meeting. One faculty member served as liaison to the high performance computing advisory board (12 additional hours). Based on these assumption, the total time devoted to FCC work directly for the committee was estimated at approximately $4 * (10 + 2) + 3 * (10 + 10) + 12 = 48 + 60 + 12 = 120$ hours.

Appendix: Response to faculty regarding the FCC Workday Student survey:

In October, we (the Faculty Computer Committee, FCC) surveyed the faculty about experiences with Workday Student. Using your feedback, we have been working with the Workday Student team to prioritize changes and improvements for the future, to create more support options, and to identify best practices for using Workday Student. This is part of a larger effort to improve communication between the faculty and the Workday Student team.

Hard work from the Workday Student team, registrar's office, ADCs, and the faculty led to substantial improvements between orientation advising and the spring 2023 pre-registration. This resolved many issues seen in August (e.g., data errors, missing information in course descriptions, room numbers, and issues with cross-listed courses). For future registration, the Workday Student team and the registrar's office is planning to provide additional student and faculty training resources with rapid response to AskIT tickets. While not all issues can be resolved (or resolved immediately), through the "Workday in Small Schools" consortium, our staff are advocating for feature changes to the base software that have the potential to improve usability over time.

We are appreciative of your feedback and suggestions and wanted to provide a summary of (a) the feedback from the survey and (b) the responses from the Workday Student team, including a description of changes and improvements that are planned or in progress.

We provide here a list of ongoing faculty concerns. We categorized these based on issues that have been addressed by the Workday Student team (☑), those that can be and are being addressed by the Workday Student team (▢), and those that require more fundamental changes to the Workday software (•) and cannot be fixed in house:

☑ Advisees appear in the advising window with no apparent order.
> **RESPONSE:** Now, they should appear in alphabetical order.

☑ There was an issue where some major declarations' advisor designations were being prompted, sent for action and acted upon, where others were not.
> **RESPONSE:** Several department chairs worked with the Workday Student office, and the "business process" that facilitates those communications has been significantly improved.

☑ Some faculty were having difficulty getting a list of advisee email addresses.
> **RESPONSE:** It is now possible to generate a list of advisee emails by exporting your advisee list to Excel.

▢ Communication around Workday (and an acknowledgement of the challenges it has posed to faculty) has been lacking.
> **RESPONSE:** The Workday Student team is now aiming to produce a regular update (on the order of every other month), with all implementation changes cataloged here: https://www.amherst.edu/services/workday-at-amherst/updates

▢ The "Academic Progress" feature does not report complete information.
> **RESPONSE:** Currently a small pilot group of majors (Black Studies, Economics, Physics

and Astronomy) are represented in the Academic Progress feature of Workday. Using lessons-learned from that pilot group, the Workday team will begin to work with additional departments/programs on representing their major. (If you're not sure where your department stands on that list, contact Addy Free at afree@amherst.edu.)

▢ Previous "Unofficial Transcripts" were very useful and it seems difficult to replicate that information within Workday Student.
RESPONSE: The ability to generate a PDF of the unofficial transcript is expected to be available for each of your advisees no later than the first day of Spring 2023 classes and the team will also provide access to a simple report of academic history that you may end up preferring over the PDF. This avoids the filler between terms.

▢ There is concern about missing "Historic" academic records.
RESPONSE: Workday uses a concept of "historical" versus "active" when converting data from a legacy system (Colleague) to Workday. The academic records of most graduates and alumni of ~2002-2018 are planned to be migrated into Workday by the end of 2022.

▢ It is difficult to explore the curriculum in the current "Amherst Find Course Sections to Register" report.
RESPONSE: Tools that let you filter by department were disfavored by faculty in small departments, which (by Workday's design) fall at the bottom of the department list, and that was discontinued. The previous "course scheduler" was a custom application that no longer works, but the Provost's office is considering how it might provide a pdf of the traditional "course schedule" book.

• The number of clicks and lack of defaults (e.g., to select the current semester requires three clicks) have made it difficult to keep track of student registrations and quickly navigate the interface. This includes the difficulty of quickly accessing saved schedules for students requesting approval. These issues have been particularly pronounced with faculty with many advisees.

