Fast Takes in Slo-Mo: High-Speed Imaging in PE Classes

• Robyn Fizz

IT’s own Doc Edgerton began to revolutionize high-speed photography in 1931 – a technology made famous by a milk drop. Over the years, Edgerton photographed many objects and athletes in motion. Today that legacy lives on through MIT’s Edgerton Center and an innovative project funded by a d’Arbeloff grant: High-Speed Imaging for Physical Education. The project’s medium is digital video and, this time around, the athletes in front of the lens are students in MIT’s physical education (PE) classes or sports programs. The video clips – shot on site, run through software, and displayed on a wide-screen monitor – give instructors and students a real-time tool for analyzing a baseball swing or a javelin throw.

Brains and Brawn

This high-speed imaging project is the brainchild of Noah Riskin, Head Coach of Men’s Gymnastics in MIT’s Department of Athletics, Physical Education, and Recreation (DAPER), and James Bales, Assistant Director of the Edgerton Center. Their informal conversations eventually led to a project proposal. They realized that high-speed video and computing technology had reached a stage where a mini-studio and screen could be packed on a cart and wheeled to the gym or athletic field to capture students’ physical activities firsthand. Much like instant replays on television, immediate playback could give students insights about their technique and allow instructors to critique aspects of form on the spot.

Riskin and Bales also knew their turf. By building a link between two campus cultures – science and technology and fitness and sports – they hoped to make PE classes more engaging for MIT students, especially those who view PE as just another requirement.

Trial Run

The project’s first milestone was to design a prototype system that was portable and easy to use. Bales and Riskin – aided by students Jean Marie Barnwell, Stephen Cousineau, Colin Dillard, Aaron Doody, Brian Hemond, Shauna Jin, and Chris Vogt – built a wheeled instructor’s kiosk. The current version includes a high-speed video camera, two 1000-watt lamps, and long extension cords. On the IT side, there’s a Pentium 4 computer running Avid editing software and Xcitex and Boeing-SVS motion-tracking software. A handheld cordless mouse adds flexibility, and the 30-inch LCD display is large enough to ensure that every student in a class can view the videos.

In its first year, this imaging system was used in one of Riskin’s gymnastics classes and in training for archery, baseball, lacrosse, sailing, and several track-and-field events. An expanded roll-out is now under way.
High-Speed Imaging
continued from page 1

The Case for High-Speed Video
High-speed video, shot at 250 to 1000 frames per second (fps), divides motion into a series of crisp images closely spaced in time, exposing fine details that would appear as a blur in standard video (30 fps). Combined with slow-motion playback, this clarity is key to analyzing movement. Clips can be played at different rates or viewed frame by frame. You can also zoom in for a closer look.

The main drawback at this time is the technology’s storage requirements. Even in monochrome, a five-second video shot at 500 fps is 1 to 2 gigabytes in size. It doesn’t take many clips from many classes to fill up the project’s server.

To handle this storage challenge, only key frames from a small number of clips are saved. These are placed in a course locker and can be viewed online by friends and family. At the end of term, students get a DVD and the clips are deleted from the locker.

Some videos are catalogued and kept for future use — there’s a growing collection of clips showing correct form in different sports that can be played in class or referenced online.

Forward Motion
Both in classes and coaching with athletes, the imaging system has made its mark. The students and athletes can see their movements in a way they’ve never been able to see them before, and can evaluate the discrepancies between what they felt when performing various skills and what they see on video.

There have also been unexpected benefits. Some students are as interested in being “behind” the system as in front of it. They have been encouraged to play with the technology and user interface, enhancing how the system meshes with the class.

The imaging project has also fostered a merging of physical education and academics: the pilot of a “sports” version of Physics I (sp247). Riskin and Bales have been structuring the curriculum with Alexander Slocum, Director of the Experimental Study Group, Halston Taylor, the Men’s Track Coach, and MIT graduate David Gessel. One section focuses on gymnastics and the other on scuba and track.

