Many of us have made a mad dash to a meeting on the other side of campus and wondered, “Should I wait for the shuttle bus or start walking?” Now, thanks to a new app developed by the MTSU Mobile Development Team called MTBustracking, we’ll have a decision maker right at our fingertips. The new app provides its users a way to view where the Raider Xpress buses are at on their routes at any time. The student-based team worked with Ron Malone, assistant vice president for Events and Transportation Services, and Tracy Read, manager of Parking and Transportation Services, to review the various options and decide the best

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Doing Business at the Speed of Thought

I

TD is currently working on a pilot project to deploy Microsoft Lync 2013. Microsoft Lync is an enterprise-ready unified communications platform that allows users to enhance their productivity by providing a consistent, single client experience for presence, instant messaging, enterprise voice, and conferencing.

Below is a feature overview of Lync 2013:

**Presence** is a collection of information about a contact in Lync that includes availability, willingness to communicate, as well as location and status information. Presence information is gathered based on Exchange Calendar entries or phone status, and can also be manually set by the user. Knowing the presence of a user allows you to utilize the most efficient method of communication, thus improving productivity.

**Instant Messaging (IM)** allows users to send messages to one another in real-time, rather than routing quick, short questions through traditional email. Used in conjunction with Presence, you can quickly get answers to questions when the recipient might be unavailable by phone.

**Enterprise Voice** allows traditional call handling through the Lync client, including call answer, call forward, transfer, and hold, using a broad range of both IP and USB endpoint devices. With Lync’s Enterprise Voice solution, your campus phone number has the ability to move with you and can be accessed from a desktop, laptop, or mobile device.

**Conferencing** within Lync includes audio, video, and Web conferencing. Lync provides a familiar user experience to those that are accustomed to traditional audio bridge services, including dial-in services and touch-tone call control commands, but with the benefit of one-click scheduling within Microsoft Outlook. Expanding upon the audio component, Lync also enables users to share programs or their entire desktop to conference attendees, as well as peer-to-peer or multiparty video conferencing.

Also included in the Lync implementation plan is an upgrade to the current voice mail system, Intuity Audix. The new voice mail platform, **Unified Messaging**, will work in conjunction with Microsoft Exchange to route voice mail messages to email, providing a speech-to-text written preview of the voice message, as well as allowing playback of the audio file.

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Wireless Update

MTSU Network Services has embarked upon an expansive project this year to provide complete wireless network coverage to the main campus. The project started this spring, with the College of Education receiving the first wireless upgrade in support of several initiatives in that building.

Each room was surveyed to determine if the current wireless coverage was adequate in terms of signal strength and capacity. The data was then modeled in special software, pinpointing the exact locations of where wireless access points were needed throughout the building to meet the new performance standards of MTSU Networking Services.

Through funding supplied by the Information Technology Division, the College of Education Building wireless network was completed, providing enhanced coverage and capacity to accommodate many more wireless devices, including smartphones, laptops, and tablets.

The next building to receive the wireless upgrade will be the James E. Walker Library. This building presents a serious challenge to wireless networking, with the book stacks and reinforced walls creating several layers of signal attenuating material. The survey and data modeling has been done, and the hardware and software has been recently ordered.

Additional buildings will be upgraded with priority based on several factors, including age of current equipment, student population served in that building, curriculum requirements, etc.
University Launches New Software to Protect Private Information

If you see the image of a blue dog appear on the bottom right corner of your desktop, don’t panic! It’s part of a new auditing software package designed to protect your private information such as Social Security or bank account numbers from getting into the wrong hands.

All universities, as well as other public and private entities, must make reasonable efforts to ensure the security of the data they maintain. Certain data, known collectively as Personally Identifiable Information (PII), require more stringent safeguards than other types of data.

The MTSU Information Security Policy I:03:06, dated July 1, 2009, covers the protection of University information in all its forms. It discusses what PII is, how it may be handled and stored, along with measures taken to safeguard that data.

Section V.J. of the Information Security Policy specifically addresses the storage of PII, stating that, where possible, all records containing PII shall be stored on secure network drives with access limited to those individuals or entities that require access to perform a legitimate University function. Individual workstations, laptops, mobile storage devices, and other personal computers (e.g., PDAs and home computers, etc.) shall not be used to store records containing PII except where permitted by policy.