RESPONSE: Underlying this issue is Workday's lack of support for "deep linking" – if it were possible to automatically generate a clickable link to a specific saved schedule, or default to the current period, the Workday Student team could easily reduce the number of clicks to reach a targeted dataset. Without a structural change that enables deep linking, the current click paths are the best system the Workday Student team could develop. There is an alternative implementation of advising within Workday Student ("Academic Plans") which may have avoided some of the issues with saved schedules, but the faculty advisory committee and executive committee ruled that approach out based on its structural conflicts with the Amherst registration process.

• Course tags (such as "Quantitative Reasoning") only appear at the course-level, and can't be seen when browsing courses.
RESPONSE: Unfortunately, it is not possible for us to make that information visible at the section-level. The college is exploring licensing two products from Workday (Prism and Extend), which may improve our ability to configure the information displayed, but no decisions about those add-ons have been made.

• "Find Courses" leads you to a course list that contains courses not scheduled for the coming semester.
  RESPONSE: There was a request that this report be removed or renamed so that there will be less confusion – this is a default report within Workday that cannot be modified, but the project team has been asking Workday for this since December 2020. It is a common request of similar schools that we be allowed to configure this to look at specific terms' offerings or to be able to remove it.

We welcome continued feedback on Workday Student, as does the project team. For support, to ask questions or suggest improvements, you can contact the Workday team through AskIT@amherst.edu or if you prefer, you can email Addy Free, Amherst's Project Director for Workday Student.

With gratitude,

The FCC (Jack Cheney, Martin Garnar, David Hamilton (CIO), Nick Horton (chair), Nick Holschuh, Jaya Kannan, Will Rosenbaum)

Annual Report of the Faculty Computer Committee (FCC)
Academic Year 2021/22

Faculty Members:
Ashley Carter (Chair)
Nick Holschuh
Will Rosenbaum

Ex Officio Members:
David Hamilton (CIO)
Jaya Kannan (Director, ATS)
Martin Garnar (Director of the Library)

Committee Responsibilities: Appointed by the committee of six, The FCC acts to advise the CIO (David Hamilton) and the director of Academic Technology Services (Jaya Kannan) on decisions related to digital infrastructure for academic needs.

Executive Summary: This year included major hiring initiatives within IT, the first full year using Workday for student hiring and departmental accounting, the transition to Workday Student for advising and registration, an evaluation of lessons learned from remote teaching, the development of policies around data retention in Moodle, and the reception of a large National Science Foundation award to set-up new high performance computing resources on campus. Given our reliance on digital tools over the last two years, there has been high faculty engagement with IT at the college, and the FCC has been active in raising and responding to issues surrounding the computer replacement program, classroom technology, AskIT procedures and response rates, grant reporting in Workday, and registration needs in Workday Student. In addition to operational issues, the FCC has worked on strategic planning with IT, spanning topics related to cybersecurity at the college and our engagement with the Massachusetts Green High Performance Computing Center. Details of this work can be found below.

Technical Summary: In the following sections, we divide the work of the FCC by topic area. Much of this work is ongoing, but we summarize the accomplishments of the last year at the end of each section.

1. **Moodle Data Retention Policy:** As the use of Moodle by faculty at the college increased during the COVID-19 pandemic, Moodle back-up procedures became increasingly time consuming and costly. To identify a backup strategy that would not inconvenience faculty who rely on historical course material in Moodle, Asha Kinney (Senior academic technology specialist at the college) consulted with the FCC on the typical faculty use of Moodle and curricular cycles at the college, and presented data describing the number of historical Moodle pages regularly referenced by the faculty. Based on that work, we developed a Moodle data retention policy that can be found here.

2. **Classroom Technology Survey:** Academic Technology Services in partnership with the FCC deployed a survey to collect feedback from the faculty on available technology resources for teaching and learning. The goal was to ensure that the college is providing cutting edge tools to the faculty, and to collate lessons learned from digital teaching. That survey was sent to the faculty on May 9th, 2022, with the subject line "Faculty Feedback Needed: Help IT Improve Academic and Classroom Technology!"