Students get 6 credits for the Special Program subject, as well as credit toward the PE requirement. In the gymnastics section of sp247, the students go through rigorous physical activity, followed by problem-solving with chalk right on the mat. The gymnastics and slow-motion playback, this clarity is key to analyzing movement. Clips can be played at different rates or viewed frame by frame. You can also zoom in for a closer look.

The main drawback at this time is the technology’s storage requirements. Even in monochrome, a five-second video shot at 500 fps is 1 to 2 gigabytes in size. It doesn’t take many clips from many classes to fill up the project’s server.

To handle this storage challenge, only key frames from a small number of clips are saved. These are placed in a course locker and can be viewed online by friends and family. At the end of term, students get a DVD and the clips are deleted from the locker.

Some videos are catalogued and kept for future use — there’s a growing collection of clips showing correct form in different sports that can be played in class or referenced online.

Forward Motion
Both in classes and coaching with athletes, the imaging system has made its mark. The students and athletes can see their movements in a way they’ve never been able to see them before, and can evaluate the discrepancies between what they felt when performing various skills and what they see on video.

There have also been unexpected benefits. Some students are as interested in being “behind” the system as in front of it. They have been encouraged to play with the technology and user interface, enhancing how the system meshes with the class.

The imaging project has also fostered a merging of physical education and academics: the pilot of a “sports” version of Physics I (sp247). Riskin and Bales have been structuring the curriculum with Alexander Slocum, Director of the Experimental Study Group, Halston Taylor, the Men’s Track Coach, and MIT graduate David Gessel. One section focuses on gymnastics and the other on scuba and track.

Students get 6 credits for the Special Program subject, as well as credit toward the PE requirement. In the gymnastics section of sp247, the students go through rigorous physical activity, followed by problem-solving with chalk right on the mat. The gymnastics and

New Apple Catalog Available through ECAT

With support from the MIT Procurement Department and IS&T, Apple Computer’s ECAT catalog is now available to the community for Institute and personal purchases. Through this catalog, community members can purchase MIT-recommended Apple computers and laptops, as well as the entire line of Apple products. The new catalog also lets you customize systems.

To connect to the catalog, go to http://web.mit.edu/ecat/ and select Apple Computer.

The SAP Connection
Institute orders placed through Apple’s ECAT catalog are submitted to Apple through SAP and invoiced electronically. Invoices are posted automatically in SAP and are immediately viewable on detail transaction reports (document type EI). If you are not authorized to use SAP, you can create a proposal within the catalog and send it to your department’s authorized purchasing agent.

Having this direct relationship with Apple has many benefits, including improved order accuracy, reduced delivery time, and better pricing for institutional orders.

Support on Campus
Several of MIT’s recommended systems are on display in a small showroom in Building N42 at 211 Massachusetts Avenue. If you would like help in selecting and configuring an Apple system to meet your needs, contact an MIT presales consultant at 253-7686 or mcc@mit.edu.

Any ECAT invoicing questions or discrepancies should be directed to Laura Simmons at 253-2520 or <simmons@mit.edu>.

For other questions or comments about the Apple-MIT partnership, contact Laura Simmons or Mary Bacci at 253-5499 or <mamato@mit.edu>.

Going with the Flow
Slow-motion imagery of athletes has inherent visual appeal, and the work on this project could lead to some aesthetic offshoots. One idea is to sponsor a visual artist to explore the link between body movement and digital technology. Another is to fund a large-scale projection (in, for example, the Zesiger Center) of ultra-slow images of MIT students in motion — a stunning loop of organic forms floating in space.

Next Steps
Riskin and Bales are working with vendors Xcitex and Boeing to customize the motion-tracking software. The idea is to create overlays of key trajectories: for example, the movement of knee, hip, and foot in a soccer kick.

They will also continue to train MIT instructors and coaches in using the system, looking for ways to optimize it for each class or athlete.

