Academic Technology (AT), a directorate within Tufts Computing and Communications Services (TCCS) is a university-wide resource that provides guidance and professional advice on using instructional technology in support of teaching and research initiatives. Through on-site consultations, AT’s three groups — Curricular Technologies, Faculty Development and Support, and Research and Scientific Computing — work with the schools and faculty on how to integrate technology to further their educational and research objectives.

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The AT Help Desk provides faculty with individual help on questions related to the use of instructional technology.

ATHelp: 617-627-2451 or athelp@tufts.edu

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What is a Digital Library?

By Pauline Stieff

The purpose of a digital library is to provide access to digital content in a variety of formats. Content is generally organized into collections and can be searched by either full text or metadata. At Tufts, this work is integrated into a broader initiative to build an institutional repository for long-term storage and management of digital content of enduring value. This repository together with the digital library makes it easier to discover and retrieve data and to store and manage it for the long term.

The Tufts Digital Library (TDL) is a collaborative effort between the Digital Collections and Archives (DCA) and Academic Technology (AT). The TDL is one part of a larger digital repository system being developed at Tufts and managed by the DCA.

The TDL supports the teaching and research mission of the university by creating access to a growing collection of digital content produced and developed at Tufts. The TDL user interface provides innovative metadata and full-text searching tools to discover and view this content.

Tufts University’s Digital Collections and Archives is the steward of the University’s permanently valuable records and collections created in any format, ensuring their permanent preservation and accessibility. The DCA supports the University-wide Records Management Program, the University Archives and Manuscript Collections, and the Tufts Digital Library.

Many grants now require recipients to make information publicly available. This means that faculty and staff grant recipients would need to archive and manage potentially large amounts of information for the foreseeable future and beyond.

According to Rob Chavez, DCA’s Technology Manager, there were two aspects to the creation of the DCA. Building upon models created by other institutions, like the University of Virginia and using the Fedora repository architecture, Tufts has created the plumbing or structure of the DCA. This repository is the foundation upon which other applications can be built. Visual Understanding Environment (VUE) is one of these applications. VUE is a concept mapping tool which is used to manage long-term digital library information. Also, VUE allows others to develop new tools to extract, copy and utilize the digital library data.

What makes the TDL special is its focus on digital content created by and for the Tufts community. With collections that support the teaching and research mission of the university, the TDL meets a vital need for faculty, students, and administrators.

Content currently available includes historical photographs of Tufts and Boston, texts on the history of London, Boston city directories, musical scores, select graduate theses, and student publications such as the Tufts Daily. Plans for future additions include oral histories, faculty publications, and collections on the tobacco industry and the Mystic Watershed.

The first digital library at Tufts was the Perseus Collection. One of the early projects was Edward C. Bolles Collection, A Digital Archive on the History and Topography of London which was funded by a 2001 grant from the Institute of Museum and Library Services and the Berger Family Technology Transfer Endowment. (See the related article in this issue about these and other digital collections at Tufts.)

Use the Tufts Digital Library to explore a wide range of ideas and topics in a growing repository of digital content. Faculty and staff who are interested in storing information in the digital library for long-term preservation or public access are encouraged to contact the DCA at Tufts as early as possible. To reach the DCA, visit http://dca.tufts.edu/, send an email to archives@tufts.edu or call 7-3737.

Pauline Stieff, Grants Specialist in Academic Technology, is a writer with extensive development experience in the non-profit sector.
Technology Assistance at Tufts (Part II)

More Answers to Frequently Asked Questions about Tufts’ Technology Resources

Compiled by Rebecca Sholes

General Information
http://inside.tufts.edu/support/

Technology and Research

My research projects are using a lot of data storage, and management of it has grown beyond what I can deal with on my desktop computer or departmental server. What options are available at Tufts to improve the management burden and increase my storage options?

