

# is&t

News about information services and technology throughout MIT

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## StarBiochem: A Role Model for Teaching the Sciences

• Lourdes Alemán and Robyn Fizz

In the past, biology was often thought of as a static discipline, with students memorizing long lists of facts. While biology never really stood still, today the field is changing rapidly. Students need dynamic new ways to learn the basics.

Professor Graham Walker teaches an introductory biology course at MIT that includes a section on the molecular structure of proteins. He knew that his students would learn more about proteins by playing with three-dimensional models than by poring over textbooks. If the students could manipulate the elements of a molecule and see how the protein's structure changed, they could gain insights, firsthand, that built on what they'd learned in class.

Walker was familiar with software that displayed 3-D models of protein molecules, but these packages weren't optimal for students. Their interfaces were too complicated and they didn't show the structure of proteins in the step-by-step progression he taught in class. The 3-D viewer Walker had in mind would have an intuitive interface that showed the build-up of protein structures and encouraged the students to explore different scenarios.

In 2004, Walker connected with Chuck Shubert, who at the time worked for IS&T as a software developer in the Academic Computing group. Shubert was excited at the prospect of creating software that would deliver on the requests of a seasoned faculty member. With initial funding from IS&T, he joined forces in 2005 with another IS&T developer, Ivica Ceraj.

### TEALsim

Shubert and Ceraj proposed building the 3-D viewer using the Technology Enhanced Active Learning Simulation Environment (TEALsim; [icampus.mit.edu/teal/content/?TEALsim](http://icampus.mit.edu/teal/content/?TEALsim)). This framework was originally developed by Professor John Belcher to help undergraduates learn physics concepts through on-screen visualizations.

TEALsim, which runs simulations as either Java applications or applets, is platform independent. This means it can operate on virtually any computer a student might use, in the classroom or outside of it.

While TEALsim hadn't been developed for biology, Shubert and Ceraj liked its open framework and were optimistic about adapting it for protein structure simulations.

### Form Follows Function

With TEALsim lined up, Shubert and Ceraj conferred with Walker and postdoctoral associate Melissa Kosinski-Collins about the functionality of a student-friendly 3-D viewer. The first requirement was to convert data files from the Protein Data Bank

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## StarBiochem

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into 3-D renderings that were color-coded to indicate different elements. This database includes over 54,000 proteins.

The second key factor was the design of the user interface: the goal was to let students highlight or hide protein components and rotate the proteins in space in order to see them from all angles. Through these manipulations, students could observe how molecular changes affect protein structure.

### A Star is Born

Shubert and Ceraj created a prototype using TEALsim and a host of protocols, standards, queries, and plug-ins. Then came the test. MIT students tried the software in IS&T's Usability Lab (see page 6). The developers got immediate (and positive) feedback on how students interacted with the 3-D viewer.

Sensing the software's potential, Shubert and Ceraj decided to brand what they envisioned as a series of releases that would bring research tools to teaching and learning. Software Tools for Academics and Researchers (STAR) was born, along with its first offspring, the 3-D protein viewer they named StarBiochem.

With the insights gained from StarBiochem, the students are making mutated crystallin protein to see if this mutated structure forms precipitates in a test tube.

As Kosinski-Collins states, "We're giving students problems that haven't yet been solved, and whose outcomes could have real applications to treating human diseases. This lets students learn how science is really done — by doing it themselves!"

### Popular and Then Some

StarBiochem has been popular far beyond the developers' expectations. In addition to its introduction in Walker's class, StarBiochem has been used in high school biology classes and by graduate students in the lab. Its most recent appearance has been in an introductory biology lab course at Brandeis University, where Kosinski-Collins is now a professor.

Her students are using StarBiochem to learn about the structure of a protein called crystallin, which has been implicated in cataract formation. The software allows them to design mutations in the crystallin gene that they think could disrupt its protein structure and lead to cataract formation.

### How Suite It Is

Shubert and Ceraj transitioned to MIT's Office of Educational Innovation and Technology (OEIT) when it was created in 2007, and their team has grown to six members. Funding has come from multiple sources, including OEIT, IS&T, and grants from the Davis Educational Foundation and the Howard Hughes Medical Institute.

The STAR software suite is going strong, proving that open standards and thoughtful interface design translate well to many disciplines. There are now six Star programs, two of which are in beta.

