

Information Technology Division Bulletin

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Message from the CIO

For those returning from a summer break or off-campus activities, welcome back! Once again, our IT staff are gearing up for a busy semester to help faculty, staff and students. As is customary, we dedicate the first bulletin in the fall semester to highlighting selected TTU IT resources available to the TTU community. In this issue we will review a **selection of IT resources**, provide an update on our **enterprise video capture solution**, and remind the campus community about the **TTU Acceptable Use Policy for data and information resources**. We are also reprinting an article I was invited to write by CIO Applications Magazine last year on **technology trends in higher education**. We look forward to another academic year of collaborations, partnerships, and contributions in support of Texas Tech University's strategic priorities. Go Tech!

—Sam Segran, Associate Vice President for IT and Chief Information Officer



Back to School

IT Resources/Services

The fall semester is an ideal time to invest in acquiring the tools needed to begin the academic year with the best foot forward. TTU offers a variety of IT resources that will help make the transition into the new school year a smooth one.

Computing Labs:

The TTU IT Division manages 11 computer labs at locations across our campus (itts.ttu.edu/labs). Not only are these computing labs excellent for group work, but they are also fully equipped with productivity tools such as Microsoft Office, AutoCAD, SPSS, SAS, and Adobe software.

Faculty are welcome to reserve our computing labs for ad hoc, periodic course sessions that require computer use. For more information, or to make a reservation, please call (806) 742-1650.

ShortCourses:

The TTU IT Division offers a broad range of free ShortCourses to all faculty, staff, and students. These instructor-led courses are taught by trained professionals in the main ATLC facility, that is located in the west basement of the TTU Library Building. To register, or to find out more information, please visit www.depts.ttu.edu/itts/training/shortcourses, or call (806) 742-1650.

Computer Based Training (CBT):

Skillsoft Online Training (cbt.ttu.edu) is an online, self-paced, interactive training system. TTU hosts an inventory of over 4,000 courses, covering basic-to-advanced technology skills, customer service, project management, and general management skills. The TTU IT Division has partnered with Human Resources to construct an HR Training Catalog available to faculty, staff, and students.

The HR Training Catalog includes courses in:

- Ethics;
- HR Certifications;
- Interviewing and Hiring;
- Organizational Behavior;
- Recruitment and Retention;
- HR Leadership Program;
- Strategies for Successful Employee On-Boarding;
- The Role of HR as a Business Partner;
- Communicating in a Diverse Environment; and
- Customer Service.

CBT modules can be used as professional development or to augment academic instruction that requires technical skills. The Skillsoft learning materials are professional, multimedia, engaging, applied, and feature-rich. Please visit www.cbt.ttu.edu to use this valuable resource provided to the TTU community.

WEPA Printing Kiosks:

The start of the semester brings with it many expenses. Don't let printers, printer ink, and paper further burden your budget—print with WEPA (Wireless Everywhere Print Anywhere).

TTU offers 25+ kiosk locations across campus that are available for printing at any time. Log into WEPA with eRaider credentials and deposit funds through the Raider Card system, WEPA account, or with a WEPA print card. Materials can be printed by inserting a USB drive into the kiosk, uploading documents onto the cloud, or by uploading the documents to your WEPA account. For more information about how WEPA kiosks work, please visit www.depts.ttu.edu/itts/labs/printing.

For more information, please visit www.depts.ttu.edu/ithelpcentral, or call (806) 742-4357 (HELP). Go Tech!

Technology Trends and Its Impact on Higher Education

Sam Segran, (May 2016), CIO Applications Magazine

Instead of just one or two prominent technology trends, higher education has been transformed by the blending of the best of a number of technology trends. After more than 900 years of a traditional learning environment in which the teacher imparted knowledge to the student via face-to-face teacher-led discourse or lecture, the face of higher education has now been significantly altered in the last dozen years. Social media, mobile and cloud have already impacted higher education in many significant ways and continue to change the landscape.

Teaching modalities have already been changed and educators are continuing to push the limits of integrating newer technology in their respective fields, morphing traditional methods to newer flipped classes, adaptive learning, online learning, blended learning, and on-demand learning, including MOOCs. The emergence of Learning Management Platforms that leverage managed content and other educational resources, cloud, social media, and mobile technology has helped accelerate the changes in the higher education landscape.