In collaboration with School based IT support groups, TCCS is in the process of extending its data storage infrastructure to increase the amount of networked-attached storage available to Tufts faculty. Over the past year, significant enhancements have been made to the University's storage infrastructure to better accommodate data storage needs related to research and teaching. Depending upon the scope and nature of your data storage requirements, the current TCCS solution may be appropriate for your academic projects. Storage options include backups and some just provide large temporary storage. To further explore the benefits of networked data storage at Tufts, please contact your School's Information Technology representatives to schedule a needs analysis interview.

What high performance computing options are available at Tufts for scientific computing and bioinformatics?

TCCS-Academic Technology supports a Beowulf style Linux-based cluster computer designed to support popular commercial and open source scientific software. In addition, a server dedicated to support popular bioinformatics tools such as GCG, Seqweb, Seqlab, and BioPerl is available. Questions may be sent to cluster01-support@tufts.edu or for further information check: http://www.tufts.edu/tccs/r-clustermain.html

What potential advantages are there to using Tufts research Linux compute cluster?

The primary advantage is one of scaling either the scope of a computation or increasing the workflow. Cluster hardware and some software resources allow for scaling the size or scope of a problem. For example, if your problem takes too long on a fast workstation to complete, or if you have too many tasks then the cluster may be a suitable solution.

Where can I get information and help concerning research computing, statistical procedures, software packages, research data management and visualization options?

TCCS-Academic Technology provides support in these areas. For further information, contact Durwood Marshall at durwood.marshall@tufts.edu or x72180.

What research data subscription services are available at Tufts?

TCCS-Academic Technology maintains a membership with University of Michigan’s Inter-University Consortium for Political and Social Research (ICPSR). ICPSR maintains and provides access to a vast archive of social science data for research and instruction, and offers training in quantitative methods to facilitate effective data use. Please refer to the ICPSR website for details: http://www.icpsr.umich.edu/

What is a Geographic Information System (GIS)?

A GIS is a set of software, hardware, data, and methods that allow users to enter, store, display, transform, overlay and analyze digital, spatial data. The suite of tools offered by a GIS enables you to incorporate the importance of location into the way you visualize and analyze your research data.

How can I learn more about how GIS can help me with my teaching and research?

Academic Technology has two staff members who can assist you with this: Denise Castronovo, AT’s GIS Specialist, and Yelena Ogneva-Himmelberger, Ph.D., who holds a joint appointment as a GIS Lecturer for UEPF/Environmental Studies and as a GIS Research and Teaching Consultant with Academic Technology. You can contact them at:

Denise Castronovo
Email: denise.castronovo@tufts.edu
Phone: x74235

Yelena Ogneva-Himmelberger
Email: yelena.ogneva@tufts.edu
Phone: x73394

What resources are available for my students to learn GIS?

Yelena Ogneva-Himmelberger teaches two courses in GIS:

- Introductory GIS during the fall semester and Advanced GIS in the spring semester. John Durant, Ph.D. (CEE), offers an Introductory GIS course in the fall semester as well. In addition, Academic Technology offers software training workshops using ESRI’s GIS package. There are also on-line tutorials available from ESRI that Academic Technology can sign students and faculty up for so they can work at their own pace.

How can I obtain copies of GIS software for my research?

Our license agreement with ESRI enables faculty and staff to place ESRI’s ArcGIS software onto their office and home computers. Our license does not allow for installation on student's computers, however. ESRI offers student discounts for student software purchases. Copies of ArcGIS software can be obtained from Denise Castronovo in Academic Technology.

Teaching, Learning, & Technology Grants

Are there any grants for faculty who would like to incorporate technology into their teaching?

Under A Partnership in Technology (APT) Grants Program, grant recipients are partnered with a team of AT staff members who provide assistance with project design, management and development. Each grantee will receive 600 hours of AT staff time over the grant year. The intent of the program is to support projects with a wide curriculum impact serving a large portion of Tufts’ teaching and learning community. For more detailed information go to: http://at.tccs.tufts.edu/ or see the article on the last page of this newsletter.