To learn more about StarBiochem and its siblings, go to [web.mit.edu/star](http://web.mit.edu/star). §

## Get into IT During IAP

IS&T is sponsoring assorted events about information technology during IAP 2009. These range from Quick Start classes and hands-on courses to sessions on topics like handling sensitive data, WIN.MIT.EDU container administration, and J, the thinking programmers' language.

Here are a few sample selections.

### An Introduction to MIT Touchstone

Jan 6, 2:00–3:00pm, W20-491

Come to this session to find out about MIT Touchstone, IS&T's newest system for web authentication. The presentation will cover the goals and purpose of the system, its technology components, and its road map.

### IT Overview and Data Center Tour

Jan 16, 1:00–3:00pm, W92-Back Bay

This session will provide an overview of Windows Server Hosting and include a tour of the W91 and W92 Data Centers.

### TSM: Overview of the IS&T Backup Service

Jan 23, 1:00–3:00pm, 1-150

Learn about the benefits of the Tivoli Storage Manager (TSM) backup service. TSM lets you back up files from your computer to IS&T's secure servers via MITnet or the Internet. If and when you need to recover lost files, you can restore them using TSM.



### Mobile Devices at MIT

Jan 28, 1:00–2:30pm, 56-114

This session will cover mobile devices and their applications. The presenters will make recommendations for existing and potential mobile device users at MIT.

### Online Listing

For a complete listing of IS&T-sponsored events during IAP, go to [student.mit.edu/iap/nsis](http://student.mit.edu/iap/nsis). §



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# Software Spotlight

## On a Mission of Transition: Athena 10 Is Coming

• William Cattey

Athena, once MIT's sole academic computing environment, is now one platform among many. But it still has its place at MIT. Athena provides a tight integration of user interface, services, applications, and tools. It powers many computer labs on campus, and is used by students for class work and to run educational software.

The current version of Athena in clusters and on private Athena workstations is 9.4. Starting in January, during IAP, Athena 10 will be available for opt-in and on specially marked early adopter systems in Athena clusters around campus. If testing goes as expected, Athena 10 will become the default release in July 2009.

This new version marks a crossroads for Athena. In order to continue to provide cost-effective value as one of many computing platforms at MIT, the Athena 10 Release Team set the goals of

- Reducing ongoing maintenance costs while continuing to support existing Athena users
- Making it easier for new users to get utility from Athena

### Looking Ahead

Athena 10 will continue to support the familiar user interface, public cluster systems, and Quickstation systems tailored for shorter sessions. At the same time, the new version will make it possible to move ahead while letting go of components that are no longer optimal. Athena 10 will

- Allow installation of Athena on an already installed Linux system without an operating system reinstall
- Unbundle the components to allow customers the option to choose which pieces of Athena they want
- Retire functionality that is no longer used or of sufficient benefit to warrant the ongoing maintenance cost

- Replace several MIT-invented or MIT-maintained components with open-source components, migrating where necessary to community-standard practices from Athena-unique ones



### Making the Move

The Athena base Linux distribution will change from Red Hat Enterprise Linux 4 to Ubuntu, which has many strengths that play well in the Athena environment.

- Its advanced packaging tool (APT) simplifies configuring and installing software packages on Athena.
- Its versions of device drivers and applications strike a balance between “new enough” and “robust enough.”
- It contains a lot of useful functionality by default.
- It's one of the most popular distributions of Linux on campus, and with incoming freshmen.

Once the Athena 10 Release Team decided on Ubuntu, it took an inventory of all the present Athena user-visible features and, for each one, asked these questions:

- Can this feature be supported by a component Ubuntu installs by default?
- If not, is there an easy way to leverage existing defaults?
- If not, is there a similar practice that has become standard?
- If not, should this feature be de-supported?

The Athena 10 implementation is based on the Debathena Project of the Student Information Processing Board (SIPB). The Athena Release Team continues to collaborate with SIPB, making Athena into a more community-based development effort.

### The Once and Future Athena Release

Athena 10 is a transitional release. Some users will be migrating off of obscure functionality. Some will subtly change how they use familiar features. New users will be able to opt into one or more unbundled components.

As this happens, Athena 10 will take a significant step in the direction of becoming a thin veneer of software added to off-the-shelf systems and devices. Ultimately, Athena will fade into the background, having changed from a “release” to a “layer.”