For more about the project, leap to http://web.mit.edu/sp.7ur/
A Must-Have for Windows Users: VirusScan Enterprise 8.0i

- Lee Ridgway and Bryant Vernon

Information Services and Technology (IS&T) strongly encourages all Windows users in the MIT community to use VirusScan Enterprise 8.0i. This anti-virus program runs on Windows XP/2000 computers and on Windows 2000 Server and Windows Server 2003. VirusScan Enterprise 8.0i contains many enhancements and new features, including the ability to detect and remove a growing number of spyware/malware programs and to scan and prevent scripts from performing malicious actions. Other features include:

- The ability to restrict access to specified ports, files, folders, and shares
- The ability to block connections from remote computers that have infected files in a shared folder
- Protection from buffer overflow exploits – attacks that take advantage of software defects to execute malicious code
- An Unwanted Programs Policy that lets you select categories of unwanted programs – such as adware – and decide what action VirusScan should take when it detects them
- Scanning of Microsoft Outlook e-mail folders, attachments, and messages
- An AutoUpdate feature that lets you selectively update virus definition (DAT) files, the scanning engine, product upgrades, hot fixes, patches, and service packs
- An Alert Manager that provides immediate notification when a virus has been detected
- Repair installation, which lets an administrator restore VirusScan to the original installation settings or reinstall the program files from the VirusScan Console

Note that the MIT-installed version of VirusScan Enterprise 8.0i is preconfigured to perform thorough daily scans and updates. For instructions on how to adjust the time of daily updates, see http://itinfo.mit.edu/article?id=7301

To learn more about MIT’s preconfigured settings for VirusScan, go to http://web.mit.edu/ist/istnews/article?id=7389

The VirusScan Console gives you quick access to the program’s key features, from Access Protection to AutoUpdate.

- On-Access Scanning runs in the background and scans files as they are accessed
- The more resource-intensive On-Demand Scanning checks all parts of your computer each day or as scheduled

If you find that VirusScan is interfering with the processing speed of your machine, try the suggestions detailed at http://itinfo.mit.edu/article?id=7377

Also be aware that, although VirusScan Enterprise 8.0i contains anti-spyware/malware functionality, it is not a complete solution. IS&T urges you to review MIT’s anti-malware page at http://web.mit.edu/ist/topics/security/malware.html to learn how you can better protect yourself against this increasingly prevalent threat to your privacy.

Support
IS&T offers full support for VirusScan Enterprise 8.0i. System requirements, installation instructions, and other documentation are available from the VirusScan at MIT page at http://itinfo.mit.edu/product?vid=644

IS&T also offers a free Virus Protection Software Quick Start class. The next session is Friday, October 29 at noon in the N42 Demo Center. No registration is required.

If you have questions about or need assistance with VirusScan, contact the Computing Help Desk at <computing-help@mit.edu> or 253-1101.
IS&T Enhances Its E-Mail Spam Screening Service

Theresa Regan

Eighteen months ago, Information Services and Technology (IS&T) introduced spam screening at MIT. This service provides considerable individual choice in managing the ever-increasing volume of unsolicited e-mail, otherwise known as spam. The service’s flexibility allows each member of the MIT community to customize any or all of the following settings:

- Spam score threshold
- Allow/deny lists
- Auto purging of spam messages

Overall, the service has been effective and well received. Every day, IS&T scores approximately 750,000 messages and of these, 500,000 are determined to be spam, based on user settings.

Note: If you spend a lot of time deleting “junk” e-mail in your Inbox, you may not have configured your e-mail program for spam screening. For a quick primer, see the box below.

New Enhancements

Recently, IS&T introduced two enhancements to its spam screening service, based on industry trends and requests from the community for more help in limiting the delivery of spam.

As of October 4, new members of the community have a Spamscreen folder automatically created and configured for auto-purge at the time their e-mail account is created. They also receive a “Welcome” message that highlights IS&T’s e-mail services and Spam Screening web site, and explains the available customizable settings.