To help the University meet the requirements of that policy, the Information Technology Division (ITD) is installing Identity Finder, an auditing software package, on all PC's and Mac computers across the campus. Identity Finder replaces Spider, an open source utility last updated in 2008, used to find SSN, credit card numbers, and other PII in a variety of file types on MTSU computers. Identity Finder also replaces an existing manual process with an automatic process to ensure employee computers comply with section V.J. of the University’s Information Security Policy.

Identity Finder behaves very similarly to our anti-virus solution. The software scans the local desktop, and if it detects a possible issue, an alert will be generated to the management console. ITD Security will contact the user to work together to ensure the alert is valid, and if so, to secure the information.

The purpose of Identity Finder is to identify PII only. It does not perform an inventory of software or software licenses, or evaluate data in any way. Any data outside the scope of PII is ignored. Data that is within the scope of Identity Finder includes Social Security Numbers, credit card and PCI data, and bank account numbers.

The data that generates an issue is NOT sent back to the central management console. Only the computer name, data type (SSN, credit card number, etc.), and data location are maintained by the central management console.

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2012 Technology Quality Survey

During the fall semester, the Information Technology Division conducted a survey to collect information as to the satisfaction of the campus community with the quality of ITD-related services. Thanks to the input generated from over 500 responses, ITD gathered information to help direct strategic planning and priority setting for the next year. ITD intends to conduct the survey annually and use it to track progress in providing services to the campus.

The survey results pinpointed several priority issues in which ITD has already begun to address such as the state and quality of campus Internet access. To address that issue, ITD is in the process of upgrading the wireless network across campus to increase wireless coverage and signal strength in all areas. Dubbed “Ubiquitous Wireless,” the project aims to accommodate the rapid increase in mobile devices such as smartphones, tablets, and laptops.

Engineers representing Enterasys and Howard Technology Solutions are administering technical surveys in each building on campus to create an engineering design that details the technologies required to reach the Ubiquitous Wireless standard.

Following the completion of the engineering design, a list of materials will be created and priced. The building will then be placed on a priority list for an upgrade. The upgrade project will take approximately two years to be completed. However, students, faculty, and staff will notice marked improvement in high-traffic areas very quickly. Several buildings on campus have already received a wireless upgrade such as Scarlett Commons, Womack Lane in Housing, and the College of Education. The engineering design has been completed for the James Walker Library, and that building’s upgrade process should commence in the very near future.

This represents just one of the many ongoing technology-related projects and is an example of how ITD intends to use the information collected from the survey to enhance the quality of the services it provides. Please look for next year’s survey for a chance to provide input and suggestions.

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There’s an old adage that affirms, “Two minds are greater than one.” That saying rings especially true for an ambitious collaborative endeavor that combines teaching and learning with innovative technology.

Dubbed Project Engage by a team comprised of three Middle Tennessee State University professors and five teacher candidates who joined forces to launch the initiative, the project uses iPads loaded with specific pedagogical applications that foster educational growth in an elementary setting.

Dr. Becky Alexander, a MTSU elementary education assistant professor who helped get the project off the ground, said the endeavor began in a meeting at Woodbury Grammar School in Woodbury, Tennessee in the fall of 2011.

Alexander joined five of her students, Hallie Shafer, Heather Martin, Miguel Eguia, Raven Booth, and Tyler Mingle to observe a first grade class taught by Holly Harwood, who is one of Alexander’s former protégés. The group discussed ways in which to improve the educational experience for the first graders, including the creation of literacy workstations, common core standards, iPad integration, and the establishment of a class blog.

The team’s efforts were rewarded last summer when it received a technology innovation grant that provided the ability to purchase iPads loaded with specific pedagogical applications that support collaboration. Project Engage also includes observations, workstations, collaborative blogs between the teacher candidates and the first grade students, and shared book reading using Google Hangouts.