The Berger Family Technology Transfer Program Grants Program: This program is a technology partnership between librarians and faculty. For more information on this program, go to: www.library.tufts.edu/tisch/Berger/bergerhome.html or contact Jo-Ann Michalak, Director, Tisch Library at jo-ann.michalak@tufts.edu

(continued on back page)
Digital Libraries at Tufts and Beyond
Compiled by Pauline Stieff

Frédéric Louis Ritter Music Collection
http://www.library.tufts.edu/tisch/berger/Ritter/
The Ritter Collection consists of approximately 2500 items and was bestowed upon Tufts College in 1901 by trustee Albert Metcalf to support the development of the Department of Music. The Frédéric Louis Ritter Collection is the single largest named special collection at Tufts as well as an overview of music history, containing works from the 16th to the 19th centuries on all areas of musical interest—history, biography, theory, composition, and performance. Ritter collected contemporary and important historical scores, books, and periodicals throughout his entire life as a professional musician, composer, and author, but they became his most important resource when he was appointed Professor of Music and subsequently the Director of the School of Music at Vassar College in 1867, where he served until his death in 1891. Michael Rogan, Music Librarian, was the project leader responsible for digitizing this collection.

Latino Cultural Heritage Project
http://dca.tufts.edu/features/urban/
Professor Deborah Pacini coordinated a joint effort between Tufts undergraduates and Latino high school students from Cambridge. Anthropology 183, Urban Borderlands, documents the arrival and integration of the Latino community in contemporary U.S. cities. Through interviews, recorded oral histories and field research, students develop a history of the Latino community of Cambridge, Massachusetts. Research topics are determined by the class and include subjects such as the history and trajectory of the various Latino groups’ arrival in Cambridge, their settlement patterns and primary economic activities; the role of the church, sports, culture and the media; and the relationships and interactions of the various Latino groups with Cambridge’s existing ethnic communities. The course is offered each spring and new material is added to the collection at the completion of each semester.

Mystic River Watershed Association (MyRWA) Records
The Mystic River Watershed Association was founded in 1970 to protect, restore and conserve Mystic-area waters. In the 1990s, the Association’s charter was changed to include local groups as well as individual members.

The MyRWA records cover a wide range of material of interest to Watershed residents, researchers, historians, and others. They cover topics directly related to the watershed such as runoff and eutrophication, as well as topics of more general relevance, such as traffic and bird watching. One particularly notable feature of the collection is that it contains reports, correspondence, articles, brochures, legal documents and maps created not only by the MyRWA but also by related organizations, such as the Environmental Protection Agency and the Joint Regional Transit Committee.

In 2001, the MyRWA, entered into an agreement with Tufts (via former UEP Professor Molly Anderson) to house its records at DCA within Tufts and make them available to researchers. The MyRWA and Tufts are actively involved in the Mystic Watershed Collaborative, whose goal is to develop greater awareness and understanding of important environmental problems in our bioregion that affect human health and quality of life.

Perseus Project
www.perseus.tufts.edu/
Led by Classics professor Gregory Crane, the Perseus Project is an evolving digital library of resources for the study of the humanities. Collaborators initially formed the project to construct a large, heterogeneous collection of materials, textual and visual, on the Archaic and Classical Greek world. Planning for Perseus began in 1985 and was formally established in July, 1987. The project has expanded into other areas of the humanities, adding tools for more languages, a variety of collections, and new types of materials which include literary and historical collections ranging from the English Renaissance to the American Civil War. Collaboration with the DCA led to the Bolles Collection on London.

The Tufts University Sciences Knowledgebase (TUSK)
http://tusk.tufts.edu/home/?108144507
TUSK is a dynamic multimedia knowledge management system, which supports faculty and students in teaching and learning. TUSK provides a portal to an integrated body of knowledge and tools to personally organize the vast array of health information through its related applications. Begun in 1995 and led by Director Susan Albright, it serves all Tufts health sciences schools and programs including the Medical, Dental and Veterinary Schools.

