

TSM SPOTLIGHT

James Weatherly



James Weatherly, associate professor at Murray State, has been with the TSM program since it began 10 years ago. He was raised in middle Tennessee until 16 years of age when he moved to Murray, Ky., graduating from Murray High School. Weatherly joined the faculty of Murray State when a new program began, Electrical Engineering Technology. Weatherly

has now been on the faculty at Murray State University for 35 years teaching in the programs of Electrical Engineering Technology, Electromechanical Engineering Technology and Telecommunications Systems Management. He graduated from the University of Tennessee at Knoxville with a B.S. and M.S. in Electrical Engineering.

Former faculty advisor for MSU's student chapter of the Institute for Electrical and Electronic Engineers (IEEE), Weatherly also enjoys raising beef cattle among his many other endeavors. Some of Weatherly's time is spent as a consultant to a regional industry dealing with electrical issues. He spends his days off being the Boy Scout Scoutmaster, coaching the Murray High Boys Soccer Team, spending time with grandchildren and tending to the family farm. The last forty years he has been happily married to his wife Patricia and they have two children, Chris and Matt, and three grandchildren.



Randall Winchester is the newest addition to Murray State University's TSM staff this year. Winchester joined the staff of the Center for Telecommunications Systems Management in July 2009 as the Communications Researcher. He is originally from Murray, Ky., where he has been an active community member

serving on the Calloway County Public Library Board for eight years and with the Murray State University Amateur Radio Club. Winchester received his BIS degree in 1991 and is excited to be back at Murray State to be exposed to the people, programs and potential the university has to offer.

Winchester shares research interests in communications, software usability, database organization, electronics and robotics. He enjoys teaching an Amateur Radio licensing class and has taught the basic entry level class up to the highest entry level class of license. In his spare time he enjoys spending time with his wife and two sons, catching up on sleep, reading, tinkering with the radio, computer or boat. Winchester's quote to live by is from Socrates, "The more you know, the more you realize you know nothing."

Mark your calendars

2010

- May 11 P.O.I.N.T., Madisonville
- June 7-11 Cyber Academy 1
- June 21-25 Cyber Academy 2
- July 12-16 Cyber Academy 3
- July 27-30 Second-year Academy
- September 16 AT&T Women in Telecom

For more information on any events, please call **270-809-3987**

Freeze Frame



Pictured from right to left, TSM students, Travis Taylor, Chris Wiggins, Zach Blandford and Matt Henry enjoyed the CISCO NOW van that visited campus to demonstrate the latest technologies.



**MURRAY
STATE UNIVERSITY**

**Center for Telecommunications
Systems Management**

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The Director's Chair

Research and Development (R&D) - R&D refers to systematic investigation or experimentation involving innovation or technical risk, the outcome of which is either new knowledge or new or improved materials, products, devices, processes or services. (<http://www.angel-investor-news.com/glossary.htm>)

R&D is becoming an increasingly important part of the Telecommunication Systems Management (TSM) program at Murray State University (MSU). In the 10 years since the Program of Distinction in TSM was started at MSU; R&D has grown from nothing to a current project portfolio of almost \$4,000,000. Having a wide variety of R&D projects allows TSM faculty, staff and students the opportunity to put into practice their knowledge and skills.

The Multi-Band Radio (MBR) project discussed in this issue is one example of the reputation of the TSM program at MSU. MSU was sought out by the U.S. Department of Homeland Security (DHS) to test the new MBR. While MSU was not paid to do this experimentation, we were the only university in the nation asked to be part of the final testing of the product. The inclusion of the TSM program, by DHS, is a clear validation of our reputation on the national level.

With \$3M of R&D being conducted for DHS, MSU faculty, staff and students are able to develop new products that are innovative. Graduate and undergraduate students are involved in the 10 current R&D projects. The projects allow students to put into practice things they have learned in the classroom and to develop new skills required to successfully address technical

issues in the projects. While the technical aspects of the projects are significant, the business component of the projects allows the TSM students to apply all of their training in finding total solutions to the problems. The unique blend of engineering and business in the TSM program is a perfect fit in solving the issues involved in the R&D projects.

