



Transportation Focus is a quarterly newsletter published by the Nick J. Rahall, II Appalachian Transportation Institute.

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Read *Transportation Focus* online at www.marshall.edu/ati/news/newsletter.htmlx.

Upcoming Events

Transportation Professional Development Courses

Feb. 28-March 1, 2006 Traffic Analysis Workshop and Peer Exchange for WVDOT and FHWA Employees, RTI 3rd Floor Conference Room, Huntington, W.Va.

Feb. 21-23, 2006 West Virginia Utility Inspector Training, Blackwater Falls, Davis, W.Va.

Feb. 28-March 2, 2006 West Virginia Utility Inspector Training, Blackwater Falls, Davis, W.Va.

March 28-29, 2006 PASS 2-Day Training, Parkersburg, W.Va.

May 2-3, 2006 Rail and Road Seminar, State College, College Park, Penn.

Conferences

Aug. 2-3, 2006 Geohazards in Transportation in the Appalachian Region, 6th Annual Technical Forum, Hyatt Regency Hotel, Lexington, Ky.

K-12 Outreach Activities

Feb. 25, 2006 2nd Transportation Injury Prevention Safety (TIPS) Program, Veteran's Memorial Field House, 10 a.m. to 4 p.m.

June 12-16, or 19-23, 2006 SEDA Summer Camp, Morrow Library, Room 119, Marshall University, Huntington, W.Va.

June 26-30, 2006 Design a Future Vehicle Workshop, Morrow Library, Room 119, Marshall University, Huntington, W.Va.

Upcoming Events

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Winter 2006



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Partner Schools:



Partnership with Benedum Foundation, Pittsburgh Gateways Corporation Creates New Transportation Business Incubator for Southern W.Va.

On January 18, 2006, representatives from the Claude Worthington Benedum Foundation presented RTI and its partner, the Pittsburgh Gateways Corporation (PGC), with a grant of \$350,000 to help develop a transportation business incubator in Huntington, W.Va.

RTI and PGC will serve as a regional catalyst in the development of new transportation-related companies in West Virginia through a physical business incubator combined with new company start-up support including business acceleration services.

Approximately 100 individuals who represented the local business community, higher educational institutions, government organizations and RTI students and staff attended the event.

After remarks were given by RTI director of research Dr. Richard Begley and PGC director Mr. Doug Skowron, Mr. Lloyd Jackson presented U.S. Rep. Nick J. Rahall, II with a check on behalf of the Benedum Foundation.

“By serving as a vehicle for developing new transportation-related companies in West Virginia, the business incubator will help RTI fulfill its vision of building jobs through transportation,” Rahall said. “I commend the Benedum Foundation for seeing the potential for a program such as this and believe today marks the beginning of a long, productive partnership between the Foundation and RTI.”

“With the guidance that this business incubator will provide, West Virginia transportation-related businesses will be armed with the tools they need to succeed,” he said. “Stronger businesses mean a stronger economy for all of West Virginia, making this a special day not just for those involved but for all of the residents of our fine state.”

Continued on 3: INCUBATOR



Above: Benedum Foundation representative Lloyd Jackson presents Nick J. Rahall, II and RTI Director of Research Richard Begley with a grant of \$350,000.

Winter 2006

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Plymale's Perspective The Director's Report



As we begin a new year, I am proud to say that many of our researchers, faculty and staff have been recognized for their accomplishments in transportation research, education and technology transfer activities. We congratulate them for their important work in building jobs through transportation:

- Dr. Richard Begley, Dr. Tony Szwilski, Pete Dailey and Zhibin Sheng were recognized for having the best university research paper at the Railway Engineering 2005- 8th International Conference and Exhibition in London, England. There were representatives from 31 countries competing for the award.
- Chandra Inglis-Smith, a graduate research assistant, received the 2005 Student of the Year Award in Washington, D.C. As a member of the Executive Committee of the Council of University Transportation Centers, I had the honor of presenting Chandra and award winners from every UTC with their awards, as well.
- John Fekete, a graduate of Marshall University and former student of Dr. Raymond Busbee, has been named Deputy Director of the Hatfield-McCoy Trails. Fekete, who is also Director of Field Operations for the trail authority, maps out new trails and designs them using GPS training he received at RTI.