“One of the most effective benefits of Project Engage is the cross-departmental collaboration it generated. The project allows educators from different walks of life to team up for the good of the community,” said Dr. Charles Milligan, another MTSU Womack Family Educational Leadership assistant professor who also assisted with the

Teaching, Learning & Technology

PROFILE

A Collaborative Effort

Pictured from left to right: Dr. Becky Alexander, Dr. Charlene True, and Dr. Charles Milligan. The academic trio joined five teacher candidates to launch Project Engage, a collaborative endeavor that implements iPads loaded with specific pedagogical applications that foster educational growth in an elementary setting.

The Common Core State Standards are a set of state-mandated educational guidelines for math and English language arts that were developed to ensure every student graduates high school prepared for college or the workforce. The standards reflect clear expectations of what students should know in each grade and subject. One of the most effective benefits of Project Engage is the cross-departmental collaboration it generated. The project allows educators from different walks of life to team up for the good of the community.

“The project has gotten us all working together,” said Dr. Charles Milligan, another MTSU Womack Family Educational Leadership assistant professor who also assisted with the

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MTBustracking
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approach. One option explored was an “out of the box” solution for a fleet management system with GPS devices. It was not the most cost effective solution for the University, and the Mobile Development Team decided to build a solution from scratch.

The MTBustracking system starts, as you might have guessed, on the buses. Transmitters that are mounted on each shuttle bus broadcast the bus’s location when it is in motion. If the bus sits idle for an extended period of time, the location will not be broadcast. The server side of the system listens for location broadcasts, and the Web service stores and relays the locations to the end-user. The Web service also provides personnel in Parking and Transportation Services a way to manage the system. They can turn tracking on and off for each bus and schedule times when buses will not be tracked (e.g. when a bus is scheduled for a long trip away from campus).

The mobile app map displays the bus route color and shows each bus’s location as it travels around campus. You can preview the system at http://mtbustracking.mtsu.edu. Keep checking your phone for the next MTSU Mobile version download containing the MTBustracking functionality.

Current student MTSU Mobile Development Team members are Jason Bandy, Chelsea Rath, Matt Houglum, Robert Reaves, Reid Wiggins, and Chris Johnson.

Collaborate
Continued from page 4

initiative. “Due to the nature of what they do, academic departments are conclave of autonomy. This project allows us to set an example of collaboration for the schools. It also allows us to approach things from different perspectives. The school’s principal (Bonnie Patterson) has been an integral part of Woodbury and Cannon County for her whole life. She has such passion for her students that it’s hard not to want to assist her with this project. It’s been good for us, it’s been good for the school, and it’s been good for the students and community as well. We hope to see some tremendous gains in school achievement.”

The teachers-in-training who worked on the project had expressed a desire to conduct research and to publish, Alexander noted. Project Engage provides fertile ground for numerous research opportunities.

“This is something the teacher candidates were really excited about,” Alexander said. “They were leading the way and knew what they wanted. Everything that we did with Project Engage was a collaborative effort, not only among us but with Ms. Harwood and the principal. The schools wanted us to collaborate with them to make sure that we fulfilled the needs of the students. There was always constant communication.”

Project Engage reaps numerous benefits including fostering a productive working relationship among MTSU teacher candidates, faculty, and elementary school personnel; providing burgeoning teachers with the opportunity to work with a diverse population of students; exposing elementary school students to higher education; and providing teacher candidates with an opportunity to use innovative technologies in a pedagogical setting.

In addition, the project supports and compliments literacy, technology, diverse learners, and standards and assessment.

Although technology is one of the driving forces fueling the project, Alexander believes it is not as crucial as the learning process itself.

“Technology is still secondary to how children learn,” she said. “We need to be aware of all the differences in how children come to learn instead of just showing them technology for technology’s sake. It’s more about the child and learning about what his or her needs are and how we can provide those needs.”

“Technology is not going to go away,” Milligan added. “We have to embrace it and find out how to use it to everyone’s benefit.”

Project Engage helped teacher candidate Miguel Eguia realize the importance of technology in a modern classroom setting.

“Through the use of the many educational apps, teachers can deliver a personalized lesson to their students,” he said. “Also, the simple mobility of the iPad allows the instructor to deliver the best hands-on experience possible. Using this technology not only teaches and keeps the children current with the technology of everyday life, but it also allows them to use it just as they might in the workplace. From using apps to solving issues they were presented with, to consultation and voting on decisions they needed to make, the apps gave them an engaging means and experience of real-world problem solving through parity and collaboration.”