Additionally, for current users of the Spamscreen folder who have enabled automatic purging, the period for purging has been extended from 14 to 21 days. IS&T has increased the purge period by one week to allow extra time for new members of the community to acclimate to the MIT computing environment and this important service.

Spam Handling Specifics for New Accounts

If you have a new e-mail account and use either an IMAP program (e.g., Outlook) or MIT WebMail, you will see the Spamscreen folder – already automatically created on the server – under your Inbox.

However, if you have a new e-mail account and use Eudora with Post Office Protocol (POP) as your e-mail client, you will not see the Spamscreen folder locally on your computer. You have two options for checking the contents of your Spamscreen folder:

1. You can use MIT WebMail to access your Spamscreen folder. To learn more about WebMail, see http://web.mit.edu/webmail/

2. You can delete the Spamscreen folder in WebMail, and opt to receive all of your e-mail locally in Eudora. To do this, you must create a Spam-screen folder in Eudora and configure a filter to pick up messages scored as spam. For instructions, see http://web.mit.edu/ist/services/email/nospam/#configure

Need Help?

If you have questions about spam screening at MIT, contact the Computing Help Desk at <computing-help@mit.edu> or 253-1101.

A Quick Primer: Setting Up Spam Screening

IS&T maintains and supports MIT’s spam screening service, but it is up to each individual user to configure the spam screening options for their MIT e-mail account.

All e-mail that is received in your MIT account (ending in @mit.edu) is given a spam-ranking score. Messages with a certain score or higher are given the header X-Spam-Flag: YES. You can filter messages, based on this header, with your e-mail program. Filtering moves the messages with the X-Spam-Flag: YES flag into a separate folder of your choice. For instructions on how to configure your e-mail client to handle spam and how to customize various settings, such as scoring, allow/deny lists, and automatic purging, see http://web.mit.edu/ist/services/email/nospam/

Windows XP Professional Service Pack 2 Provides Added Security

IS&T is recommending Service Pack 2 (SP2) for Windows XP Professional at MIT. Windows XP SP2 includes many updated security features that help protect against network attacks.

To ensure a smooth upgrade, back up your system and take the precautions outlined in Microsoft’s “What to Know Before You Download and Install Windows XP Service Pack 2” at http://www.microsoft.com/winexp/sp2/sp2_whattoknow.mspx

New Features – and a Caveat

SP2’s new features include:

- Improved Windows Firewall
- New Security Center
- Pop-up Blocker for Internet Explorer
- Better power management
- Improved wireless networking

SP2 also provides added safeguards against viruses and worms. For details about new features in SP2, see http://itinfo.mit.edu/article?id=7323

While SP2 is an important upgrade, don’t let it give you a false sense of security. It does not protect against all vulnerabilities. Windows users must continue to be vigilant with respect to security patches; IS&T recommends using the MIT Windows Automatic Update Service (WAUS) to get the most critical patches for your system.

To learn more about WAUS, see http://web.mit.edu/ist/topics/windows/updates/

Support on Campus

To find out how to get SP2, see IS&T’s Windows XP Professional page at http://itinfo.mit.edu/product?vid=642

This page also provides pointers if you experience software problems after installing SP2.

If you need assistance related to SP2, talk to your local IT support provider or contact the Computing Help Desk at <computing-help@mit.edu> or 253-1101.
Come to IS&T’s Open House in the New N42 Walk-in Center

• Ginny Williams

Information Services and Technology (IS&T) invites the MIT community to an Open House on Thursday, October 28 from noon to 5pm. The festivities will be held in the combined walk-in center for clients in Building N42 at 211 Massachusetts Avenue.

Stop by the N42 lobby for light refreshments and to meet IS&T staff. You can also talk to representatives from Apple Computer, GovConnection, and other vendors, and take a look at current recommended hardware. Last but not least, try your luck by entering the Open House drawing; you might win one of the hourly door prizes.