Athena began as MIT-purchased systems running the monolithic Athena release. It provided a single set of MIT-invented and maintained applications and services on desktop computers that were always connected to MITnet. Despite these monolithic origins, the Athena vision always looked to the future. Steve Lerman, the former leader of Project Athena, recalled this vision at a recent celebration of Athena's 25th anniversary: “Computing should be just like turning on a light.”

Although the Athena Release may fade away, the overarching goal of Project Athena – personal computing with an MIT flavor – will live on. The Athena inventions will be ubiquitous, even if people forget to call them Athena.

### To Learn More

The Athena 10 Technical Plan describes the feature analysis and approach to implementation with default Ubuntu components. It's available online at

<https://wikis.mit.edu/confluence/x/CQvt>

To check out the Athena 10 Project Wiki that describes the ongoing status of the work, go to

<https://wikis.mit.edu/confluence/x/9k4>

If you'd like to try out Athena 10, download instructions and documentation are available at [athena10.mit.edu](http://athena10.mit.edu).

To find out more about the SIPB Debathena Project, see [debathena.mit.edu](http://debathena.mit.edu).

For more information on Athena 9 as it is presently deployed and supported, visit [web.mit.edu/ist/topics/athena](http://web.mit.edu/ist/topics/athena). §



# Network Notes

## Thinking Thin: Wireless Technology Enhancements at MIT

• Lee Ridgway

In the summer of 2001, Information Systems (predecessor to IS&T) rolled out the first wireless access to MITnet, starting with 200 access points in the main campus libraries, classrooms, and some public spaces. Seven years later, IS&T now supports about 3600 far-flung access points which give essentially complete wireless coverage throughout the MIT campus.



### Upgrade in Progress

This past year IS&T embarked on a major upgrade of the MITnet wireless system using next-generation “thin” technology from Cisco Systems, Inc. The up-

graded system, with Cisco Aironet 1250 access points, will provide several enhancements over the existing system. These include

- Support for the 802.11n standard with increased speeds up to 300 Mbps, in addition to continued support of the previous 802.11 standards (a/b/g)
- Improved coverage, range, and performance
- The ability to connect seamlessly when roaming around campus

If you have a laptop and are moving around campus, you can determine whether or not you have access to the new wireless system by going to your laptop’s network connection menu or control panel. If you are in an upgraded wireless area, you should see three options:

- MIT
- MIT N
- MIT GUEST

Select **MIT N**.

**MIT** is the current wireless service, with the addition of support for 802.11n. **MIT N**

is limited to those newer computers and mobile devices that support the 5GHz transmission frequency. **MIT N** assures getting the highest bandwidth your computer or device can support. **MIT GUEST**, when fully implemented, will provide quick access to a basic set of network services for MIT visitors.

IS&T performed the Initial deployment and testing of the new access points in its own buildings and the “New Ashdown” dorm, NW35. Further deployments are focusing on MITnet construction projects requiring new access, and high-traffic hotspots, with the main campus area being next on the list.

As of November 2008, upgrades in the following buildings have been completed:

10	12	54	W5	W16
W20	W51	W61	W89	W91
W92	W98	E40	E51	E52
E53	N42	NW35	NE25	

Stata Student Street

With most recent models of computers, you should encounter no problems connecting with the latest wireless technology. IS&T advises making sure your computer is up to date with the most recent drivers from the vendor. If problems occur, such as crashing, temporary loss of connectivity, or not getting a response, contact the Computing Help Desk at 617.253.1101 or [computing-help@mit.edu](mailto:computing-help@mit.edu).

### Future Services

In addition to better performance, the upgraded system lays the groundwork for new offerings, including location-based services. For example, with your laptop you could walk into different buildings on campus and get a URL and web page customized for that building.

IS&T is also looking into other new technologies available with the upgraded system, including carrying voice and video over the wireless network. Another capability under consideration is Fixed Mobile Convergence (FMC) for enhancing cell-phone network coverage across campus. §



# Bits and Bytes

This column presents announcements about IS&T-supported software. For more information about recent releases, see [web.mit.edu/swrt](http://web.mit.edu/swrt).

## Adobe Releases Reader 9

IS&T now supports Adobe Reader 9.x for Macintosh and Windows, while continuing to support Reader 8 for Linux. Adobe’s free software lets you open, view, search, and print Portable Document Format (PDF) files. This format, based on PostScript, is highly portable across platforms and is often used to share files with others who don’t have the same software or fonts.