"Every day is something new and exciting." This statement from one of our TSM staff members is reflective of the environment created by a robust R&D program. Faculty and staff have opportunities to not only do exciting work but to also publish results. The publishing of results from the R&D projects increases the stature of the TSM program at MSU.

The ability to bring R&D projects to MSU also provides support to the entire TSM program. The projects fund new laboratory equipment and upgrades to existing facilities. The projects also allow the TSM program to add new staff. People are now coming to MSU asking us to lead research projects or to be part of their team. Industry and government agencies feel that the TSM program at MSU is now recognized as a leader in research.

Jim Gantt



Convergence



News from
The Center for Telecommunications Systems Management
Spring 2010

2010 marks 10th Anniversary of TSM

One Program of Distinction—10 Years of Excellence. This year marks the 10th Anniversary of the TSM program. Throughout the past 10 years the program has seen tremendous accomplishment and has demonstrated excellence. Every individual that is or has been a member of TSM as faculty, staff or student in the program has played an instrumental role in bringing TSM to greater

heights and pushing the envelope in defining a true Program of Distinction.

Join us at the TSM Awards Luncheon during the annual Patterns of Distinction Security Matters conference to celebrate the 10th Anniversary!!! Register at www.podsecuritymatters.com

The "Cave" has a New Value

The TSM program finished another successful year in the CyberCave with summer academies and fall field trips. This past summer CyberCave Academy was in higher demand than ever before. Approximately 200 applications were received for admittance into the summer camps with only 80 spots available. Changes were made to accommodate the high number of applicants by the addition of an extra first-year camp. In total, the CyberCave Academies this past summer included four first-year camps and one second-year camp.

With the number and location of applicants growing and ranging as far as California, Colorado and West Virginia, additional changes began to be considered. CyberCave Academy, always known as a free five-day summer camp that included instruction, housing, activities, and food, would soon have a value to demonstrate its prestige. This past fall the decision was made to no longer have CyberCave Academy as a free week-long camp. A new room and board fee was voted on by the TSM Policy Board and will be implemented during the summer of 2010. Despite the implementation of the room and board fee, some students will still have the opportunity to attend the camp free of charge. Several scholarships were made available by the Center for TSM to enable students a free week-long summer academy experience.

"It will be interesting to see what effects the new changes bring now that CyberCave is no longer a guaranteed free camp. CyberCave Academy is a prestigious camp that has offered students an education and college experience free of charge for one week. The difference we expect to see are students that apply



Some students from the 2nd Year Academy get together on their last day of camp to snap a picture.

for the experience, not a free week of camp. The hope is to recruit students who eventually will want to attend Murray State and study in the TSM program," said Amber Anderson, marketing specialist for CTSM.

The excitement and demand for CyberCave didn't end in the summer months. Students who attended CyberCave Academy summer camps introduced the experience to fellow classmates. This past fall, field trips were a success as new schools visited campus due to the recommendation of past CyberCave Academy students. Teachers were eager to learn about the Cave and what the TSM program had to offer. Field trips for the spring term are already booked and the CyberCave staff is excited to kickoff another semester. For more information about CyberCave Academy or Field Trips, check out our website <http://www.murraystate.edu/tsm/cybercave>.

<http://www.murraystate.edu/tsm>

WIT Golf Day

The Fourth Annual AT&T Women in Telecom Golf Day went off without a hitch once again at MSU Miller Golf Course on September 17, 2009. The Golf Day originated in 2006 as the first event in the region tailored specifically for women in the telecom field. The Program of Distinction in TSM hosts the event annually not only to give women the opportunity to learn how to golf but to network and build relationships with other women with similar interests. Approximately 45 females attended this year's event representing nine organizations/companies; alongside these women were female students and faculty from the TSM program who were sponsored by AT&T.

MSU Women's Golf Coach, Velvet Milkman, and Miller Golf Pro, Will Snodgrass, started the day off by instructing the women on basic golf technique. After some practice and lunch the women were able to take what they had learned to the course, playing nine holes of golf and participating in some putting contests. During lunch, compliments of AT&T, the attendees were able to hear guest speakers share their experiences in the telecom field. The keynote speaker, AT&T Kentucky/Tennessee Area Manager, Deborah Buchanan, spoke of her experiences as a lady in the telecom industry. Andrea Crouch, a scholarship winner for three consecutive years spoke about the influence of TSM in her everyday activities. TSM faculty, Marcia Combs, discussed how she has taken her past experiences in the telecom industry and used them in her teaching.