TUSK contains over 150,000 pieces of content. Its features include: schedule display, with blocks linked to relevant content; on-line quizzes and evaluations; a comprehensive content management system allowing content/metadata upload and course management tools and the ability to reuse existing content in new contexts; indexing using the NLM's Unified Medical Language System, and XML marked up text displaying the semantic meaning of the content (for example, there are tags to denote keywords, nuggets, topic sentences and the like.) New tools under construction include a case-based tool for teaching and learning including a faculty authoring and student interface tools, and tools integrating external content into our system in order to be seamlessly viewed within the system. Tools to link content via keywords and learning objectives will help both students and curriculum planners to understand the linkages between content.

Fedora
www.fedora.info
Fedora is the repository architecture on which the Tufts Digital Library and repository are based. This site contains information about the Fedora system and its uses.

Digital Library Federation (DLF)
www.diglib.org/
DLF is an international association of libraries and allied institutions. Its mission is to enable new research and scholarship of its members, students, scholars, lifelong learners, and the general public by developing an international network of digital libraries. DLF relies on collaboration, the expertise of its members, and a nimble, flexible, organizational structure to fulfill its mission. Notable member collections include those of the University of Virginia (www.lib.virginia.edu), California Digital Library (www.cdlib.org), the University of Michigan (www.lib.umich.edu/lit/) and the Library of Congress (http://memory.loc.gov/ammem/dli2/html/lendlp.html).
The Innovations in Education Intramural Grant Program at the Medical School is designed to promote and support teaching innovations developed by our faculty that will enhance the core educational programs and overall mission of Tufts University School of Medicine (TUSM), including the Sackler School of Graduate Biomedical Sciences. For more information, go to http://medicine.tufts.edu/IG/index.html or contact the Office of Educational Affairs, Tufts University School of Medicine at med-innovations@tufts.edu or x62191.

Desktop Support

How can I get help putting new software on my computer?
You should contact the Front Line Support Provider (FSP) for your department or school to get help with installing new software on your computer. Use the FSP Lookup database, http://training.tccs.tufts.edu:8080/, to find the name and contact information for the FSP assigned to your department. The IT Support Center, at ext. 73376, can also direct you to the appropriate person.

E-Mail

Who do I contact to get more “space” in my email account?
To get more space for your email account, contact the FSP for your department or school. Your FSP will then meet with you to determine whether or not your request for additional space is based on real need or can be resolved through better management of your existing email account.

I’m going out-of-town to a conference. How can I put a message on my email?
Information is available on the TCCS website on how to put a message on your email and use other email tools. Go to the following webpage for step by step instructions: http://www.tufts.edu/tccs/s-trumpuser1.html

Rebecca Sholes is the Faculty Development Coordinator in Academic Technology and a graduate of the Fletcher School of Law and Diplomacy.

2005 APT Grant Program
Seeking Applications

The 2005 A Partnership in Technology (APT) Faculty Grants Program is seeking letters of intent. This internal program provides 600 hours of Academic Technology staff time for faculty projects which are experimenting with the use of instructional technology for teaching, learning and research. The program is designed to leverage Tufts’ technology resources to create a partnership between faculty and Academic Technology staff.

Up to four (4) grants per cycle will be chosen in two program areas:

1. Educational Technology Development: Applicants will submit letters of intent/proposals for new technology projects or initiatives for which there are no existing supporting technologies at Tufts. This can include new projects which seek to incorporate existing software and tailor it to the needs of teaching, learning and research resulting in new software applications.

2. Technology Integration/Curricula Support: Applicants will submit letters of intent/proposals for projects which require additional technology support to integrate existing software into their teaching/research project. Projects with the potential for wider applicability for impact across disciplines/schools will be given priority.

Grant recipients will be chosen from the pool of full proposals. The funding cycle for the grant program is 12 months. Grant support will begin on July 1, 2005 or October 1, 2005 and end June 30, 2006 or September 30, 2006. Each grantee will be assigned a team from AT who will work with them throughout the funding cycle. The deadline for letters of intent has been extended to March 1, 2005; the deadline for full proposals remains at April 15, 2005. Further program information and the RFP is available on the AT web site. Contact Pauline Stieff at pauline.stieff@tufts.edu or 7-3369 with questions or to apply.

Calendar

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