Microsoft Lync
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all through a single inbox. Unlike the current Enabled Voice Mail solution, the single inbox functionality will be available to all voice mail users.

Lync 2013 will certainly transform business processes and open new communication paths. While you will still be able to communicate via a traditional phone conversation, you will likely find that with Lync there may be a more effective way to get the answers you need when you need them.

Instead of doing business in a wait-to-hear-back approach, imagine doing business at the speed of thought. Stay tuned for more exciting developments with Lync 2013!
From balancing multiple course loads to managing their curriculums, teachers have a lot on their plates. The last thing they need to be worried about is technology.

That’s where Darryl Leach comes in. “I call it banging my head,” Leach reflected. “I tell teachers not to bang their heads. Let me bang my head for them and find solutions that I know will work. That way, when I’m making a recommendation I know I’m not passing a problem on to the teacher. I’m giving them something that will help enrich their teaching and perhaps even their lives.”

As an instructional technology specialist serving in ITD’s Faculty Instructional Technology Center (FITC), Leach assists MTSU faculty with all facets of instructional technology, including online course development and multimedia applications.

Leach also liaises with University College and the Learning, Teaching, and Innovative Technology Center to reinforce consistency of his teaching standards and guidance.

In order to assist his faculty clientele, Leach regularly teaches workshops, conducts one-on-one and phone consultations, and advocates for teachers on their behalf by submitting incident reports to Desire2Learn (D2L) as needed and ensuring new D2L versions are fully tested before going live.

“I’m essentially their voice,” he explained. “I’m there to make sure D2L is working for them and not the other way around.”

The FITC has been a perfect fit for Leach, who served 26 years in the U.S. Air Force working in the communications and technology fields. Culminating his career as a Chief Master Sergeant and serving as chief of all Department of Defense networks in the Pacific theater, Leach retired from the Air Force in 2004 to pursue his interests in the recording industry. He earned a master’s degree in recording arts & technology from MTSU, and worked as a studio manager in the Murfreesboro-based Walnut House Studios before joining ITD in 2009.

“This job is ideal for nearly my entire background,” Leach said. “I had already served as a GA for the FITC, and of course with my recording industry experience, the audio and visual portion of the job seemed to complete an incredibly unique fit between the job description and all of my skillsets.”

Aside from the job description that fit like a glove, another aspect about MTSU attracted Leach’s admiration.

“What really impresses me about MTSU is the quality in the buildings and services,” he said. “When I first attended my orientation briefing for the Masters of Recording Arts and Technology program, (MTSU President) Dr. McPhee said he was committed to having the best quality buildings, facilities, and services. And I’ve absolutely seen that quality reflected in the studios, classrooms, library, rec center, and other campus buildings where I’ve had the opportunity to work and study.”

Outside of the office Leach enjoys recording and songwriting and spending time with his wife, Aimee. Their son, Casey, recently completed his commitment to the U.S. Air Force and works as a U.S. Department of Defense contractor in Denver.
**ITD Staff News**

**Charlie Cantrell** recently joined ITD as its newest Web specialist. In his new role, Charlie will primarily support faculty, staff, and students with their Web presence and help maintain the University’s website. He comes to MTSU from Saint Thomas Health, where he worked as an E-Learning Specialist. His responsibilities there included serving as the learning management system administrator and assisting with online learning initiatives. Charlie is a graduate of Tennessee Technological University with a degree in Web design. Online education is Charlie’s passion, and he hopes to leverage MTSU’s Web presence to make it easier for students to find the information they need.

**Systems administrators Paul Collette and Mike Stefani** recently attended a week-long NetApp “boot camp” course in Atlanta. The program is an accelerated five-day training course for advanced NetApp SAN (storage area network) management, which is the background storage that ties in to the campus infrastructure to support the University’s Banner databases, virtual desktops, and various other servers.