Velvet Milkman leads ladies at AT&T Women in Telecom for some stretching to start the day

Not only does the AT&T Golf Day provide networking opportunity for women in the telecom industry, but it is beneficial to the TSM program because the event raises money for TSM Scholarships. Due to the generosity of AT&T and several other companies, over 5,000 dollars was raised providing three lovely ladies with scholarships for the 2010-2011 school year. Supporters of the event included: WinScribe, Purchase Area Communications, West Kentucky and Tennessee, Community Financial Services Bank, Newwave Communications, Computer Services, Inc., Tacticon Research, IRIS Networks and College of Science Engineering and Technology.

Geeks Night Out

A new kind of meeting was reintroduced this past fall that is making everyone who is anyone get out on the second Tuesday of every month. The Professional Organization of Information and Network Technologies (POINT) kicked off its first meeting in September at the Big Apple Café in Murray. Approximately 45 were in attendance making it a success for the first of several meetings. In October, the second meeting was held at Whalers Catch in Paducah and in November at O'Charleys in Hopkinsville. With meetings every month in centralized locations around Western Kentucky, POINT will gather individuals from a variety of companies and locations to assist industry leaders in sharing information. The meetings will be held on the second Tuesday of each month, rotating between locations in Murray, Paducah, Hopkinsville and Madisonville.

POINT's mission is to introduce and share knowledge in the high-tech fields of software development and information technology, while providing environments for professionals to network on a regular basis. The evening starts with

networking opportunities with light appetizers provided. Following casual conversation a featured guest speaker addresses attendees about an important topic in the telecom or information technology industry. Chris Tanner, former assistant director of the Regional Business and Innovation Center (RBIC) was the featured speaker for all three meetings in the fall. Tanner had served as a Patent Attorney for 10 years and gave helpful information to attendees about software patents.

Murray State's Program of Distinction in Telecommunications Systems Management (TSM), the Computer Science and Information Systems (CSIS) Department and the RBIC came together to create POINT. There is no registration or membership fee but anyone that is interested in participating is asked to register for the events. If you would like to be added to the POINT mailing list to receive updates on meeting locations and times please contact Loretta Daniel at loretta.daniel@murraystate.edu or (270) 809-6071.

Murray State: Only University Selected in Multi-Band Radio Project

TSM has been a leader in multiple Department of Homeland Security (DHS) projects. This past fall Murray State University, along with 13 other organizations, was selected to conduct a pilot study for a Multi-Band Radio (MBR) Project funded by the DHS. Murray State was the only university that was selected to be a part of this pilot study. Other agencies across the nation involved included the 2010 Olympic Security Committee, Amtrak, Boise Fire Department, Canadian Interoperability Technology Interest Group, Customs and Border Patrol, Federal Emergency Management Agency, Hawaii State Civil Defense, Interagency Communication Interoperability System, Michigan Emergency Medical Services, Phoenix Police Department and Arizona Department of Emergency, Texas National Guard, U.S. Marshals Service, and Washington Metro Area Transit Authority Transit Police.

"Murray State was selected as a player in this project due to our national reputation in Telecommunications Systems Management research. It is not only an honor to take part in the project but to be the only university involved," commented Jim Gantt, Director of Center for Telecommunication Systems Management. The Center took the lead in Murray State's part of the project organized through the Program of Distinction in TSM. Projects like this give the university and the TSM program national recognition.

The need for the MBR project became necessary when trying to find more efficient ways for emergency response agencies to communicate and swap information. The DHS Science and Technology Directorate awarded a \$6.2 million contract to Thales Communication to orchestrate a first-ever MBR that allowed emergency responders to communicate with partner agencies despite the radio band. Currently radio bands only function within a specific frequency, the MBR, comparable in size and weight to existing portable radios, provides users with a more modern and efficient means of communication possibilities. The prototype will be able to access primary



Mark Garland (pictured left) shows off one of the Multi-band radios provided to Murray State.

public safety bands between 136-174 mega hertz (MHz) and 380-520 MHz as well as in 700 MHz and 800 MHz bands. These capabilities along with others, when authorized, will allow federal agencies to communicate with local, tribal, regional and state counterparts. Priced at approximately \$4,000-\$6,000 the MBR is comparable to current high-end portable radios and is the first multiband to be designed for government agencies and first responders, DHS said.