3. **Improvements to AskIT and the IT response Rate:** Members of the faculty raised concerns about the AskIT response rate over the last two years, which we brought to IT. After many retirements over that period, IT support services (ITSS) is only down 1 FTE, and we met with Tyrell Wellington (the new director of ITSS) to discuss support for faculty, service expectations, and historical performance. Working with Tyrell, the FCC is developing a plan for enhanced transparency about closure rates for support tickets, which will be complemented by improved tracking within the AskIT system. Once data are available, ITSS intends to provide a clear service level agreement (SLA) in which expected response rates for IT issues (as a function of issue priority) are clearly articulated.

4. **Workday Platform:** Members of the faculty, through individual channels and a collected letter from the pre-tenure STEM faculty, expressed concerns about the current implementation of Workday for expenses, hiring and payroll management, and grant reporting and budget management. Through a series of meetings with the Workday team, the FCC identified strategies for workflow improvement in the system. ADCs can now file expenses and hire students on behalf of the faculty. A new grant reporting dashboard will be launching at the end of May, and orientation materials for new faculty were developed to improve their experience in using workday going forward.

5. **Workday Student:** Together with the Ad Hoc Committee on the Implementation of Workday, the FCC met with the registrar's office and the Workday Student team on three occasions to test and improve the registration process. We also worked with IT and the Workday Student team to improve faculty communication and develop a training and support program for orientation advising for the Fall 2022 semester. This includes the advancement of training roadshows, department-level meetings, the development and publication of quick reference guides, and the development of live zoom support during the first advising window in which Workday Student is used.

6. **High Performance Computing:** Both through faculty hiring and with the selection of a National Science Foundation Major Research Instrumentation award (NSF MRI), the need for high performance computing hardware and software support at the college has grown. The FCC worked with IT and the PI's on the NSF MRI (Amy Wagaman and Lee Spector) to set up a high performance computing advisory board. That advisory board consists of:

Faculty Representatives:	*IT Representatives:*
● Amy Wagaman	● Andy Anderson
● Lee Spector	● Stefan Antonowicz
● Nick Holschuh	● David Hamilton
	● Jaya Kannan

   This group oversaw the hiring process for a high performance computing technician within IT, has managed the purchasing of the computing cluster hardware, and manages our ongoing migration of hardware support to the Massachusetts Green High Performance Computing Center in Holyoke, MA. That group is investigating ways to improve communication with the faculty about high performance computing, and evaluating what its role should be after the completion of the MRI award period.

7. **Data Storage and Cloud Computing:** As the college works to enable cloud computing through services like Google Collab and Amazon's AWS platform, the FCC raised the need to establish clear policies for individual cost allocation. That work remains ongoing. But to support the data distribution and open science requirements for modern funding agencies, the college has partnered with the Harvard Dataverse to provide access for faculty to a platform capable of persistent data archiving and DOI generation.

8. **Cybersecurity at the College:** In the face of increasing cybersecurity threats to institutions of higher learning, the college has hired its first Chief Information Security Officer, Christine Whalley. She is undergoing an exhaustive evaluation of risk to the institution and developing a plan for improved risk mitigation at the college. This is in part motivated by a 400% increase in the insurance costs to the college associated with cyber security. The FCC is working with Christine to come up with a strategy that will minimize disruption to the end-user experience, and guarantee that faculty research (even when it requires complex computing environments) can continue without issue. We have reinstituted the cybersecurity training program, and are discussing how best to implement a "Least Privilege" system for device management at the college. Information about these plans will likely be communicated at the beginning of the next academic year.

9. **Faculty Engagement with the FCC:** Finally, as with all other committees at the college, we were asked to evaluate the role of the FCC within the college, and consider its necessity the functioning of the college. In our initial conversation, we concluded that the FCC may actually be *more important* than previously thought, and it continues to fill a necessary role as a bridge between the faculty, IT, and senior staff. Recent conversations of the full faculty surrounding the Workday Student transition highlight the need for a committee that regularly engages with the faculty on these issues, and provides improved communication on issues of academic technology and cybersecurity. We seek input on how to improve the efficacy of the FCC going forward, to make sure all voices are heard and minimize faculty stress that results from the changing technological landscape of the college.