Reader 9.x offers faster launching and improved performance. It includes Portfolios to ease navigation when working with multiple PDF documents, native Adobe Flash support, improved CAD and geospatial functions, and accessibility enhancements. To learn more, see the Adobe Reader at MIT page at [itinfo.mit.edu/product.php?name=acroread](http://itinfo.mit.edu/product.php?name=acroread).

## Mouse-Clicking Software Recommended by ATIC

For computer users with repetitive strain injuries (RSI) or other disabilities, the act of clicking a mouse can be problematic. IS&T’s Adaptive Technology Information Center (ATIC) has tested various mouse-clicking applications that work by sensing when a user pauses the mouse over a spot for a specific length of time.

The most full-featured mouse-clicking software that ATIC recommends is SmartClick ([www.rjcooper.smartclick](http://www.rjcooper.smartclick)), which runs on Macintosh and Windows computers. Since this software costs \$119, it’s best suited for those who need to use it indefinitely.

For users who want just a short-term solution, ATIC recommends ClickNoMo for the Macintosh ([www.clicknomo.com](http://www.clicknomo.com)) and Dwell Clicker for Windows ([www.sensorysoftware.com](http://www.sensorysoftware.com)). ClickNoMo costs \$25; Dwell Clicker is free.

To learn more about alternative pointing devices and software, visit [web.mit.edu/atic/www/tools/pointing.html](http://web.mit.edu/atic/www/tools/pointing.html). §



# Safe Computing

## Protecting MIT's Stored Personal Information

• **Monique Yeaton**

MIT is intensifying its efforts to reduce the risk of exposure of sensitive data and personal information. Since 2007, initiatives have been put in place to handle data-incident reporting, comply with the credit card industry's security standards, and protect Social Security Numbers at MIT.

The latest initiative is the formation of a High-Impact Data Protection (HIDP) Team. Its role is to evaluate encryption tools for protecting data that, if involved in a breach of security, poses significant risk to individual members of the MIT community or to MIT as a whole.

### Securing Data on Computers

MIT policy states that any individuals who manage or use sensitive data "must protect [it] from unauthorized modification, disclosure, and destruction." Recent regulations

released by Massachusetts (201 CMR 17.00) also establish minimum standards for safeguarding personal information of Massachusetts residents. One of these regulations requires encryption of all personal information stored on laptops or portable devices.

To comply with these regulations by the target date of May 1, 2009, the HIDP Team has begun testing PGP Desktop. This encryption package was provisionally selected for its ease of use, after evaluating several products and conferring with other schools.

This product protects data on Windows and Macintosh computers by fully encrypting hard disk contents. Only a user who has the PGP password can decrypt the data on the drive or boot the machine. Losing the key is not a problem because a recovery token stored on the PGP Universal Server can be recovered if a password is forgotten.

After PGP Desktop has been tested and approved for limited release, a pilot group

of select users in key, high-risk areas at MIT will begin using it. Should all go well, those who can benefit from such robust protection will then be able to obtain PGP Desktop through the IS&T Software Release Team.

### Securing Mobile Devices

The HIDP Team also recognizes the need to protect data on mobile devices that would put MIT at risk if lost or stolen. MIT is not currently equipped to provide data protection capabilities for Apple iPhone, BlackBerry, Palm OS, or Windows Mobile devices, but the HIDP Team is looking into various options. The team will also be making recommendations on how to remotely lock and retrieve data from certain lost or stolen mobile devices.

### Moving Toward Compliance

The solutions that will emerge from these two investigations won't address all of the Massachusetts regulations; however, they are a step in the right direction. If you have questions about this project, contact the HIDP Team at [ist-hidp@mit.edu](mailto:ist-hidp@mit.edu). §

## OC11 Data Center Comes Online

• **Garry Zacheiss**

IS&T has a new data center in operation. Located in Boston and hosted by the Markley Group, the facility has been given the MIT building designation OC11 (for "11th off-campus building"). OC11 will ultimately house many of the enterprise systems located in the W91 Data Center.

The OC11 facility provided IS&T with the opportunity to start with a clean slate. It represents a significant upgrade from the W91 Data Center in terms of reliability, redundancy, and design.

IS&T began deploying servers to OC11 in November, starting with the production VM-ware environment and two EMC Storage Area Networks (SANs). SANs offer large arrays of high-performance disk storage and meet the needs of the many demanding enterprise applications in use at MIT.



