The CyberCave is an interactive, hands-on laboratory which caters to high school students seeking to explore today's world of cutting edge technology. The CyberCave program is sponsored and delivered by faculty and staff from MSU's Program of Distinction in Telecommunications Systems Management. Example technologies to be explored include:

- **Video Conferencing**
  Using videophones and PCs equipped with videoconferencing software, students get a glimpse into this increasingly popular method of communication.

- **Wireless Networking**
  Students will configure a wireless network based on 802.11b technology and examine related issues such as encryption, channel allocation and IP assignment.

- **Pocket PCs**
  Students will explore various applications of the HP iPaq 5450 Pocket PC with emphasis on wireless and security capabilities.

- **Biometrics**
  Fingerprint and iris scanners are used to demonstrate how biological features can be the key to unlocking sensitive information.

- **Telephony**
  Using Adtran Atlas 550 switches, students set up their own telephone networks to gain a better understanding of how the phones they see every day actually work.

In summer 2004, a group of 17 students from across the state of Kentucky enjoyed a week-long workshop at Murray State University's CyberCave. The workshop explored advanced technologies and entrepreneurship in the areas of biometric network security, network integrated robotics, video communication, wireless technology, advanced networking and multimedia exploration. The week consisted of 5 days of technology instruction along with extracurricular activities at night. Campers had the opportunity to choose from residential housing or commuting. Three meals a day were provided to each student at no cost.

Two Cyber Camps are planned for Summer 2005. The first will be June 6 – 10 and the second will be June 13 – 17. Please contact the center if you would like to join us for an exciting five-day camp exploring technology on the campus of Murray State University or if you would be interested in a tour of the campus and the facilities available to Murray State students.

TSM 2005 and TSM 2006 Educational Conferences

Beginning with a small though dedicated group in the spring of 2002, the annual educational conference in telecommunications and information technology has continued to grow. In spring 2003, the conference relocated to Louisville and saw attendance triple. Spring of 2004's third annual conference saw attendance continue to grow and the development of the International Telecommunications Education and Research Association (ITERA). Following the 2004 conference a journal of selected papers from both the second and third annual conferences was published by the Center for Telecommunications Systems Management.

During the spring 2004 conference it was agreed that ITERA and Murray State University would jointly sponsor the 2005 conference and that it would be scheduled to precede the USTA conference in Las Vegas. This would also mean a fall conference in place of a spring conference. At this time, plans are for this conference to feature "invited" speakers and paper presentations focusing more on the business side of telecommunications and information technology. Dates for the conference are October 22 and 23.

Continuing its association with USTA, the fifth annual conference will again be scheduled in conjunction with USTA's Telecom06 conference in Las Vegas. Dates for this conference have not been finalized yet, but it will be a spring conference with a more academic emphasis by the speakers and paper presentations. Dr. Terry Holmes of Murray State University is again the program chair for this conference and will be sending out a call for papers for the 2006 conference after the 2005-2006 school year begins this fall.

As it becomes available, information about TSM 2005 and TSM 2006 will be posted to the TSM website at Murray State University **www.murraystate.edu/tsm/conf**

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The Center for
Telecommunications Systems Management
Spring 2005

News from the Director

Let me introduce myself. I'm Jim Gantt and I took over as the director of the Center for Telecommunications Systems Management (CTSM) in February. I'm returning to Murray State after an absence of over 30 years. I grew up in Murray, graduated from Murray State, and then went to graduate school and the Army. I served in and worked for the Army for over 30 years and retired last December. While working for the Army I completed my Ph.D. at Georgia Tech in Industrial and Systems Engineering. In my last Army job I was responsible for research in telecommunications, computer science, weather and supercomputers. Some specific research projects included wireless communications and security, networks, robotics, language translation, visualization and micro scale weather modeling.

I am excited about being at Murray State and being part of the Program of Distinction in Telecommunications Systems Management (TSM). I have worked with many universities and reviewed many research programs. I find the TSM program at Murray State to be strong and yet having potential for growth. It is great to be able to work with dedicated students.

My first two months have been exciting and busy. In this issue you will find an article on the first meeting of the TSM National Advisory Board (NAB). This Board brought together leaders from industry and academia to advise the university on how to strengthen TSM. The board members were excited about their interactions with students and faculty. They left Murray with respect for the entire TSM program. The support for TSM by the university administration is exceptional. Dr. Alexander, MSU president, spent several hours with the board and shared his support for TSM and his vision for the future in this field.

Make sure you look at the articles on the CyberCave, ITERA, and the Faculty spotlight. Good things are happening and these are just a few.