Web specialist **Alecia Heidt** recently attended the 2013 OmniUpdate User Training Conference in Anaheim, Cali. The event, which was held on March 3-7, highlighted the newest capabilities and best practices of the innovative content management system, OU Campus, which was recently implemented at MTSU. Conference attendees were provided with opportunities to spend quality face-to-face time with Omni-Update staff, participate in hands-on workshops, interact and network with representatives from hundreds of higher education institutions from around the country, and listen to presentations from OU Campus experts.

Assistant Vice President **Lisa Rogers**, senior systems analyst **Glenda Oshop**, and senior systems analyst **Ying Ding** will join a host of other MTSU representatives at the Ellucian Live Conference in Philadelphia on April 7-10, 2013. The annual event draws approximately 8,500 participants from 2,400 higher education institutions around the world. Attendees will discuss new ideas, insights, and approaches to help higher education move forward with enterprise and student service systems.

Identity Finder will be automatically installed on all Windows computers connected to the FSA domain by April 1, 2013. Non-FSA domain computers, along with all Mac computers, will be installed manually until an automatic process can be developed.

Once installed, the software is configured to scan the computer on the first Thursday of each month at 2:00 a.m. Please ensure you leave your computer powered on overnight, with your account logged out.


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Get the most out of your wireless telephone’s data plan by configuring your device to utilize MTSU’s wireless network (WLANMTSU) when you are on campus. This is now more important than ever, as many wireless providers are moving away from unlimited data plans. By taking a few moments now to verify that your phone is set to utilize MTSU’s wireless network, you may save yourself from overage expenses in the future. Once your phone has been configured and WiFi turned on, your phone will search for the WiFi network when you are on campus and automatically revert to your provider’s network when you leave the campus. For more information about MTSU’s wireless network, visit [http://mtsu.edu/itdnet/wireless_itdnet.php](http://mtsu.edu/itdnet/wireless_itdnet.php), or contact the Help Desk at 5345.
Are you sick of the two-step process of deleting objects and then having to empty the Recycling Bin? Here’s how to really, REALLY delete a file or folder forever. Highlight the item you want to delete and press Shift + Delete on the keyboard. Just one step! This bypasses the Recycling Bin and the item is deleted. But be careful though. Because once it’s gone, it’s gone forever!

When Routers go Rogue

A “rogue router” is a network device, most commonly a commercially available wireless router, that is placed on the MTSU network without prior permission of ITD Network Services.

Typically, commercial routers, such as Linksys, D-Link, etc., have a network service called Dynamic Host Configuration Protocol (DHCP) enabled by default. This automates the process by which a home user obtains an IP address from the router, allowing that user to connect to the home network, and subsequently to the Internet.

We use DHCP across the network at MTSU as well, however, we have specific information that is relayed to each computer, tablet or other device as it connects to our network.

When a rogue router is connected to the network, it can intercept the DHCP requests from the device, responding with incorrect information. It appears to the user that they are connected to the University network, but in reality they are only connected to that rogue router. Network Services has technology in place to track down unauthorized network devices such as rogue routers, but it remains a time-consuming process.

We encourage all students, faculty, and staff to consult with Network Services at 615-898-5753 before attempting to attach any wired or wireless router, switch, or other network equipment to the University enterprise network.

Progress continues to be made on the Middle Tennessee State University Website Revitalization Project.

With a scheduled unveiling later this spring, the revamped MTSU site will sport a fresh new look designed to be viewed on all media including traditional desktops, laptops, tablets, and smartphones. In preparation for the launch, members of the ITD Web Team and Marketing have been meeting with representatives from each of the University’s programs to develop engaging Web page content to highlight each program’s expertise and uniqueness.

Ultimately, the goal is to create one University site containing lots of information in lieu of many disparate sites. The University’s current site consists of more than 17,000 pages and has grown organically to a point where it has become challenging to navigate, especially for potential students who are not familiar with the University. The revamped website aims to trim away extraneous or esoteric information in order to become less cluttered and confusing for potential students interested in attending MTSU and will play a part in the University’s focus on retention and graduation.

The Web Team has been working closely with Creative and Visual Services to obtain vibrant images for the new site, and Marketing and Communications has contracted with an independent videography company to create videos to highlight the University’s programs. These videos will be posted gradually after the site officially launches. Marketing and Communications is also gathering quotes from various MTSU students and alumni to help personalize the new site.

Stay tuned for further developments.