A Combined Service Center

The Open House is one way of raising awareness about IS&T’s combined walk-in service center for clients. As part of a strategic effort to give campus computer users one place to come for hardware- and software-related advice, IS&T services previously available in the lower level of the Student Center (W20) have been relocated to the front area of Building N42 – joining other IS&T units in providing products and services to clients. In this single location, you will be able to

• Meet with consultants for hardware and software repair
• Look at demonstration models and discuss new computer purchases with consultants
• Take care of computing account activities such as password resets
• Pick up requested copies of volume-licensed software
• Receive directions and contacts for other IS&T activities, meetings, and consultations

Other IS&T activities have also been relocated from W20 to N42 – for example, the Athena Consultants and Athena Cluster Services.

Getting in Touch

Contact information for the groups that have relocated to N42 remain the same, and directory and service information on the IS&T web pages have been updated.

To learn more about the full range of IS&T offerings, check out the Getting Services page at http://web.mit.edu/ist/services/.

Getting There: MIT’s T-pass Service Moves Online

• Esther Yanow

If you’re one of the many members of the community who take advantage of MIT’s subsidized MBTA T-pass program, you can save yourself some steps. Applications for T-passes are now handled online.

Registered students and MIT faculty and staff who do not have regular full-time parking permits are eligible for this service. Because MIT offers T-passes at a 50-percent subsidy, the program is very popular: over 5,000 T-passes are distributed each month.

A Site for Commuting

This past January, the Parking and Transportation Office asked IS&T to develop a web-based T-pass site. IS&T had already developed the Parking web site in July 2003, and agreed to add the new T-pass features. With these enhancements, the Parking web site has evolved into a general commuting site, available at https://commuting.mit.edu/

Note that you need certificates to access the applications on this site.

End of the Paper Chase

Eliminating paper T-pass applications has streamlined work for the Parking and Transportation Office. Each year, students and employees submit new applications, and some make further changes to their T-pass information – for a total of about 6500 transactions.

Parking Office staff no longer have to manually enter this information into an Excel spreadsheet. Online automation significantly reduces data entry errors and lets the Parking Office staff focus on customer service.

A Fast Track for Users

The online T-pass service also benefits eligible users, who no longer have to fill out a paper form and go to the Parking and Transportation Office to register for a new T-pass account or to change information (for example, T-pass pickup location). Similarly, T-pass holders can go online to temporarily suspend receiving a T-pass or to cancel and close out their T-pass account.

With online access, T-pass holders can also look at their account online, verify what they ordered, and see a history of any changes they made.

Questions?

If you have questions or comments about the T-pass service, send e-mail to <tpass@mit.edu>.

2004 Ed Tech Fair: From Innovation to Impact

On Tuesday, November 2 from 10am to 2 pm, the 2004 Ed Tech Fair will be held in Lobby 13. While this event is geared toward MIT faculty and those interested in educational technology, everyone in the community is welcome to stop by.

The Ed Tech Fair will feature MIT faculty project demos and information about educational technology services on campus. The theme for this year’s fair, “From Innovation to Impact,” will showcase projects that have already made an impact on student learning.

These projects represent diverse disciplines, technologies, and pedagogical goals. If you’re interested in educational technology, this is a great way to network with others on campus who are actively involved in these efforts.

The Ed Tech Fair is sponsored by IS&T Academic Computing, the Office of the Dean for Undergraduate Education, and the Teaching and Learning Lab. For more information, see http://web.mit.edu/edtechfair/
Security Issues for Files in AFS Lockers

The Andrew File System (AFS) is a global filesystem that can be accessed from any computer with an AFS client, or via web servers that serve AFS (such as web.mit.edu).

When you store files in AFS (Athena lockers, for example), take extra care regarding security and access privileges – especially when the files contain sensitive data. AFS enforces permissions at the directory (folder) level – all files in a given directory share the same permissions. By default, most directories in new lockers are listable by any user. This means users can see file names and subdirectories, but can’t view the file contents.