We respectfully submit this report to the faculty, with the [full (informal) detail of our meetings found here](#).

AMHERST COLLEGE
Department Of Physics & Astronomy

May 7, 2019

Report of the Faculty Computer Committee (FCC)[*]

Professors Harris Daniels, Kannan Jagannathan, chair, and Ingrid Nelson; Librarian of the College Bryn Geffert, ex officio, and Chief Information Officer (CIO) David Hamilton, ex officio. In addition, others who serve on the committee ex officio, are Associate Dean of the Faculty, Professor Jack Cheney; Associate CIO for IT Services and Outreach, Luis Hernandez; and Director of Academic Technology Services (ATS), Jaya Kannan.

The quaintly named 'computer' committee has as a part of its charge, "…advis[ing] the director of IT [now, Chief Information Officer] and the director of ATS on topics related to the use of computer technology in support of research and instruction and on other IT issues affecting the academic life of the college". In the interest of keeping the report short, I will not go much beyond the headlines.

The MAC (Media Access Control) Flap Storm:
Though the committee discussed a number of issues that I mention below, the most prominent one was the network crash that brought down most IT services for a few days earlier in the semester and the immediate aftermath of that crisis. The IT department had been well aware of the aging infrastructure, and was actively planning to move to a cloud-based email system very soon.
David Hamilton has given this body a report on the valiant and successful efforts of the IT department and the administration in making that transition as smooth and robust as possible.

Cyber Security Training: We are happy to report that 52% of the faculty have gone through the online cyber security training. The committee urges colleagues who have not had time to do it during the academic year to take a little time to complete this training as early as possible in the next few weeks. Cyber security, including avoiding accidental responses to phishing, is a collective good that is important not only for us as individuals, but as a civic and community responsibility. To encourage us to complete this training, we will send a reminder to colleagues who are only now able to attend to this important task.

The BIG launch: We received an informative and engaging report on this looming behemoth of a switch in our last meeting from Kevin Weinman and David Hamilton. I won't take up more time on that issue except to repeat the plea for some patience during periods of the transition.

Other Issues: The committee discussed better ways of setting up online audits for planning course requirements and degree audits that could allow students and advisors to plan ahead a year or more. This is a complicated question not because of technology issues, but because the descriptions, availability, and suitability of courses for meeting the requirements of the majors are not always known more than a semester in advance in many departments and programs. The committee will revisit the question as needed. Practical matters like enrolling someone in moodle, and who can do that and when were discussed. The conversations on this topic will involve Jesse Barba and Eva Nowicki, in addition to Jaya Kannan on the committee.

A plea: As this year's crash showed, and as the BIG move will show, the smooth functioning of IT is so important to everything that we do, that the committee asks for active engagement of all members of the committee for help in our work. While 'AskIT' is the place to go for individual questions, if you have systemic concerns about what is in place, or suggestions about the kinds of IT support that would enhance our work, please email me or another member of the committee.

Report to the Faculty of the
Faculty Computing Committee

May 14, 2018

Kannan Jagannathan (Chair)
Harris Daniels
Yael Rice
Jack Cheney (by invitation)
Bryn Geffert (ex officio)
David Hamilton (ex officio)

The Faculty Computing Committee discussed the following topics this year:

The committee participated in the search for the redesigned position of Director of Technology for Curriculum and Research, which replaced the former Director of Academic Technology role. A candidate accepted the college's offer and will begin in June 2018.

The committee participated in the presentation of findings by Gartner Consulting, who was engaged to conduct an external review of the IT division of the college, and of the business processes which rely on the systems IT manages.The final report Gartner Consulting issued was shared with the committee, and the committee reviewed various steps IT and the administration took based on the findings. These included the reorganization of several IT departments and reporting lines and the creation of a working group tasked with considering the future of the college's Enterprise Resource Planning system (the 'ERP,' known variously as Datatel, ACdata, or Colleague), with representation from college

divisions with significant connection to the workings of these systems. This working group will begin community outreach in the fall of 2018.

The CIO responded to questions from a committee member about the prospects for putting a degree auditing solution in place, and why pursuit of it had been set aside. The committee was informed that changes to the IR and Registrar offices and personnel, the question of the future of the Student Information System (acdata/Datatel/Colleague), and challenges with how the curriculum is developed relative to the capabilities of the currently available ERP led the college to set this work aside until these circumstances had become more settled.

