

TRANSPORTATION

Building Jobs through Transportation FOCUS Winter 2011

News and Information from the Rahall Transportation Institute



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RTI Director Receives 2010 Trails Public Service Award

On November 16, 2010, the National Trails Association awarded its 2010 Trails Public Service Award to Rahall Transportation Institute Director and CEO Robert H. Plymale for his demonstration of significant and consistent support of trail planning, design, or implementation through strong leadership and legislative efforts.

Governor Early Ray Tomblin said, "I want to thank Bob Plymale and the Rahall Transportation Institute for their diligent work to make West Virginia's trail system one of the finest in the country. As an avid and fellow trail enthusiast, I know how important it is to continue to expand our trail system and keep this segment of our tourism industry strong. I am proud of

Bob's recognition and look forward to many more years of success from him and RTI."

William "Bill" Robinson, West Virginia State Trails Coordinator, nominated Plymale for the award.

"Plymale's involvement with recreational trails, both as a public servant and as the Director and CEO of the Rahall Transportation Institute (RTI), from supporting the creation of the State
CONTINUED PAGE 2: TRAILS



Patrick J. Donovan Joins RTI as Director of Maritime and Intermodal Transportation and Marshall University as Director of the National Maritime Enhancement Institute

Patrick J. Donovan recently joined the Rahall Transportation Institute (RTI) as Director of Maritime and Intermodal Transportation and Marshall University as Director of the National Maritime Enhancement Institute.



As RTI Director for Maritime and Intermodal Transportation, Patrick J. Donovan is responsible for establishing, managing and implementing programs to facilitate the development of transportation facilities that support the Appalachian Region's integration into the global economy. Patrick works with various stakeholders to include federal, state, local and potential private partners to help facilitate and establish public-private partnerships for development, operations and financial oversight of intermodal transportation

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Trail Coordinator in West Virginia, to RTI's groundbreaking work in motorized recreation, to support for the Paul Ambrose Trail for Health, gave West Virginia a candidate for the American Trails award that could compete with other state's submissions on a national level."

Plymale is a longtime advocate for constructing and utilizing recreational trails throughout southern West Virginia, and he has been a key player in the development of public trails for recreation and alternative means of transportation, including the Huntington Museum of Art Multi-Sensory Trail and the Paul Ambrose Trail for Health. Recognizing the economic development and community revitalization potential that the Hatfield McCoy Trails would bring to coal-dependent counties in southern West Virginia, he has been active in mapping, planning, and promoting hundreds of miles of motorized, private trail systems.

Since becoming Director and CEO of RTI in 2001, Plymale and the researchers and educational professionals affiliated with RTI have realized the potential trails have to boost the region's tourism industry and reviving its economy. Some of RTI's first research initiatives addressed creating 'Rails to Trails' projects along the Greenbrier River Trail, planning for development of greenways between the State's major cities and developing and evaluating a geographical information mapping system for the Hatfield McCoy network of trails.

Jeff Lusk, Hatfield McCoy Trails Executive Director, said, "Plymale and RTI's largest regional impact on trails in West Virginia may be the work with the Hatfield McCoy Regional Recreation Authority. In fact, since 2005, off-highway vehicle recreation has become southern West Virginia's most frequently utilized outdoor recreation attraction, surpassed only by white water rafting; the popularity of the Hatfield McCoy Trails systems can be attributed to the majority of off-highway vehicle trail users."

The Huntington Museum of Art's property includes more than 40 acres of hillside that has retained its natural woodland state. The museum's nature trail is a well-marked and maintained trail approximately one mile in length; Plymale and RTI have supported this trail from the early stages of its development through completion of the project.

As a result of RTI research, Plymale was instrumental in the development of the Paul Ambrose Trail for Health (PATH) in Cabell and Wayne Counties of West Virginia. Once complete, the PATH will be a proposed 26-mile, public trail that was named for Dr. Paul Ambrose, a young physician who was killed at the Pentagon in the terrorist attacks of Sept. 11, 2001. Ambrose was en route to attend an adolescent obesity conference in Los Angeles, when his plane was crashed into the Pentagon. The PATH, which will consist of segments of crushed limestone non-motorized trail as well as motorized "Share the Road" segments, will link residential communities to business and educational areas and provide a safe, alternative means of transportation and recreation. RTI has led planning and fundraising efforts through grant-writing and public events, which total approximately \$340,000. In addition, more than 1,000 individuals in the tri-state area have participated in PATH-related health and fitness or education activities, which continue the legacy of Dr. Ambrose to fight obesity through physical activity.