When you create a new directory, it inherits the permissions of the current directory (e.g., your home directory). IS&T recommends that you check permissions whenever you create a directory or upload sensitive files. You can view directory permissions by typing

```
athena% fs la
```

To find the permissions set for the public, look for the line that begins with `system:anyuser`. The letters on the line after that show the permissions. If there is only an “l”, the directory is only listable. If there is an “r” and an “l”, the directory is readable by any user, and could be indexed and cached by Google or other search engines. If you need help figuring out permissions for a directory, send mail to User Accounts at <accounts@mit.edu> or the Athena Consultants at <olc@mit.edu>.

To learn more about AFS permissions, including how to determine what portions of your locker are publicly accessible and how to change those permissions, see the stock answers at

```
http://web.mit.edu/answers/unix/afs/
```

Can I run two anti-virus applications on my Windows machine? Won’t this be safer?

A

Windows users should install only one anti-virus application per machine. Installing more than one can cause a machine to run slowly and possibly render each application ineffective. IS&T recommends VirusScan 8.0i for Windows. See the Software Spotlight on page 3 for details.

How can I receive notification of the latest virus definition (DAT) file updates for VirusScan and Virex?

A

Go to the McAfee Security Headquarters page at

```
```

Under DAT Notification Service, click the Subscribe link, enter your e-mail address, and click the Subscribe button.

My incoming Eudora e-mail is being blocked by VirusScan. What can I do?

A

You can fix this problem by excluding the Eudora Spool Folder from VirusScan On-Access Scanning. (The Spool Folder temporarily stores e-mail attachments.) Here’s how to exclude this folder:

1. Right click on the VirusScan Shield icon in the Windows tray, and select VirusScan Console or select Start>Programs>Network Associates>VirusScan Console.
2. In the VirusScan Console window, right click On-Access Scan and select Properties.
3. In the VirusScan On-Access Scan Properties window, click All Processes, then the Detection tab.
4. Click the Exclusions button at the lower right.
5. In the Set Exclusions dialog, click Add.
6. In the Add Exclusion Item dialog, click Browse.
7. In the field By name/location... in the Browse for Folder dialog, select your Eudora Spool Folder. It is typically located at C:\Users\username\Eudora\spool but the location depends on where you store your e-mail.
8. Click OK three times to close each dialog and save your changes.

Even though the Eudora Spool Folder is excluded, your system will still be protected from e-mail-borne viruses. VirusScan will catch infected attachments when they are moved to the Attachments folder.

New Council to Coordinate IT Planning and Resources at MIT

Information technology (IT) has become one of the most important factors in the success of academic, research, and administrative enterprise at MIT. A 2002 external review committee recommended that MIT appoint a strategic coordinating body to develop better Institute-wide processes for planning and resource allocation for all aspects of IT.

In response, Provost Robert Brown and Executive Vice President John Curry have established the Information Technology Strategic Planning and Resources Coordinating Council (IT-SPARCC). With members from the Academic Council, MIT Council on Education Technology (MITCET), and the Administrative Systems and Policies Coordinating Council (ASPCC), IT-SPARCC will be chaired by Dr. Jerrold M. Grochow, Vice President for Information Services and Technology. This group will advise the Provost and Executive Vice President on policy and priorities for IT infrastructure and services. Dr. Patrick Dreher, Associate Director of the Laboratory for Nuclear Science, will serve as Deputy Chair of the Council.

IT-SPARCC will discuss reports and proposals on issues prepared by task forces of the Council, by staff, or by other organizations within MIT, and will focus on setting policy and making recommendations with broad impact. Topics that the Council will consider may include

- General review of the provision of IT and related services at MIT
- Charging mechanisms for IT services
- Strategies for allocation of the Institute general budget across academic, administrative, and research computing
- Space allocation for IT
- Review of priorities for computing infrastructure, academic computing, and administrative IT

Recommendations from IT-SPARCC will feed directly into the decision-making process for capital allocation, annual budgets, and rate structures.