The committee reviewed a policy for required security training for faculty and staff which the previous FCC helped develop, shortly before the policy went into effect in April 2018.

At the Dean of the Faculty's request, the committee discussed expectations of privacy in an era of increasingly sophisticated digital forensics technologies and techniques. The CIO shared that IT is increasingly tasked with using an array of tools to assist with safety, legal, and academic honesty matters. IT is troubled by what it perceives as a slippery slope surrounding this issue, and suggested the community is not sufficiently aware of these matters, which contributed to the Dean's request. The committee ultimately concluded it did not consider itself best positioned to craft a recommendation or policy on behalf of the college, and the matter was referred back to the Dean's office.

The committee was updated on progress to replace the 'Virtual Computer Lab' system IT uses to deliver software to the community. The working group put in place in 2017 to identify a successor system is close to making a final recommendation. A number of faculty will be piloting the use of Citrix this fall, in preparation for a broader roll out in Spring 2019 if the pilot runs smoothly.

The committee received an update on IT's work to address the top risks identified in a 2017 Cybersecurity Risk Assessment. At the time of the submission of this report 6 of the 10 major risks have been addressed and 2 are on track for mitigation this summer. A subsequent risk assessment will be scheduled for winter 2018/19. IT also shared the results of a 2018 vulnerability scan, how IT has begun reporting the outcomes of these scans to the board and college leadership, and IT's plans to conduct them on a rolling basis in partnership with other colleges.

The committee had its annual review of the Five Colleges Inc, data network, the history of the relationship, and questions about the future of this approach to providing internet connectivity to the campus. It also reviewed changes that were made to the network and service agreements that will allow the partner schools to purchase bandwidth and services from other providers.

The committee was updated on the future of the delivery of cable television services to the campus. The outcome of a student survey and subsequent conversations with College Council has led to pursuit of a contract with Comcast to replace existing television delivery to campus, a project which should be complete by the time student return in the fall of 2018.

IT revisited its creation of a feedback loop for teaching spaces on campus, and reported the findings of the initial classroom survey that was used. IT put several new services in place as a result of the initial survey, including arranging for the regular cleaning and maintenance of all IT equipment, providing better information about classrooms on the college website (including much better photography), and a number of steps it took to address concerns in specific classrooms.

The committee reviewed proposed changes to the college's Acceptable Use Policy. One change was proposed by IT to address an insufficiently specific clause describing acceptable use of college network resources, which students had been found to be exploiting. Another change was requested by the college's counsel, and was intended to correct language

connected to which parties needed to be consulted in the case where a court order or other such circumstance required a review of the contents of an individual's college email correspondence. The committee agreed with both changes, but also concluded that while it should continue to be consulted in an advisory capacity, it does not agree that it should have authority over this policy, despite past precedent.

The committee was updated on the college's relationship with the Liberal Arts Consortium of Online Learning (LACOL), a group that was formed by several schools in the face of the national interest in MOOCs, edX, and similar providers. The consortium grew by another 2 schools this year, and the committee was informed about the projects Amherst faculty have engaged in which IT has helped support.

The committee discussed the future of the library catalog, and an opportunity to put a successor to the current product (Aleph) in place, which the college is pursuing in partnership with the Five Colleges Inc. Schools.

The committee reviewed the annual presentation Information Technology gave to the Committee on Priorities and Resources, and discussed some of the high level issues driving change in the IT budget. The committee also discussed the FTE requests IT was making for FY2019, and reviewed matters connected to the annual budget, including the possibility of extending the replacement cycle from 4 to 5 or 6 years for some college equipment. Ultimately this issue was again set aside for consideration during the subsequent (2020) budget cycle.

The committee considered the need to find a more broadly representative way for it to share its work with the community and to solicit more timely feedback on its work, ultimately concluding that it will pursue this in the fall.