Under his direction, RTI has provided trail inventory and mapping, layout and design services and trail construction oversight for public and private trails. With the assistance of Dr. Raymond Busbee, RTI has developed four online courses offered by Marshall University to equip professionals to create and maintain Off-Highway Vehicle Trail Systems: Introduction to Off-Highway Vehicle (OHV) Recreation; Planning, Design and Construction of Off-Highway Vehicle Trail Systems; Construction of OHV Trail Systems; and Operation and Management of OHV Trail Systems. These courses, which are available for graduate or undergraduate credit, may lead to a minor in Off-Highway Vehicle Recreation Management. Individuals who complete these courses have entered the workforce as trail specialists, directors of field operations, director of trail planning and development and trail maintenance crew.

Plymale also helped RTI create a partnership with St. Mary's Medical Center to create the Transportation Injury Prevention and Safety (TIPS) program. Through TIPS, registered nurses and safety professionals travel to schools and public events in West Virginia and southern Ohio to teach bicycle, vehicle, skateboard, off-highway vehicle and motorcycle safety. TIPS professionals often perform bicycle and car seat safety checks and provide free helmets to students.

The award was presented to Theresa Litteral, RTI Trails Systems and Planning Coordinator, who accepted the award on behalf of RTI and Plymale. "I am proud to have been able except this award on Bob's behalf, thus representing everything he has done for the State of West Virginia and the Rahall Transportation Institute," Litteral said. "I think it is important to demonstrate his hard work and dedication to trails and be recognized for his achievements within the trail community with this honorable award."





RTI

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projects throughout the Appalachian Region. Patrick also is the Director of the National Maritime Enhancement Institute at Marshall University.

RTI Director and CEO Robert H. “Bob” Plymale said, Donovan “brings an energy and an enthusiasm that’s well-thought-of nationally in the intermodal and maritime industry.”

Prior to joining RTI, Patrick was Executive Director of the West Virginia Public Port Authority where he helped establish five Local Port Authority Districts throughout West Virginia; facilitate the establishment of the model public-private partnership, which led to the implementation and opening of the Heartland Corridor; and pioneered the first public-private intermodal rail terminal partnership strategy for the State of West Virginia.

He is a recognized Inland Navigation Leader, serving as Vice President of the National Waterways Conference, Inc. He is the current Vice-Chairman of the American Association of State Highway and Transportation Officials Standing Committee on Waterways. Patrick also serves as the State of West Virginia’s appointed representative on the Appalachian Regional Commission’s Network Appalachia Study Group. Patrick is a member of the Transportation Research Board’s Committee on Waterways and is founding member of SmartRivers. Patrick currently serves in an advisory role to the Tri-State Airport Authority as well as the Cabell-Wayne Local Port Authority District.

Patrick earned a Master’s degree in Geography from Marshall University Graduate College and a Bachelor’s degree in Geography from Marshall University.

Sixth Annual Post Mine Land Use Forum at Logan Oct. 21, 2010

The Corridor G Regional Development Authority (RDA) hosted its Sixth Annual Post Mine Land Use Forum on Thursday, October 21, 2010, at the Earl Ray Tomblin Convention Center in Logan, W.Va. The agenda included registration at 8:30 a.m., 9:00-12:00 presentations and panel discussions with presenters, and lunch at 12:00 followed by closing remarks.

Approximately 60 people attended the annual forum that brings together landowners, coal operators, state officials and representatives from various state agencies to determine the best way to assist the Corridor G region transition from a coal based economy to a more diversified one. The Corridor G RDA was created by Senate Bill 527 to promote, develop, and advance the business prosperity and economic welfare of Lincoln, Boone, Logan, and Mingo counties, including, but not limited to, the area adjacent to Corridor G, their citizens and their industrial complex.

Speakers were: Howard Sammons, Chairman, Corridor G RDA; Robby Queen, District Representative, Logan Office of Congressman Nick Rahall; Randy Huffman, Cabinet Secretary, W.Va. Dept. of Environmental Protection; Terry Clarke, Project Manager, Energy Resources, US Army Corps of Engineers; Terry Sammons, Sammons Law Office; Jeff Wood, Energy Development Specialist, Office of Coalfield Community Development; Lantz Rankin, President, Heritage Technical Associates, Inc.; Michael E. Duvall, President and General Manager, ICG Eastern, LLC; and Keith O’Dell Senior Environmental and Permitting Engineer, ICG Eastern, LLC.

RTI Research Associates Justin Matthews and Jessica Weddington and Associate Director of Research and Technology Transfer Specialist Dr. Pam Hamilton networked with subject experts to strengthen research strategies for measuring the impact of the King Coal Highway Project.



Dr. Peter J. Dailey Earns Ph.D., Honored as RTI Student of the Year

Senior research associate and adjunct professor Peter J. Dailey was recently named Outstanding Student of the Year by the Rahall Transportation Institute.