In addition, our Technology Transfer team has created a new place to archived media clippings related to RTI research and activities on web at <http://www.marshall.edu/ati/news/media.html>. New articles are posted on the web soon after they are published in the media, so we encourage ~~visitors~~ ^{visitors} to check back frequently.

Robert H. Plymale
Robert H. Plymale

TED2006 To Take Place March 2006



The third international conference on Transportation and Economic Development, TED2006, will take place March 26-30, 2006, in Little Rock, Ark.

RTI is a supporting sponsor of the conference, and Director Bob Plymale and Assistant Director Richard Begley are members of the planning committee.

According to the official website, TED2006 will cover national and international issues but will also have special sessions to discuss the perspectives and analysis of transportation issues in the Southwest and Southeast regions. These sessions will cover NAFTA issues, and other related border, trade and transportation issues.

All papers and presentations will be published in the TED 2006 Conference Proceedings, which will be available on the TED2006 website after the conference concludes.

More information about the conference may be found at www.ted2006-littlerock.org

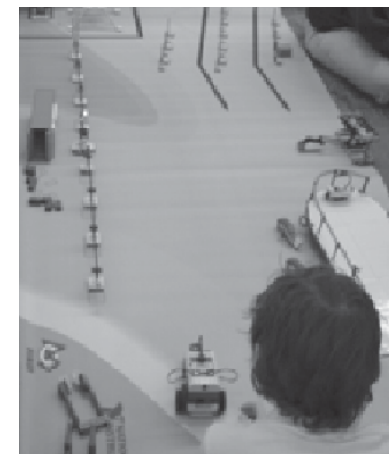


Students Embark on an Ocean Odyssey with FIRST LEGO League

by Abigail Kimberlain

Huntington-area children competed in the FIRST LEGO League Ocean Odyssey Challenge at Marshall University's Morrow Library in December. These 30 students, ages 9 – 14, participated in this global FLL competition for the very first time in our region. The

teams built and programmed their own LEGO Mindstorms Robot to work through a series of Ocean Odyssey missions, such as locating sunken treasure, responsible fishing and preventing pollution. The purpose of this even was to help the students prepare teams for the FIRST LEGO League State Tournament.



Students Compete in FIRST LEGO League Tournament

by Abigail Kimberlain

Wheeling, W. Va. was the home of FIRST LEGO League's seventh annual state competition in which two Huntington-area teams participated: the Barboursville RoboPirates and the Robo Geek Squad. Twenty-two teams from throughout the state competed in a table competition and were judged on project presentation, teamwork and a technical interview. Both students and coaches were awarded participation medals, and the Robo Geek Squad won an award for robot performance and technicality.

"Although not every team walked away with a trophy, the most important part of the competition was the effort that put was put forth to get there," said Linda Hamilton, Coordinator of K-12 Outreach Intelligent Transportation Systems Workshops.





K-12 Education Opportunities Shared at Communities in School's Event

by Abigail Kimberlain

Since 2002, RTI has partnered with Cabell County's branch of the national non-profit, Communities in Schools. CIS is the leading community-based organization committed to helping kids stay in school and preparing them for life.



On October 26, 2005, a CIS networking event called an "Evening with the Agencies" took place at the Huntington Museum of Art. This special event allowed community representatives to meet with CIS and talk about opportunities available to students in the Tri-State, and the importance of education.

RTI Program Coordinator, Barbara Roberts, attended the event and discussed RTI's K-12 education outreach program with other local agencies, including Big Brothers Big Sisters, Girls Scouts and Junior Achievement. The goal of RTI's K-12 education program is to "nurture a new generation of transportation professionals during school years by introducing transportation issues during the school years and to encourage students to consider transportation-related careers later in life." By sharing what RTI has to offer with these community agencies, Roberts brought RTI another step closer to achieving that fundamental goal.

Also in attendance was "Evening with the Agencies" guest of honor, First Lady Gayle Manchin, who gave a brief speech about the importance of education.

Transportation Seminar Series Takes Place in Charleston

by Errin Jewell



On Dec. 1, 2005, Dr. Richard Begley and Wayne Brown of the Greenbrier Co-Generation Plant, were keynote speakers at a transportation seminar series in Charleston, W.Va.