This transition, while primarily involving W91 and OC11, includes new SAN fabric between all of IS&T's major data center sites to ensure high availability and business continuity.

### Greater Capacity in a Smaller Space

OC11 will allow many additional servers to be stored in the same floor-space footprint as W91 – up to 80 cabinets of servers. The major increases in capacity are in the form of cooling and power: OC11 provides 150 tons of cooling compared to 80 tons in the W91 Data Center, and 250 kilowatts of power compared to 144 kilowatts in W91.

OC11 significantly extends MIT's metro fiber-optic network. This network connects the MIT campus to several key network interconnection facilities in the Boston area, including OC11 and the Level 3 Communications facility at 300 Bent Street.

According to Theresa Regan, Director of IS&T's Operations and

Infrastructure Services, "The MIT metro fiber network provides up to 48 strands of dark fiber between OC11 and the MIT campus, and allows for high-speed connectivity of 10 gigabits per second and beyond for MIT's enterprise applications and infrastructure."

Due to OC11's off-campus location, IS&T is operating the facility in a "lights out" manner, with remote console and power capabilities for all servers and no IS&T staff located permanently on site. IS&T will use the space freed up in the W91 Data Center to meet the growing demand for research and high-performance computing on campus. §



# Tech Tips: MITvoip Phone Service

This column presents tips about computing. For more information technology Q&As, check the IS&T Hermes knowledge database at [kb.mit.edu](http://kb.mit.edu).

**Q.** Is my MITvoip phone energy efficient?

**A.** Most MITvoip phones have a backlit LCD display. Backlighting the display consumes about a watt of electricity per day, a small amount for a single phone, but about 144 kilowatt hours per day for all MITvoip phones at the Institute (or enough energy for four to five homes).

To make your MITvoip phone more energy efficient, you can turn off the backlit display when the phone is idle. To do this:

1. Press the **Menu** button.
2. Press **3** (Settings).
3. Press **1** (Basic).
4. Press **3** (Backlight Intensity).
5. Press **2** (Backlight Idle Intensity).

6. Press **4** (Off).
7. Press the **Select** soft key.
8. Press the **Save** soft key.
9. Press the **Exit** soft key four times.

**Q.** My MITvoip Polycom phone has arrow keys. What are they for?

**A.** These keys help you navigate through call lists and contact directory entries. The checkmark button lets you select an item.

When your phone is in idle mode, the arrow keys act as shortcuts to your lists:

- Up: Speed Dial Info
- Down: Missed Calls
- Right: Placed Calls
- Left: Received Calls

For details, see the Call Lists page at [web.mit.edu/ist/topics/voip/lists.html](http://web.mit.edu/ist/topics/voip/lists.html) and the Contact Directory and Speed Dial page at [web.mit.edu/ist/topics/voip/directory.html](http://web.mit.edu/ist/topics/voip/directory.html). §

## Deployment Schedule

IS&T began a phased rollout of voice over IP telephone service in January 2008. Over 30% of the telephone “lines” to departments, labs, and centers have been transitioned from the traditional telephone service to MITvoip. A full deployment schedule for the rest of the community has been developed based on a set of transition criteria. For details, go to the MITvoip Transition Status page at [web.mit.edu/ist/topics/voip/status.html](http://web.mit.edu/ist/topics/voip/status.html).

The transition plan remains flexible to best accommodate the needs of the MIT community. If you have questions, send mail to the Transition Team at [voip-transition-team@mit.edu](mailto:voip-transition-team@mit.edu).

## What’s Up in Usability at MIT

• Michael Dutton

**Designing** an effective web site depends on knowing your users. If you wait until your web site has been developed to find out how your audience responds, it may be too late or too costly to make changes.

One way to ensure that your web site is optimal for visitors is to contact IS&T’s Usability Team. Current services include

- User research
- Card sorting
- Information-architecture reviews
- Design reviews and testing
- Reviews of code for accessibility, in conjunction with the Adaptive Technology Information Center (ATIC)
- Formal lab-based usability testing

Whether you want to do full-scale testing or choose from Usability’s menu of options, the team can tailor its services accordingly. All services are free to the MIT community.

### Recent Developments

In the last year, several exciting developments have taken place within Usability. The team has hired more staff to help with increased demand for services. These new consultants have been instrumental in working with community members to organize lab testing and coordinate design reviews.