Report to the Faculty of the Faculty Computing Committee

May 15, 2017

Michael Ching (Chair)
Adam Levine
Julia McQuade
Jack Cheney (ex officio)
Bryn Geffert (ex officio)
David Hamilton (ex officio)

The Faculty Computing Committee discussed the following topics this year:

The Committee agreed to remove hari stephen kumar at his request, given his change in role and increased responsibilities. The committee also agreed to remove Bridget Dahill because of her pending change in role.

The committee reviewed the presentation IT gave to the CPR and discussed some of the high level issues driving change in the IT budget. Generalizing, IT believes that increasingly it will rely on SaaS (Software as a Service, or 'cloud') solutions, which will drive up operating costs but reduce capital investment requirements.

The committee was made aware that IT will pursue migration of campus email services to a cloud solution, beginning with students, possibly as early as Fall of 2017. This will allow for much better control over spam and phishing incidents and reduce the overall costs of providing this resource to campus, while bringing some much needed improvements to the user experience. The most likely vendors are Microsoft and Google, and a working group will be established to review the marketplace and make a recommendation. Faculty participation in that working group will begin in the Fall of 2017.

The committee reviewed changes to the Director of Academic Technology Services portfolio of responsibilities, the strategy that informed these changes, and the new job description that will apply to the position. They also reviewed new IT search procedures and weighed in on the search process and which faculty to involve. That search began in May of 2017 and aims to place someone in the position by Fall of 2017.

The committee similarly reviewed the Director of IT Infrastructure role, which was filled when Brian Holley was appointed in March of 2017 after a national search.

The committee discussed the increased number of cybersecurity incidents, particularly phishing attacks. They reviewed a draft policy for required security training for faculty and staff, and made recommendations for how to encourage faculty participation. This policy will be in place in the Fall 2017 semester, and incorporates the FCC's feedback.

The committee again reviewed the campus approach to providing virtualized access to applications, the reasons the college has approached delivering applications to faculty, staff and students this way, and the challenges with respect to the current tools ('Virtual Computer Lab,' or 'VCL') and plans for the future. IT has established a working group which includes participants from several 5C campuses. IT will invite faculty participation in this working group in the fall of 2017 once some basic groundwork has been completed. The objective of the working group is to identify successor/s to the existing VCL tool.

The committee discussed the college's Enterprise Risk Management exercise, how it is connected to a Cybersecurity Risk Assessment IT engaged a firm to conduct, and reviewed the top 10 risks that were identified in the cybersecurity assessment. Plans for mitigation of those risks were shared. At the time of the submission of this report 3 of the 10 have been addressed and IT is on track to address several more in the Spring and Summer of 2017.

The committee discussed the Five Colleges Inc, network, the history of the relationship, and questions about the future of this approach to providing internet connectivity to the campus.

The committee discussed the possibility of developing a 'Makerspace' on the campus, two initiatives pursuing this, and possible locations for such a resource.

The committee discussed the future of the delivery of cable television services to the campus, the history of student requests via College Council to end the delivery of these services, and the potential impact on teaching and learning and other campus activities if the existing arrangements are changed.

The committee discussed opportunities to enhance IT engagement and communications with faculty, and concluded that a return to visits to department meetings on a periodic basis seemed the best option, with the Student Information System challenges and more generally IT's top 10 issues as entrees to the conversation being the best way to proceed. IT agreed to take this up with the Dean of the Faculty.

The committee discussed challenges with the management of the wireless network in the existing and new science buildings, where in-classroom use of network services can interfere with research in lab spaces.

The committee discussed the possibility of lengthening the existing 4-year computer replacement cycle. They reviewed data from CLAC (the Consortium of Liberal Arts Colleges) showing the number of schools that have moved to 5 and even 6 year replacement cycles. IT

held off on changing this for this budget cycle and will return to this question for the FY19 budget.

The committee discussed the future of the telephone system on campus. The existing infrastructure is aging and is expensive to replace, in a time when the approach to delivering communication services is changing. Additionally, it is increasingly the case that employees are using their personal cell phones and rarely (and in some cases, particularly for visiting faculty, never) using the telephones issued to them by the college. IT is studying alternatives, including testing with some campus offices, and will invite faculty participation in these tests, likely next academic year.