I want to close by thanking Dr. Phil Sparks who retired at the end of January. Phil served as director of the CTSM for over four years. During that time he took an idea and built it into a functioning program. He led the development of a national conference, ITERA, and laid the foundation for the TSM NAB. Phil has left Murray State with a solid CTSM.

Jim Gantt

MURRAY STATE UNIVERSITY

The Center for

Telecommunications Systems Management

SPRING 2005

TSM establishes National Advisory Board

Pictured from left: Kent Bohanon, Richard Anderson, Steven Powless, Dr. James Graham, Cynthia Brumfield, Dr. Linda Johnson, Robert DuCharme and Robert West. John Abel and Michael Hegeman were unavailable for the photo.

The National Board members met with the Murray State Advisory Board at the Alumni Center on April 1.

To assist the faculty and staff connected with the Telecommunications Systems Management (TSM) program and the Center for TSM in determining the strengths and weaknesses of the program and to help us become aware of opportunities and threats, a National Advisory Board has been formed. The board consists of 10 members selected from across the country with different backgrounds, all with something to contribute to the TSM program. The members of the board met with seven members of the Murray State Advisory Board on March 31 and April 1. This meeting allowed the national board members to become informed about MSU/TSM/CTSM, allowed advice to be received by the MSU advisory board on TSM issues, and helped obtain the involvement of the national board members in assisting the TSM program. During the two-day meeting, board members met in Paducah, toured the Murray State University campus and the facilities available to the program, met with representatives of the two colleges in the interdisciplinary program, met graduate and undergraduate students, and participated in numerous discussions.

Members of the National Advisory Board are: John Abel, senior vice president, United States Telecom Association; Richard Anderson, vice chairman of planning and administration, BellSouth; Kent Bohanon, ABS security analyst, State Farm Insurance; Cynthia Brumfield, president, Broadband Insight; Robert DuCharme, security training manager, CISCO Systems Inc.; Dr. James Graham, director, Telecommunications Research Center, University of Louisville; Michael Hegeman, AutoDesk; Dr. Linda Johnson, professor, Western Kentucky University; Steven Powless, president and CEO, Computer Services Inc.; and Robert West, regional sales director, Qwest.

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ITERA

International Telecommunications Education and Research Association

Since its inception at the TSM 2003 academic conference, ITERA has grown and evolved. At the TSM 2004 academic conference, by-laws were approved and officers were elected. Murray State University continues to play a large role in the organization, supporting its website www.itera.org, having both organization and individual memberships, and having two members elected to the Executive Board.

ITERA has also developed a very strong affiliation with the United States Telecomm Association (USTA). ITERA and Murray State University's Telecommunications Systems Management program will be jointly sponsoring the TSM 2005 academic conference and selected dates to immediately precede the USTA conference in Las Vegas in October.

ITERA's goal as outlined in their mission statement is to advance telecommunications science through the creation of a forum for telecommunications and networking professionals, educators and researchers which will encourage and support the creation and maintenance of telecommunications interest groups, conferences, proceedings and journals.

TELECOMMUNICATIONS DATABASE

Murray State University maintains one of the world's largest databases of telecommunications links. The service is free to the user. It is a project of the Program of Distinction. You can find it at www.eXroads.com. This database contains over 30,000 entries. This project is a continuation of the originator, Dr. Walter Bolter, the center's first director.

TSM Faculty/Student Spotlight

When The Telecommunications Systems Management (TSM) program was conceived as an interdisciplinary program, faculty and classes from two colleges came together to form the program.

In the College of Business and Public Affairs:

- Narine Badasyan, assistant professor, economics
- Margie Boldt, assistant professor, accounting
- Anthony Cantarella, assistant professor, computer science and information systems
- Steve Dublin, instructor, management, marketing and business administration
- Terry Holmes, assistant professor, management, marketing and business administration
- Bill Lyle, assistant professor, computer science and information systems
- Martin Milkman, professor, economics and finance
- Fred Miller, professor, management, marketing and business administration
- Victor Raj, chair, computer science and information systems
- George Rice, visiting assistant professor, computer science and information systems

In the College of Science, Engineering and Technology:

- Marlin Greer, associate professor, electromechanical engineering technology
- John Hart, lecturer, telecommunications systems management
- Adam Mabrouk, lecturer, telecommunications systems management
- John McLaren, assistant professor, telecommunications systems management
- Marcia Scott, lecturer, telecommunications systems management
- James Weatherly, associate professor, electromechanical engineering technology
- Abdulrahaman Yarali, assistant professor, telecommunications systems managment

Working with the Telecommunications Systems Management program in relation to the growing interest in online classes for both the undergraduate and graduate programs are:

- Heath Keller, director, online program, business and public affairs
- Linda Miller, director, Center for Teaching and Learning Technology
- Cindy McLaren, online advisor