To contact the Council, send e-mail to <it-sparcc@mit.edu> or to individual members. For the full membership list, go to

```
http://web.mit.edu/it-sparcc/
```
Take Steps to Protect Sensitive MIT and Personal Data

• Linda LeBlanc and Christopher Logan

The term “sensitive data” can refer to many things – from classified documents to class lists. In the context of secure computing, the term often denotes information that can be used as a personal identifier – for example, your birthdate, Social Security number, and home address. Financially sensitive data can be as simple as your bank account or credit card numbers.

At MIT, departments, offices, and labs use and store sensitive data every day – often in electronic format. This data includes not only personal identifiers, but also medical records, academic records such as grades, salary information, and research data and other intellectual property.

Safeguarding Institute Data

If you are a member of the community who deals with sensitive data, it’s important that you take seriously your responsibility to protect it. The first step is to be clear about what data under your care needs safeguarding – when in doubt, ask your supervisor.

The next step is to ensure that sensitive data is never left in an unprotected location. If the data is in electronic format, you need to store it in a password-protected or encrypted environment. If you’re not sure how to password-protect your machine, talk to your local IT support provider or contact the Computing Help Desk at <computing-help@mit.edu> or 253-1101.

Protecting Your Personal Data

With the ubiquity of e-mail and the Internet, it’s easier than ever for personal data to be compromised. It can happen through e-mail scams such as phishing, online business dealings, or inadvertent exposure of data. Once your personal data has been snagged, you are at risk for identity theft. This can cause untold distress, as well as the loss of time and money.

Read on to find out about some of the scams you’re likely to encounter, and how you can best protect yourself.

Gone Phishing

Phishing is an online scam that uses e-mail and legitimate-looking web sites to try to trick you into divulging your personal financial data. This type of e-mail often states that in order to “protect” your credit card or bank account, the account will have to be suspended until you confirm specific personal data. A URL in this “spoofed” message links to what appears to be a legitimate web site, but is in fact a site that collects credit card numbers, user names and passwords, or other account information for fraudulent use. Many in the MIT community have received this type of e-mail, targeting PayPal, eBay, or Amazon accounts.

Another example of a phishing scam is e-mail spoofing a software vendor, urging you to download a security patch. Clicking the link in this e-mail redirects you to a server that downloads and installs a virus or some other form of malware on your computer.

Even if you have an established relationship with a company, be wary of e-mail requests for personal information. Most legitimate businesses won’t ever ask for your personal data via e-mail because they know that such requests are too easy to spoof.

If you have doubts about an e-mail message’s authenticity, don’t click on any web links or call any of the phone numbers listed. Instead, call the phone number of the company that’s on your credit card or financial statement, and speak to one of their customer service representatives.

To learn more about phishing attacks and identity theft, check out http://www.antiphishing.org/ and http://www.ftc.gov/idtheft/.

Online Business Transactions

The Internet presents many opportunities for commerce – from online catalogs to eBay. Since online business often involves interactions with individuals or companies that are geographically distant, it is important that you verify the credibility of the people with whom you do business and to whom you provide personal information. It’s a good idea to do some research before you invest your time, money, and reputation on any transactions conducted via the Internet.

One way to investigate a business is to find out the registration information for its web site. To determine ownership, go to http://www.internic.net/whois.html and fill in the domain information (e.g., mit.edu). Be wary if you see a person listed as the registrant for a company or an international address for a U.S.-based business or a recent creation date for an established company.

You can also find out some of this information by typing the company name into Google or another search engine.

Inadvertent Exposure

Through no fault of your own, your personal data may be stolen from or exposed by custodial agencies such as banks, online vendors, or even brick-and-mortar stores. Additionally, your doctor’s office or place of employment may be a victim of data theft or some form of inadvertent exposure of sensitive material. For the most part, these circumstances are beyond your control. You can, however, take measures to see if your personal data has been exposed and act quickly if it has. This also applies if you suspect that someone has captured your personal data by phishing or other scams.

The easiest way to find out whether anyone has stolen your personal data is to request your credit report on a regular basis. The law in Massachusetts authorizes each residential consumer to receive one free credit report each year from each of the three major credit bureaus: Equifax, Experian, and TransUnion.