The committee discussed opportunities to improve teaching spaces, reviewed a draft plan from IT, and made recommendations that included support for the creation of a feedback loop for faculty and the classroom spaces, improvements to the in-classroom documentation, and improvements to the classroom web pages, including the use of 360 photos for all teaching spaces. IT will pursue these and additional improvements in the summer of 2017, and report the findings of the initial classroom survey to the committee in the fall of 2017.

The committee was updated on the college's relationship with the Liberal Arts Consortium of Online Learning (LACOL), a group that was formed by several schools in the face of the national interest in MOOCs, EdX, and similar providers. LACOL has grown its membership by one school this year, and Amherst is participating in two projects with the consortium. One is an effort to make upper level math courses available to students from member institutions for credit, with one institution furnishing the faculty and resources needed to deliver the course online. David Cox from Amherst is participating, and IT is furnishing resources to assist. The second initiative is making training materials used in mathematics available to Amherst students from a repository of materials used successfully at other schools. Amherst has committed staff and technical resources to this project.

The committee was made aware of the use of Virtual Reality in teaching and in several research projects, and of the modest investments IT was making in support of this activity.

The committee reviewed the Academic Technology Services reorganization which took place over the summer of 2016.

The committee reviewed computer retention policy and practices at the college, compared them with other institutions, and ultimately agreed with a recommendation from IT and the Dean of the Faculty's office to reduce the contexts that allowed a departing faculty member to retain the equipment the college issued to them upon their hire.

The committee discussed the Enterprise Resource Planning (ERP - 'AcData' is the public face of these tools) marketplace, the potential implications of changes to this marketplace on the Student Information System (SIS – 'ACData' is again our internal name for this), the timelines any such changes might play out on, and risks associated with choices the college could make

with respect to these issues. IT shared its intent to pursue a consulting engagement designed to help the college work through these issues, which will connect to the outside assessment of the Human Resources office by Sibson Consulting. The committee reviewed a request for proposal that was then issued, the responses to that proposal, and the scope of work that was agreed upon in the successful proposal. The contract was awarded to Gartner, an international leader in the Information Technology consulting field, and the engagement began in May of 2017. Its findings will be shared with the FCC in the Fall of 2017.

The committee was updated on the uptake of cloud storage tools at the college, particularly the Dropbox file sync and share solution rolled out at the beginning of the academic year. Adoption has been in line with expectations, with more than half the community now using the tool. IT shared that it plans to expand marketing and outreach, encouraging the movement of most files to this solution because of the many improvements this approach to file storage brings.

Report to the Faculty of the
Faculty Computing Committee

May 13, 2016

Buffy Aries (Chair)
Michael Ching
Adam Levine
Jack Cheney (ex officio)
Bridget Dahill (ex officio)
Bryn Geffert (ex officio)
David Hamilton (ex officio)
hari stephen kumar (ex officio)

The Faculty Computing Committee discussed the following topics this year:

The future of software distribution at the college. The use of software in teaching is increasing both in terms of the disciplines relying on it and the number of applications that are in use. Lack of adequate access to appropriately configured computing labs, particularly during class time, has constrained some departments' opportunities to teach some courses in any given semester. Meanwhile the financial challenges of finding space for and then purchasing and maintaining additional labs is daunting. We've also arrived at a point where almost all students arrive at the college with a laptop and smartphone. In the face of these and related issues IT turned to the use of software virtualization using a system called VCL some years ago. IT began relying on VCL to deploy required software to student furnished computers. While this has worked well in some disciplines, there are support issues and issues related to fairness of access to resources. Some student furnished equipment is more capable than others, and some students can afford to simply buy the software required in the course, while

for others this is a burden. This has led to unequal learning experiences for the students. Additionally, VCL, a tool originated at UNC Chapel Hill, is facing the prospect of reduced support or even the winding down of the project. As a result IT formed a working group tasked with making a recommendation as to how better to assure fair access to necessary software across all disciplines going forward. The working group will report on its findings this summer and the FCC will take up the findings next academic year.

Met with Molly Mead and with hari stephen kumar to discuss the work of the Teaching and Learning Center working group.