Big data is expected to have a significant impact in the higher education research environment in the next few years. While commercial vendors such as Amazon and Walmart have been successfully using big data for their daily operations for many years, the use of big data in higher education is still in its infancy. Higher education institutions replete with faculty and staff skilled in high performance computing, data sciences, computer sciences, and advanced analytics, are well-positioned to leverage these talents to help lead researchers to discoveries in areas such as the sciences, medicine, business, and engineering fields.

Additionally, while not quite big data by its strictest definition, advanced data analytics are being increasingly used by higher education institutions to assess the effectiveness of the emerging teaching and learning methods on the success of students in terms of classroom performance and graduation. As Learning Management Platforms mature, these new data points from the advanced data analysis can be integrated back into the system, thus allowing a more effective learning environment for students. Advanced data analytics also helps make faculty, staff, and the institutions become more efficient and effective in the use of resources.

Depending on the technology, certain disciplines are more impacted than others. For instance, 3D printing allows students and teachers from fields such as architecture, engineering, and design to create innovative new solutions with this new 3D modeling capability, and these technologies can then be incorporated into their instructional curriculum. Not surprisingly, some of the touted “new” technologies have fallen by the wayside. While a few of them have turned out to be much less than promised for higher education (e.g. Second Life), others such as netbooks, podcasts, and flip cams have since been superseded by new technology trends. On the other hand, emerging technologies such as the Internet of Things (IoT) haven’t even scratched the surface in higher education. Higher education institutions have their fair share of the early IoT devices such as Internet connected cameras, sensors, HVAC controls, electronic

locks, etc. From researchers with sensor devices in the field to students with gaming consoles in residence halls, the proliferation of IoT devices in higher education has barely begun. According to Gartner, “IoT, which excludes PCs, tablets, and smartphones, will grow to 26 billion units installed in 2020 representing an almost 30-fold increase from 0.9 billion in 2009.” Cisco estimates that we will have about 50 billion IoT devices by 2020. The change in network addressing from IPv4 to IPv6, and an increasingly connected world have set the stage for an explosion of IoT devices.



As technologies have matured, IT professionals in higher education institutions, and their vendor and consultant partners, have learned to integrate these newer technologies with existing infrastructures, and to secure them as well as possible. With this growth in staff experience and skills, adoption of BYOD is becoming the accepted norm in higher education. Newer mobile devices such as smartphones (especially iPhones) and tablets such as iPads, Chromebooks, and Surface Pros are becoming easier to integrate. However, IT staff still have to continue to plan and enhance their infrastructures, including the expansion of external connectivity speeds, backbone speeds, building distribution speeds, WIFI, and Digital Antenna Systems (DAS). With the expected flood of IoT devices, higher education IT professionals need to constantly enhance their security skills and security infrastructures as well since the average user is often more focused on the functionality and convenience aspects of the IoT devices rather than the secure use of them.

Recently, I had the privilege of listening to an excellent presentation on IoT devices by a Director of Research from the Institute for the Future, titled “From Internet of Things to Systems of Networked Matter: Exploring the future of IoT.” She recommended that IoT designers adopt Five Design Principles for IoT devices:

1. **Design beyond Efficiency**
2. **Design for Collective Benefit**
3. **Design for Human and Machine Systems**
4. **Design for Equity**
5. **Design for Failures**

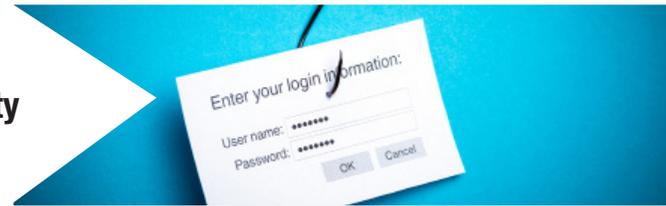
I asked the Research Director if the Institute would consider adopting a 6th Principle—“Design for Security.” In response to my question, she explained that the 5th



Principle could include Security. While it made sense, I would have been more comforted with an explicit, separate 6th Principle—”Design for Security and Privacy.”

In a higher education institution, IT security professionals are constantly kept busy with protecting data that ranges from Personally Identifiable Information (PII), FERPA data, PCI data, PHI data, research data, and other sensitive data. Each of the new technology trends has introduced its own unique challenges for a higher education institution and its community in protecting data, to meet compliance mandates, and for protecting the institutional community’s privacy and security. The emerging IoT devices will continue to bring with them a whole new range of functionalities and challenges!