They presented a PowerPoint presentation titled, "Transportation and other Technical Issues for the Proposed Construction of Several Co-Generation Power Plants in Southern West Virginia," during the event. The presentation highlighted the success of the Greenbrier Co-Generation Plant, which utilizes coal waste

by turning it into steam energy to support a local business park and create concrete bricks used in transportation products from fly-ash. Researchers also demonstrated how RTI-created TEDIS software may be used to aid the mining industry. The presentation is available on the RTI website at http://www.marshall.edu/ati/tech/greenbrier_cogen.ppt.

Nearly 75 guests attended, including members of the Kanawha Valley Mining Institute, who hosted the seminar as part of their December business meeting.



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Begley, said "this program will help accelerate business opportunities from several technologies being developed at Marshall University and will support the development of new transportation-related companies. We anticipate very soon that it will also create a significant number of new jobs in southern West Virginia."

Pat Getty of the Benedum Foundation, said the partnership will "pay dividends long down the road.

"RTI, through the vision of Congressman Rahall, has proven itself among the nation's premiere institutions for building jobs through transportation and we commend him for his continued efforts in making RTI a model for others to follow," Getty said. "The successful commercialization of good ideas through the development of knowledge-based businesses will be critically important to the economic future of West Virginia."

Frank Wilson, chair of PGC National Center for Bridge, Highway and Transportation Technologies divi-

sion, said "this partnership between our Transportation Technologies Center assembles a complementary set of political, educational and business development skills and experiences that will have the capacity and wherewithal to generate some significant results in America's resurgent attention to the nation's critical transportation infrastructure needs."

The Claude Worthington Benedum Foundation, an independent foundation established in 1944, focuses its grant-making activities in West Virginia and Pittsburgh. The foundation was created by the late Michael and Sarah Benedum, both natives of West Virginia, who named it after their only child, Claude Worthington Benedum. The Benedum Foundation has awarded almost 6,500 grants worth more than \$265 million. PGC is a business accelerator with the mission of generating new business growth. Gateways partners with leading academic and research institutions to establish and develop Centers of Technology and to effectively connect these institutions and Centers with industry.





WVDOT Employees Participate in 3 Levels of GIS Training

by Diana Long, Guest Columnist

Implementing a statewide Geographic Information System (GIS) is a challenge. Each task is daunting and the list is never ending. There is a need to match software capabilities with needs, match equipment with function, design training to target specific skills and plan for the next technological wave. Faced with this task, the West Virginia Department of Transportation (WVDOT) turned to the RTI for assistance. The goal? Develop and train 140 West Virginia Department of Transportation professionals with varying levels of experience and need. The time frame? ASAP.

In response, RTI designed and implemented a series of training courses which began September 2005. The training was clustered into three levels. Level I provides basic concepts for "Viewers." In the transportation sector, many job classifications require a general understanding of the basic concepts underlying a GIS system. The Level I course provided the participants with skills to navigate ESRI software, ArcGIS Desktop applications including ArcMap, ArcCatalog and ArcToolbox. They learned to use the basics of the software to produce maps and reports. Evaluation data showed large gains in new knowledge, and 76 percent of the participants reported that the skills learned would change the way they perform their job today. Approximately 60 percent requested more training, particularly in the tasks of producing maps and reports. This validates the WVDOT's strategy of providing "Viewer training for the majority, and more advanced training for the 'Users'."

"There is so much information and the software is so involved that learning how to use it all is going to be a big challenge," said Matt Davidson, Environmental Coordinator, Huntington District. "It will take time to get this up and running, but I believe this is the future of information management within the Department. The more we know, the more we can direct setting the kind of information we need to make us more efficient."

Level II and III are advanced training for "Users," or those responsible for creating and manipulating data. Seventy participants from the first level complete Level II and 40 of those are selected for Level III. In addition, two specialized courses in GPS and Remote Sensing will be offered. One hundred twenty DOT employees completed Level I training in February, 2006. Level II will begin later that month and will be completed by summer. Level III will be implemented during the fourth quarter in 2006.

"I am pleased with the outcomes of the Level I training provided by RTI," Hussein Elkhansa, GIS Manager for the WVDOT, said "We understand the challenge of implementing the change and we are accepting the challenge...Initially we partnered with RTI for three levels of training, and it is apparent from the feedback of the participants we will be offering a series of specialized courses tailored to specific needs in the future. My department is committed to support the initiative after implementation, into the future."