By requesting a report every six months from one of the three credit bureaus, you will be able to keep a close watch on your personal financial data. You can contact these credit bureaus at the following phone numbers:

Equifax
To order a report, call 800-685-1111
To report fraud, call 800-525-6285

Experian
To order a report or report fraud, call 888-397-3742

TransUnion
To order a report, call 800-888-4213
To report fraud, call 800-680-7289

Note: The credit bureaus will do their best to make you pay for the credit report, but with persistence you can get the free report to which you’re entitled.

Support

If you have questions about safeguarding MIT or personal data, contact the IT Security Support Team at <infoprotect@mit.edu>. This same IS&T group can also provide information about training on these subjects.
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 e-mail, you can send your questions to the corresponding e-mail addresses on the far right. (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 Casetracker at http://casetracker.mit.edu/

<table>
<thead>
<tr>
<th>For help with...</th>
<th>Dial...</th>
<th>Or send a message to...</th>
</tr>
</thead>
<tbody>
<tr>
<td>General computing questions</td>
<td>253-1101</td>
<td><a href="mailto:computing-help@mit.edu">computing-help@mit.edu</a></td>
</tr>
<tr>
<td>(Macintosh, Windows, and network/connectivity)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Academic computing</td>
<td>253-0115</td>
<td><a href="mailto:f_l@mit.edu">f_l@mit.edu</a></td>
</tr>
<tr>
<td>Administrative applications</td>
<td>253-1101</td>
<td><a href="mailto:computing-help@mit.edu">computing-help@mit.edu</a></td>
</tr>
<tr>
<td>Athena Computing Environment</td>
<td>253-4435</td>
<td><a href="mailto:olc@mit.edu">olc@mit.edu</a></td>
</tr>
<tr>
<td>Computer and printer repairs</td>
<td>253-0815</td>
<td><a href="mailto:pcservice@mit.edu">pcservice@mit.edu</a></td>
</tr>
<tr>
<td>Computer presales consulting</td>
<td>253-7686</td>
<td><a href="mailto:mcc@mit.edu">mcc@mit.edu</a></td>
</tr>
<tr>
<td>Disabilities and computing</td>
<td>253-7808</td>
<td><a href="mailto:atic@mit.edu">atic@mit.edu</a></td>
</tr>
<tr>
<td>Telephone and voice mail services</td>
<td>253-3670</td>
<td><a href="mailto:telecom-csr@mit.edu">telecom-csr@mit.edu</a></td>
</tr>
<tr>
<td>Telephone repairs</td>
<td>253-4357</td>
<td><a href="mailto:3help@mit.edu">3help@mit.edu</a></td>
</tr>
<tr>
<td>Unix/Linux</td>
<td>253-1103</td>
<td><a href="mailto:unix-linux-help@mit.edu">unix-linux-help@mit.edu</a></td>
</tr>
</tbody>
</table>

Surf Sites: Video at MIT

High-Speed Imaging for Physical Education (see lead article) uses digital video to help students become more fluent in their athletic activities. The Edgerton Center, which focuses on hands-on educational experiences for undergraduates and also carries on Doc Edgerton’s work with high-speed imaging, has played a key role in the project. You can find out more about the Edgerton Center at http://web.mit.edu/edgerton/

There are also many web sites at MIT with a slant toward video – from production services to webcams, from on-demand video of public events to classes and art installations. Take a look!

Academic Media Production Services
http://web.mit.edu/amps/

MIT Visual Arts Program
http://web.mit.edu/vap/

MITWorld
http://mitworld.mit.edu/

Project Timelapse
http://monitor.lcs.mit.edu/

Weekend Campus, Media Test Wall
http://web.mit.edu/arts/see/calendar.html

OpenCourseWare: Advanced Projects in the Visual Arts: Personal Narrative, Spring 2004
http://ocw.mit.edu/OcwWeb/Architecture/4-366Spring2004/CourseHome/