Murray State's involvement in the MBR project sets it apart and provides the opportunity for individuals in the TSM program to participate in cutting-edge research. "This research allows the university to have access to the newest emergency communications equipment in the world. The MBR project allows us to impact where emergency communication is headed and provides our students and faculty/staff an opportunity to be involved with the best and most modern equipment and research," said Gantt.



Faculty and staff accept a \$16,000 check from AT&T: (In order from left to right) John Hart, Marcia Combs, AT&T President of Kentucky Mary Pat Regan, Dr. Gary Brockway, Dean Steve Cobb and Dean Tim Todd.

Faculty Members Make Plans for Networks-To-Go

This past fall a new outreach project entitled Networks-To-Go was made a reality with the help of generous grant money from AT&T and Murray State's Regional Stewardship. The Program of Distinction in Telecommunications Systems Management (TSM) was presented with a \$16,000 grant check from AT&T and \$4,455 from the Regional Stewardship to fund the project. TSM faculty Marcia Combs and John Hart took the lead on Networks-To-Go, a new traveling lab offered by TSM at Murray State and designed for middle and high school students to explore data networking and security. Combs and Hart intend to travel to area schools and provide hands-on lab demonstrations in routing and switching techniques, wireless communication, network security and multimedia and data communications.

Combs and Hart are willing to work with schools and customize the labs to be designed to supplement each teacher's curriculum. Combs commented, "We're hoping that Networks-To-Go will continue the success of CyberCave in providing area high school students with a look into telecommunications systems management as a potential career choice. There is no substitute for getting your hands on real network equipment to learn what happens when you check your email or use your web browser."



Junior, Travis Taylor poses on the football field while waiting for Homecoming King and Queen to be announced.

TSM Student is Member of Homecoming Court

TSM was involved with Murray State Homecoming activities for the fourth year in a row by having a tent at Tent City. Visitors to the tent were greeted by faculty and staff of TSM and were given the opportunity to see a model of the Man-Portable Interoperable Tactical Operations Center (MITOC) and discuss the work the Center for TSM has been involved with. The tent offered a café atmosphere with free coffee and homemade ice cream as well as computers set up to access the web which allowed tent city visitors to invite individuals who were unable to attend the Homecoming activities to view them live online.

TSM also had a presence in the Homecoming Court. TSM junior, Travis Taylor, was the first ever TSM student selected to be a member of the 2009 Homecoming Court. To be chosen as one of the 10 candidates is a huge honor on Murray State's campus. You must be nominated by a campus organization and then go through an interview process to be selected. Taylor was nominated by Sigma Sigma Sigma sorority, and went on to the interview process to prove why he should be one of the five male candidates for court.

"I got a call shortly after the interview letting me know that I had made it on court. I was pretty excited, and immediately began looking forward to the annual homecoming parade. I am very thankful for the opportunity, and encourage everyone to get involved with different organizations on campus to put you in a position to be nominated for such an honor. Your college experience can be whatever you make it. I would not have been able to have this experience without the support of TSM and the various organizations I am a part of," commented Taylor.

AT&T Women In Telecom



Golf Day September 16, 2010

The day will include:

- Basic golf instruction
- Lunch with Guest Speaker
- Contests with prizes
- 9 holes of golf

Find more info at www.murraystate.edu/tsm/ctsm

Hosted by:



Geeks Night Out!!!

Enjoy light appetizers while networking with individuals with similar interests!!!

Bring your business cards to enter into a drawing and win!!!

Find out ways to be the featured sponsor at a meeting and talk about your company!!!

Schedule

- May 11, Paducah
- June 8, Hopkinsville
- July 13, Murray
- August 10, Paducah

POINT's mission...

Professional Organization of Information and Network Technologies

To introduce and share knowledge in the high-fields of software development and information technology while providing environments for professionals to network on a regular basis.