RTI, MUGC Are Downlink Site Hosts for SAFETEA-LU Satellite Broadcasts

At the request of the Federal Highways Charleston division, RTI served as an agency downlink site host for the November 17, 2005, SAFETEA-LU Environmental Provisions live satellite broadcast. The purpose of this broadcast is to review the key provisions and the administrative efforts underway to implement the new SAFETEA-LU law.

The local event took place at Marshall University Graduate College in South Charleston from 1 to 4 p.m. Approximately 25 to 30 personnel from the West Virginia Department of Transportation attended. RTI Principal Investigator Dr. Tony Szwilski, as well as CEGAS & CITE STAFF, attended.

FHWA headquarters' personnel and a panel of stakeholders from transportation and resource agencies, and the consulting and research communities, discussed opportunities for input into rulemaking and guidance, as well as further training and outreach events. The program included interactive question and answer sessions to explore proactive efforts to implement the provisions and to help states and communities achieve their transportation and environmental goals.

Program Coordinator Barbara Roberts synchronized the event with the Center for Transportation and the Environment (CTE), a UTC based at North Carolina State University. Participants took part by satellite or the web at more than 180 downlink sites throughout the United States, Puerto Rico and Canada.



Local Teams Place in FIRST LEGO League Tourna-

Twenty-two teams of elementary and middle school students from West Virginia participated in the 7th FIRST LEGO League Tournament Saturday, Dec. 10, 2005, at Wheeling Jesuit University, Wheeling, W.Va.

Two RTI K-12 Outreach Instructors, Linda Hamilton and Frank Adkins, led RTI-sponsored teams during the competition.

Adkins coached the Infra-Reds, which consists of 11 fourth and fifth graders from Crichton Elementary School in Greenbrier County. The Infra-Reds won the League Values Award, a trophy given to the team that "best demonstrates gracious professionalism throughout the tournament." They also finished seventh overall, which Adkins said is "quite an achievement considering this was their first ever competition."

Hamilton coached two Cabell County-based teams, the Barboursville RoboPirates of Barboursville Middle School and The Robo Geek Squad, which consisted of students from four schools. The Robo Geek Squad won an award in robot performance and technicality.

The competition brings together teams of 9-14 year olds from across West Virginia to demonstrate their skills at problem-solving, teamwork,



Left: Frank Adkins coached members of the Infra-Reds during the 2005 FLL Tournament in Wheeling, W.Va.

research, competitive play, and creative thinking, as well as their sense of community and sportsmanship. These qualities are demonstrated by building robots using LEGO building blocks and robotic kits and using these robots to complete various functions that involve controlling the robot and its ability to sense

and grasp objects. Robots are then used to perform various tasks that correlate to the competition theme.

This year's theme was Ocean Odyssey, and the tournament's tasks included locating sunken ships and recovering their valuables, repairing an underwater pipeline, freeing a trapped dolphin, building an artificial reef and lifting a mini submarine from the deck of a ship.

"The thing that seemed to be so fascinating about the entire day was watching all the students, teachers, mentors and parents be one big team," Hamilton said. "Everyone helped everyone else. Many teams made nice comments towards our local teams, congratulating them and commenting on brilliant ideas and very cool T-shirts."

"Every team worked hard to be able to come to the state competition and many parents and teachers volunteered the time to see that students were able to participate and learn from the experience."

Adkins said, "RTI continues to partner with local schools to improve educational opportunities in transportation related fields. Teams from RTI's partner schools excelled in West Virginia's annual FIRST LEGO Robotics Tournament. These teams' success provides further evidence of how outreach programs are helping to enhance the educational opportunities available to the region's school children and prepare them for possible careers in transportation."

Left: Members of the Robo-Geek squad participate in team interviews during the FLL contest.





Chandra Inglis-Smith Named Student of the Year

by Errin Jewell

On January 21, 2006, Chandra Inglis-Smith was named RTI's 2005 Outstanding Student of the Year during the United States Department of Transportation Centers 15th Annual Outstanding Student of the Year Awards Ceremony in Washington, D.C.

According to Sean Litteral, GIS Manager, "if you were going to "Google" Chandra, the key refining words should be: *visionary, self directed* and *hands on*. Throughout her academic and professional career, Chandra has always had a clear path in front of her and the ability to apply past learning and experiences to the job at hand."