Dailey is RTI's first doctoral Student of the Year and holds the first Ph.D. earned as a result of RTI's research.



He received his Ph.D. in Civil Engineering in August 2010 from West Virginia University, having earned a Master of Science degree in Technology Management from Marshall University and a Bachelor of Science degree in Mining Engineering from West Virginia University.

Dailey's dissertation

title is "Real Time Kinematic Global Navigation Satellite Systems in Railroad Transportation" and is available online at <http://rtiweb02.njrati.org/~pdailey/Research/Dissertation.html>.

He said, "The research question to be answered was to find a method of measurement that could be applied to three railroad industry problems: 1) Surveying a 1,000 car-per-day humpyard without interrupting car handling - the survey would be used to identify grade irregularities, 2) Determining horizontal track alignment by Hi-Rail, to augment visual track inspections, and 3) Determine track occupancy (what track the train is on) to a high degree of certainty independent of wired track circuits (the way trains are tracked now)."

Dailey was presented with the Student of the Year award at the Council of University Transportation Centers (CUTC) annual banquet in Washington, DC in January 2011 during the annual Transportation Research Board Annual Meeting along with students from each of the nine other UTCs.

RTI/CBER is Now Conducting a Large-Scale, Multimodal/Intermodal Shipping and Receiving Operations Survey for the Appalachian Region

RTI and the Center for Business and Economic Research (CBER) at Marshall University recently began conducting a large-scale, intermodal shipping and receiving operations feasibility study to benefit the Appalachian Region.

"Intermodal shipping is a valuable tool for retaining and attracting companies to ensure a solid economic future," Patrick J. Donovan, RTI Director, Maritime & Intermodal Transportation, said. "The economy of our region depends on reliable, economical transportation for businesses to compete. Multi-modal, multi-functional terminals and intermodal trans-loading facilities are essential for our region."

RTI and CBER are completing this work in support of the Statewide intermodal and multimodal transportation partnership project with the West Virginia Public Port Authority.

More than 2,600 surveys were mailed to shipping and operations companies throughout the Appalachian Region. Additional participants may complete the 15-minute survey online at http://wvppa.njrati.org/shipper_survey. Participation is voluntary, and results will be used to estimate immediate transportation needs and project demand for the future. To protect the privacy of participants, individual results will not be revealed and statistics will be reported in summary form only.

"The assistance of participants is greatly appreciated and necessary to make this a meaningful survey. Information will be used to estimate immediate transportation needs and project demand for the future."

For more information about participation or to receive research results from this study, please contact Patrick J. Donovan at (304) 696-2906 or pdonovan@njrati.org, or Dr. Junwook Chi at (304) 696-3311 or jchi@njrati.org.





RTI Awarded \$40K Competitive Grant to Develop a Statewide Cadastral Layer Business Plan for the State of West Virginia

The Rahall Transportation Institute will facilitate the development of a Statewide Cadastral Layer Business Plan for the State of West Virginia, with support from a competitive grant from the Federal Geographic Data Committee (FGDC). The \$40,000 grant is from the 2011 National Spatial Data Infrastructure Cooperative Agreement Program (NSDI CAP). The WV Office of GIS Coordination is also a partner in this statewide important effort.

“The Cadastral Business Plan is important to anyone who wants to find, or understand, the location of land properties on a map,” says, Dr. Diana Long, RTI Director of Workforce Development and principal investigator for the project. “Agencies, organizations and even individuals who work with property boundaries should become aware of and participate in this effort.

“During the next year, stakeholders will meet to develop a plan and consensus as to how to finish the statewide cadastral dataset, including both surface and mineral parcels. The group’s goal is to reach a consensus on how the data will be shared, stored and distributed, as well as to develop a plan to provide for the training, stewardship and updating of the data.”

A kick off meeting is planned for March 24, 2011, in Charleston, W.Va. Dr. Long says the list of stakeholders who will participate in the meeting include policy makers, private industry and workers.

“We are trying to be inclusive of all the stakeholders, and welcome representatives of Assessors, Municipalities, Mining, Gas, Forestry, Homeland Security, Insurance and Real Estate. Input from professionals who represent these segments is welcome and needed at all stages of planning.”

RTI developed the proposal with a steering committee consisting of representatives from the West Virginia Office of GIS Coordination; WV GIS Technical Center; US Geological Survey Eastern Region NSDI Partnership Office; US Bureau of Land Management; WV Association of Geospatial Professionals; WV Assessors Association; and the WV Division of Property Tax.

Global Leader for Dow Chemical’s RFID, GPS, AutoID Expertise Center Speaks at Rahall Transportation Institute Transportation Seminar Series Event

On Wednesday, November 11, 2010, Mr. Craig Casto, Dow Chemical’s Global Leader for Dow Chemical’s RFID, GPS, AutoID Expertise Center and Marshall University Alumnus, served as keynote speaker for the Rahall Transportation Institute’s first Transportation Seminar Series event for 2010-11.