Discussed IT's curricular support model and considered changes proposed by the CIO that were arrived at in the light of the college's strategic plan, the creation of a Teaching and Learning Center, and the curricular support model envisioned as a result of these initiatives. Ultimately the committee agreed with the proposed changes, which will be announced and come into effect this summer.

Discussed IT's support model more broadly, and considered the changes the new CIO was making to both process and culture in IT. These changes touched on several areas:

Adjusting the funding model for labs and other non-individual technology resources. The college had not had a rigorous process for maintaining a replacement schedule for an array of IT equipment. This frequently left Department Chairs or individual faculty casting about for funding sources as their equipment aged out of usefulness. $100's of thousands of equipment fell into this state. After conducting an audit, IT placed all of this equipment into the replacement cycle, and via conversation with the Dean and several other college offices, adjusted processes such that equipment purchased using startup funding, facility construction or refurbishment, or specific departmental or Dean's office funding will always be placed in the replacement cycle going forward. This had a negative impact on the budget, but this was mitigated somewhat by savings which were identified in other areas of the IT budget.

Pivoting IT to a service culture. New IT leadership has tasked the IT staff with recognizing that they are a service organization on campus, and need to adjust their practices in many areas as a result.

Considered issues related to IT system modernization. The committee was made aware of the shifting business landscape, where the majority of firms are moving to 'Cloud' only software solutions and away from the on premise solutions the IT staff has chiefly licensed and maintained over the last several decades. Additionally, cloud solutions with specialization in specific aspects of a business process, be it expense reporting or the Admission process or managing payroll operations, are increasingly appealing to campus offices. These changes in the landscape are challenging to IT, and to the existing vendors the college has been relying on, where at present the majority of business activity is mediated through a monolithic application known as the ERP (Enterprise Resource Planning). The college's ERP is from Ellucian, but is referred to as 'ACDATA' on our campus. Elements of ACDATA's existing services are being partially or wholly ceded to other tools, such as Slate for Admission. The question of what path should be taken with the Student Information System, which touches on grading, advising, transcripts, course scheduling and a wide swath of other processes which directly impact the faculty, needs to be assessed. There are very difficult issues to resolve, including budget issues, where the impact of change will very likely reach into the millions, the question of priorities budget and otherwise, the question as to timing, where we confront an unsettled marketplace with new challengers unseating decades-old market leaders, and a great many related issues. The community itself is divided over this issue, with some faculty desirous of change and others concerned that change for change's sake, with unclear outcomes and a history of complex IT projects not consistently delivering on expectations, as something to be avoided. As a first step, IT has issued an RFP, and will engage with a consulting firm to help the college assess its present circumstances, where the likely opportunities are, and what organizational, budget, professional development, staffing, and other changes might be undertaken. The CIO will share the findings of the consulting engagement with the FCC next academic year and return to this topic.

Discussed a 5 College grant that provides 2 years of a shared accessibility coordinator position, and the tasks that position will undertake. These include serving on the college's Accessibility Committee, serving on the IT Accessibility Committee, performing an audit of IT systems and making recommendations for mitigation steps for systems with accessibility issues, and crafting IT and college policy in consultation with the relevant stakeholders to address IT and college

accessibility issues.

At the request of the Dean, considered whether the use of drones should be banned on campus. The committee concluded the use of drones should not be banned, but that the informal process of consulting with the college's attorney's before permitting the use of drones in any particular context should be codified, which was done.

Discussed the college's continued commitment to the Liberal Arts Consortium of Online Learning (LACOL), a group that was formed by several schools in the face of the national interest in MOOC's, edX, and similar providers. The original objective was to arrive at a model for online learning tools better suited to small liberal arts colleges. In 2015 LACOL hired a full time Director and adapted their strategy in the face of changes in the marketplace and in the expectations and interests of the participating schools. LACOL is now working on enhanced programming and knowledge sharing, including a schedule of conferences and the formation of working groups looking at more specific needs for software in teaching.

Discussed the licensing of the Dropbox file storage solution by the college, in the light of the heavy use of the tool particularly by faculty, who were expending college, research, and personal funds because it provided a superior file storage and sharing experience to the tools the college was furnishing. Ultimately the college did license Dropbox, and has been testing it in the Spring semester in preparation for a full rollout beginning this summer.