The Usability Team now offers consultation in all phases of the project life cycle. It also works closely with staff in ATIC to ensure that universal design – accessibility for those with disabilities – is taken into consideration.

In addition, the IS&T Usability Lab in Building N42 has undergone significant upgrades. With a true high-definition 42" LCD TV in the observation room, viewers watching how a tester navigates through a web site can now see resolutions equal to those of the two new computers in the testing room. By updating the test computers to an iMac and a Dell Core 2 Duo, the Usability Team can assist with almost any project at MIT.

One recent project involved testing MIT Mobile Web ([m.mit.edu](http://m.mit.edu)), which offers up-to-date MIT information, optimized for different types of mobile devices. The Usability Team reviewed the intuitiveness of the Mobile Web’s icon design and terminology and provided feedback from participants who tested the MIT Mobile Web on their personal mobile phones.

### Working with Usability

So what’s the best way to engage with Usability? Send an email to the team at [usability@mit.edu](mailto:usability@mit.edu) as early in your project as possible. Usability can coordinate efforts with ATIC – though you can also reach ATIC staff directly by sending mail to [atic-review@mit.edu](mailto:atic-review@mit.edu).

Currently, demand for IS&T’s usability services is high, with formal lab testing being scheduled up to three months in advance. Design reviews and consultation for other services have shorter wait times, though early contact is still strongly encouraged.

To find out more about Usability at MIT, visit [web.mit.edu/ist/usability](http://web.mit.edu/ist/usability). §

## MIT World Reframes Its View

• Robyn Fizz

There's a place on the Web where all the smart people hang out. And you can hear what they have to say, for free, any time of day or night.

MIT World ([mitworld.mit.edu](http://mitworld.mit.edu)) has been around since 2001, but in November it leapfrogged from its original incarnation to a state-of-the-art video site. Its mission remains the same: to publish streaming video of significant public events at MIT. What's new are all the features that help visitors unlock the ideas inside.

### Cool and Creative

In 2007, MIT World received funding from the Lord Foundation for a redesign. Laurie Everett, the site's director, was eager to start: she'd already envisioned two big-picture goals. She wanted the videos to be associated with each other in creative ways that encouraged exploration. And she wanted next-generation features that made that site as cool as its content.

Working closely with staff from the MIT Libraries' Academic Media Production Services, the Publishing Services Bureau, and IS&T's DCAD Team, Everett drew up her requirements and selected ISITE Design as the developer. Once the work was well under way, ISITE turned to IS&T's Usability Team to ensure that Everett's goals were being realized.



### Getting Around

MIT World's most engaging new feature is the Idea Explorer. When viewers select the Explore Ideas tab on the home page, an empty white box fills with a waterfall of words – terms like human nature, climate change, and zebrafish. These word tags come in various sizes that relate to the number of videos linked to each concept. As Everett notes, “The bigger words are what we do here, but we talk about a lot of things at MIT.”

When visitors click on a word tag, thumbnails of the related videos appear in a grid.

Mousing over a thumbnail displays the talk's title, speakers, date, and host.

The new site also makes it easy to browse the videos in other ways. The home page has a Featured Idea that changes every few days, along with Most Recent, Most Popular, Editor's Picks, and Upcoming tabs. The Browse Videos tab sorts the talks by speaker category (e.g., MIT Faculty, Alumni, and Nobel Laureates), as well as by topics, MIT hosts, and series.

### Next-Generation Features

MIT World's videos are now embedded Flash files that play right in the page, instead of in a popup window. They're also easy to embed in web pages using Place on Page, a feature open to anyone. Each video retains its MIT World brand through the logo and opening and closing information slates.

If you like a video, you can email it to a friend. Through the Details feature, you can find out who speaks when in each video. For those with low vision, the site provides a High Contrast option for better viewing.

Behind the scenes, Everett is pleased about one more thing. She can still build an MIT World page in six minutes. §

## MIT TechTV: Same Great Look, But Better Behind the Scenes

• Kris Brewer

MIT is more than the latest research breakthroughs we hear about on the nightly news. It's greater than the sum of its experts delivering insights online and in print.