Chandra's evolution into a GIS Analyst began with a passion for archaeology. After finishing a bachelor of science degree in Anthropology from Mercyhurst College in 1997, Chandra worked as a Research Assistant for the Rochester Museum and Science Center in Rochester, N.Y., where she was the hands on person, excavating, analyzing artifacts and supporting the efforts of the museum. She then came to West Virginia as an Archaeologist for the Division of Highways.



"Chandra's vision enabled her to see the importance and impact GIS could have on the DOH and her self directed attitude enabled her to change directions and enter Marshall University Graduate College," Litteral said. As a graduate research assistant with RTI, she was a key member in the design and implementation of GIS Training for the West Virginia Department of Transportation. She also was involved in the planning and implementation of the data conversion of WV Tax Parcel

maps and survey data from CAD to a Geodatabase.

Inglis-Smith, said, "graduate course work is structured to help you succeed. Typical course design results in a student learning certain outcomes after a certain period of time successfully. RTI enabled me to integrate my knowledge of culture, and environment, with GIS technology. In one sense, my 'layers of experience' have formed my own Geodatabase with several 'feature' datasets." After graduating in May 2006 with a Masters in Geo-Biophysical Modeling, Chandra plans to pursue full-time employment "in a position that enables her to apply her GIS knowledge in a self-directed environment, with the opportunity for continuous, engaged learning," she said.

RTI Provides Passenger Service and Safety Training

by Ashlee Gibson

Seventeen people attended a 2-day PASS training course Oct. 4-5 at the Raleigh County Armory. RTI and the West Virginia Division of Public Transit have partnered to deliver PASS training sessions throughout West Virginia in calendar year 2005. The training is free, although attendees are responsible for travel and lodging expenses.

The two-day PASS Driver Certification Program ensures that community transportation drivers have current training in passenger assistance techniques, sensitivity skills appropriate for serving persons with disabilities, and includes crisis management training. The session also fulfills the training requirements for Section 5310 participants. The certification is valid for three years. Drivers may renew their certification at a one-day course. Trainers may renew their certification at a full two-day course. To view course descriptions, please go to www.marshall.edu/rti and use the RTI/PASS Transit Link.



New Railroad Conductor Training Facility

Right: Ashley Salyer, Program Coordinator; Dr. Vicki Riley, president of Marshall Community and Technical College; Robert Plymale, RTI director; and James L. Skidmore, chancellor of the Community and Technical College System of West Virginia cut the ribbon on the new facility.

On January 13, 2006, the Marshall Community and Technical College's (MCTC) Railroad Conductor Training Program graduated a new class of eleven railroad conductors and opened its newly-renovated training facility.

Ashley Salyer, Program Coordinator, Dr. Vicki Riley, president of Marshall Community and Technical College; Robert Plymale, RTI director; and James L. Skidmore, chancellor of the Community and Technical College System of West Virginia spoke during the ceremony.

The program is provided through a partnership between MCTC, RTI and the West Virginia Development Office. This five-week course is an intense and strenuous training that requires a strong commitment to learning and performance. Students who successfully complete it receive a job interview and prime consideration for employment with a Class 1 railroad. The most recent graduates were placed in Parkersburg, W.Va. and Hazard, Ky.

Although graduates are not guaranteed a job, 98 percent are employed within two days after graduation.



"Since the program's first class began in 2003, 781 students have trained and 763 conductors have been placed into jobs as conductors with Class 1 Railroads, Salyer said."

The new, 10,000 square foot training facility, is located at 348 15th Street. It contains five spacious classrooms, offices and conference rooms.

More information about the Railroad Conductor Training Program, including steps to becoming a conductor, class schedules and recruiting areas, may be found at www.marshall.edu/ctc/www/programs/railroadconductor.shtml.



Above: Recent graduates of the training program.





Robertson Attends International Symposium

by Abigail Kimberlain

The Rahall Transportation Institute co-hosted the SmartRivers 21 International Symposium on Inland Navigation in the 21st Century: Challenges, Opportunities and Best Practices, which took place Oct. 2-4, 2005 in Pittsburgh, Penn. The focus of the symposium was the movement towards inland navigation as a powerful link in the global supply chain of the 21st century. People from many European nations, Canada and the United States attended the symposium, including RTI's Director of the National Maritime Institute, Dana Robertson.

According to Robertson, invaluable transportation information was exchanged between participants, particularly from the European attendees. The U.S. and Europe are facing many of the same challenges: highway congestion, air quality issues and excessive traffic noise.