Phishing Scams Target TTU Community



TTU students, faculty, and staff continue to receive, and some have responded to, email scams targeting TTU email accounts. Recent scam emails contain such subjects as, “User shared a file with you via Dropbox,” “Office365 E-mail Validation On The Containment Box,” and “Account Shutdown.” These are some of the more common messages, but other scam emails with similar subjects have been reported as well. Please do not respond to or click any links in these phishing emails. If you respond to these emails, your eRaider account will be disabled to protect the TTU community, and institutional accounts and data.

These emails are designed to trick you into giving away your eRaider username and password to computer hackers on the Internet. Remember - Texas Tech University will NEVER ask you for your eRaider password, nor should anyone else.

If you have responded to one of these emails and provided your eRaider username and password, please change your password immediately by going to eraider.ttu.edu, and contact IT Help Central at (806) 742-4357 (HELP) for additional assistance.

Even if you have NOT responded to one of these emails but have CLICKED on the link, please contact IT Help Central at (806) 742-4357 (HELP) for additional assistance.

If you have received one of these or similar emails in your Inbox and have not responded or clicked on the link, you may simply delete the email - no further action is needed. Thank you for helping us to protect our data and information resources! To view examples of recent phishing scams, please visit www.askit.ttu.edu/phishingexamples.

For additional information about these scams, including tips on identifying fraudulent websites, please visit <https://www.askit.ttu.edu/IDfraudsites>.



Mediasite

Academic Video Growth Has Been Phenomenal!

The Mediasite video platform, used to store and distribute academic videos, has experienced continuous growth since its inception in 2010. The system contains over 14,000 hours of content created by faculty and staff, that have been viewed over 1.3 million times, including 3,000 hours of new video created and over 430,000 views in just the last year.

Mediasite video is created in lecture capture classrooms, with free desktop recorder software, and by simple video upload. This flexibility gives instructors the ability to create and use video in a way that fits

both their teaching style and their learner’s needs. The use of eRaider authentication allows instructors to control who views their video, while ensuring that students are not exposed to advertising or tracking by outside parties. eRaider integration also facilitates easy use with Blackboard, and provides powerful analytics to help content creators understand how their video is being used.

Faculty and staff at Texas Tech working with video are encouraged to contact mediasite@ttu.edu for more information about Mediasite, or call (806) 742-4357 (HELP).



Acceptable Use Policy

As you take advantage of the many information resources provided by Texas Tech University, please remember that use of these resources must adhere to TTU Operating Policies and Procedures, including the IT Acceptable Use Policy. Based on Texas Administrative Code (TAC), the Acceptable Use Policy defines your personal responsibilities when using TTU information resources. Examples of institutional information resources include but are not limited to, mobile devices, electronic files, data, computer hardware and software, peripherals, networks, etc.

Acceptable Use Highlights:

- The TTU policy applies to all TTU faculty, staff, students, and others granted access to any University information resources, regardless of location or method of access;
 - Information resources must be used in a manner consistent with the mission and objectives of TTU and the State of Texas;
 - TTU faculty, staff, and students must only use information resources they have been granted access to and no one may attempt to circumvent security measures;
- Information on safe computing practices is available for the campus community at www.cybersecurity.ttu.edu;
 - Be respectful, courteous, and ethical in the use of information resources;
 - Do not share information resources login information (e.g., eRaider user name or password). Account owners are personally responsible for all uses associated with their account;
 - Incidental personal use is restricted to authorized users within certain guidelines (outlined in the Acceptable Use Policy);
 - TTU information resources must not be used for personal/commercial gain or for political activity;
 - All use of information resources is subject to local policies and applicable state/federal laws; and
 - TTU faculty, staff, and students must be mindful of information security and report any potential or actual security violations or weaknesses immediately to the TTU IT Security Team at security@ttu.edu.

We invite you to review the complete list of TTU IT Security Policies at <http://www.depts.ttu.edu/infotech/security>. In all things at Texas Tech University, integrity matters!

Mail | Mail Stop 2008

Phone | 742-5151

Fax | 742-5155

View IT Bulletins online at
infotech.ttu.edu/itbulletin

Need IT assistance?
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