There's another window into the Institute with views that are colorful, inventive, and personal. Since its inception in April 2007, MIT TechTV ([techtv.mit.edu](http://techtv.mit.edu)) has been a bustling portal where members of the MIT community can post their videos for the world to see. Content ranges from students volunteering for Habitat for Humanity to graduate student Brian Chan creating WALL-E in origami.

So far, over 1150 videos have been posted to MIT TechTV, with views approaching five million. Not bad for a site that's only one-and-a-half-years old. MIT TechTV is an initiative of the Dean's Office in School of Engineering and the MIT Libraries' Academic Media Production Services (AMPS).

### Back-End Changes and New Features

In November, MIT TechTV switched service providers from Blip.tv to Viddler.com. This move allows the site to take advantage of new feature sets and customization options that appeal to both those who post videos and to the MIT TechTV audience.

So what's new? MIT TechTV has been streamlined: it's easier for visitors to browse and find videos, and the videos load faster than before. Favorite new features include the following:

- An *enhanced player* offers assorted video playback options, such as full-screen viewing.
- The *private videos* setting lets you share your videos with only those you choose, rather than the whole world.

- *Media-enhanced RSS and iTunes feeds* let you create feeds in your own web site or stay up to date with collections or categories of videos of interest. You can also power a plasma display with these enhanced feeds.

- *Time-code-based comments* let anyone have their say about a particular segment of a video. You can also now bookmark places in videos.

In the words of Shane Colton, a graduate student in Mechanical Engineering, “MIT TechTV has a better interface than YouTube and has given me a targeted place to put my tech videos. It makes cross-posting very simple. (Just broke 150,000 total views today.) Very glad to continue posting.”

### IAP Sessions

To learn more about MIT TechTV, go to [techtv.mit.edu/about](http://techtv.mit.edu/about). During IAP, AMPS will also offer sessions to demonstrate the new functionality and solicit feedback from the MIT community. These sessions will highlight how MIT TechTV can be used to support teaching and research. See the online IAP listings for dates and times. §

# MIT TechTV



# Getting Help

If you don't know where to get help for your computer, network, or telephone problems, dial one of the help lines listed to the right.

If you prefer to use email, you can send your questions to the corresponding email addresses. (When logged into Athena, you can also use the **olc** command to send questions to Athena's online consultants.)

You can also submit a question online via the Request Tracker link on the Getting Help page at [web.mit.edu/ist/help](http://web.mit.edu/ist/help).

For help with...	Dial...	Or send a message to...
<b>General computing questions</b> Macintosh, Windows, network/ connectivity, business applications, computer buying advice, repairs	617.253.1101	computing-help@mit.edu
<b>Athena computing environment</b>	617.253.4435	olc@mit.edu
<b>Disabilities and computing</b>	617.253.7808	atic@mit.edu
<b>Telephone support and repairs</b> Traditional and MITvoip phones	617.253.4357	telephone-help@mit.edu
<b>Traditional phone moves/changes</b> For use by AOs/DLC administrators	617.253.3670	telecom-csr@mit.edu
<b>Unix/Linux</b>	617.253.1103	unix-linux-help@mit.edu



# Surf Sites: Web Site Usability

The success of a web site often depends on how usable it is. Design and navigation are important, but so are a host of other factors – like color contrast, support for multiple browsers, well-grouped tasks, clear language, visibility of links, and accessibility. The list goes on!

IS&T's Usability Lab can help boost your web site's ease of use (see page 6 or go to [web.mit.edu/ist/usability](http://web.mit.edu/ist/usability)). You can also learn more about various aspects of usability by visiting the web sites on the right.

- 465 Berea Street – News on Web Standards, Accessibility, and Usability**  
[www.456bereastreet.com](http://www.456bereastreet.com)
- AccessIT – National Center on Accessible Information Technology in Education**  
[www.washington.edu/accessit](http://www.washington.edu/accessit)
- Cognitive Daily**  
[scienceblogs.com/cognitivedaily](http://scienceblogs.com/cognitivedaily)
- Colour Contrast Check**  
[www.snook.ca/technical/colour\\_contrast/colour.html](http://www.snook.ca/technical/colour_contrast/colour.html)
- Software Usability Research Laboratory**  
[psychology.witchita.edu/surl](http://psychology.witchita.edu/surl)
- Usability.gov – Your Guide for Developing Useable and Useful Web Sites**  
[usability.gov](http://usability.gov)
- WebAIM: Web Accessibility in Mind**  
[www.webaim.org](http://www.webaim.org)

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