"I found it very interesting to learn that the environmentalists in Europe are great supporters of the use of inland waterway systems. They understand the value of shipping products on the rivers as opposed to already congested highways," Robertson said.

The symposium also featured formal presentations, workshops, networking and a comprehensive field tour of key waterway, intermodal and business centers in Pittsburgh and the Ohio River corridor.

The next SmartRivers symposium will be hosted by the Port of Brussels in October 2006.

NMEI Director Attends Port Authorities Seminar

by Abigail Kimberlain

The American Association of Port Authorities Shallow-Draft Ports seminar, themed "Connecting Ports for Success" was attended by RTI's National Maritime Institute Director, Dana Robertson.

Taking place in Pittsburgh, the seminar's goal was to raise awareness of the benefits of linking deep and shallow-draft ports and carriers.

Seminar activities included panel discussion of maritime operations and an examination of the impact of the 2005 hurricane season's effect on the nation's ports.

The significant topic of hurricanes dominated the seminar, especially when Gary LaGrange, chairman of the APA and Port of New Orleans president/CEO spoke about the Louisiana recovery effort. He stressed the importance of Louisiana as a vital seaport.

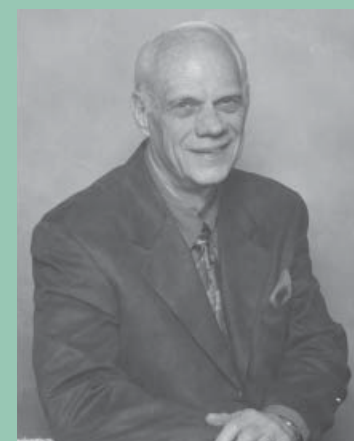
APA President/CEO Kurt Nagle said information shared at the seminar will be beneficial to the nation's maritime system.

"As much as America depends on its coastal and Great Lakes seaports to handle international cargo, our system of inland waterways and ports provides a critical connection to ensure that goods can move domestically in the most economical way possible."



Dr. Raymond Busbee Retires after 38 Years in Higher Ed

by Ashlee Gibson



After 38 years of service in higher education, Dr. Raymond Busbee, professor of Exercise Science, Sport & Recreation, will retire from Marshall University following this semester.

In his partnership with National Off-Highway Vehicle Conservation Council and the support of RTI, he developed a series of four off-highway vehicle courses that are available online. He also directed several other projects at RTI including TRP 99-11: Economic Impact Study of the Greenbrier River Trail in Southern West Virginia, TRP 99-29: Development of a Plan for a Non-Motorized Transportation Corridor in Southern WV – Case Study for Alternate Sources of Transportation between Huntington and Charleston and the creation of Transportation Injury Prevention and Safety (TIPS) K-12 Outreach partnership with St. Mary's Medical Center.

In his time at Marshall, Busbee also served as the coordinator for the Recreation and Park Resources program from 1980 to 2002, in which he was instrumental in obtaining national accreditation for the program in 1991. The program was granted continuing accredited status in 1996 and 2002.

"During my years teaching higher education at three universities, I have had the opportunity to participate in numerous research projects and studies. Without question, my work with RTI and its wonderful staff has been the most enjoyable in my entire career. The support, encouragement, technical assistance and friendliness of the RTI staff are superior," Busbee said.

Faculty & Student Spotlight: LeAndria Reed & Kate Jordan

Name: LeAndria Reed
Birthplace: Washington, D.C.

Title: Research Associate
Education: BS Industrial Technology, WVU Tech; MS Occupational Safety & Health, Marshall University

Current RTI projects: PASS instructor; Assistant Project Coordinator for the RR and Highway Safety and Operation project; Instructor for annual State utility inspector training.



Name: Kathleen "Kate" Jordan
Birthplace: Fortaleza, Brazil, grew up in Charleston, W.Va.

Education: 2002 Graduate of WVU with a degree in journalism, current graduate student at MU seeking a MA in English

RTI projects: Organization of LEGO robotics lesson plans and Contents Standards for teachers to use in the classroom; desktop publishing assistant.

Faculty and Student Spotlights will highlight a faculty or staff member and a student in each issue of Transportation Focus. If you would like to be considered for the next newsletter contact Errin Jewell at (304) 696-7165 or jewell4@marshall.edu.