Casto’s presentation was titled, “Leveraging Auto ID Technologies to Enable Work Processes across the Corporation.”

Casto presented information on how Dow Chemical is “utilizing the various tools in its Auto ID Toolbox, such as RFID, GPS and Bar Codes, to improve the Global work processes throughout the company. Areas of focus include: supply chain visibility and safety of shipments, remote worker safety, maintenance, anti-counterfeiting, marketing and improvements in asset utilization.”

Nearly 40 transportation professionals, researchers and students attended the Transportation Seminar Series Event.





Partner School News:

CART and Bluefield State College Faculty Present Paper at Workshop on Pen-Based Technology in Blacksburg, Va.

A scholarly paper and a poster prepared and submitted by Bluefield State College faculty members were accepted and presented at the 2010 Workshop on the Impact of Pen-Based Technology on Education at Virginia Tech in Blacksburg, Virginia on October 25-26, 2010.

The workshop was attended by educators and companies with an interest in instructional technology. A wide variety of disciplines are embracing Tablet PC's and similar pen-based computing devices as tools for the radical enhancement of teaching and learning. This conference is intended to leverage this interest and to identify best practices in the educational use of pen-based computing so that all educators may benefit from this next generation of technology. The paper and poster describes results and conclusions obtained from a study of pen-based technology by the Center for Applied Research and Technology, Inc. (CART) at Bluefield State College (BSC).

The paper, "Using Pen-Based Technology to Improve Instruction in Engineering Economics," was presented by Glen Ciborowski (Assistant Professor, School of Engineering Technology and Computer Science) and Bruce Mutter (CEO/Chair, CART). Based on the outcome of the applied research in Engineering Economics, Ciborowski noted, "We are now using Tablet PC's in other courses and recommend this learning environment to our colleagues. It is encouraging to experiment with new technology as part of the continual improvement process."

"The workshop provides a good opportunity to learn more about pen-based technology, participate in the sessions, and share results with our colleagues," Mutter added. "Smart pens are rapidly changing our interaction and the practice of mobile computing and bringing real processing power to traditional screens and even pen and paper. Digitizing words and drawings can really bring them to life, while simultaneously capturing and storing ideas for review."

Graduate Research Assistant Wins *Jeanne X. Kaperson Student Paper Award*

RTI Graduate Research Assistant Joshua Krumski was recently awarded the *Jeanne X. Kaperson Student Paper Award* for his abstract, "GIS Usage for Emergency Preparedness for the Release of Hazardous Materials in Cabell and Wayne Counties, West Virginia."

The Award was given by the Association of American Geographers (AAG). Krumski will present his abstract at the AAG Annual Meeting, April 13, 2010, in Seattle, Washington, with three other scholars as part of the conference's special session, Emerging Scholars in Hazards Research: Winners of the Jeanne X. Kasperon Student Paper Award.

The AAG Annual Meeting is an interdisciplinary forum open to anyone with an interest in geography and related disciplines. Presentations from scholars, researchers, professionals, and students comprise the meeting.

Krumski, who also instructs GIS Training Courses for RTI, is from Weirton, W.Va.





RTI Collaborates with West Virginia Department of Transportation and Appalachian Regional Commission for GIS Data Mapping Projects

Integration of WV DOT Road Data and Addressing Data

The West Virginia Department of Transportation (WVDOT) has completed a project to create a linear referenced road network, using the West Virginia State Addressing and Mapping (WVSAM) unattributed centerline data. High-quality road centerline data is a foundation layer for many GIS-related projects.

The same centerline base data was also used in a separate application for the WV Department of Homeland Security and Emergency Management to create a statewide, addressed street data set. This addressed dataset consists of all roads in the state, including roads not owned by WV DOT. This data could provide WV DOT with expanded capabilities, such as routing, geocoding, direction and mapping applications. However, the two datasets currently exist in different locations, maintained separately and use different geometric formats.

The Rahall Transportation Institute and the WV GIS Technical Center have teamed up to solve some of the incompatibilities between the existing WV DOT road data and the WV SAM addressed data. The objective of the study is to review technical issues regarding the feasibility of road network integration in West Virginia which incorporates linear referencing, addressing, and routing capabilities.

The projected goals of this study will identify and review existing transportation models, as well as WV DOT data needs; create an integrated road network pilot study; and identify requirements for data integration. RTI will present lessons learned and comments on the process of integrating datasets of this nature.

A GIS Portal for a Multi-State Appalachian Development Highway System

The Appalachian Regional Commission (ARC) and the Rahall Appalachian Transportation Institute (RTI) have an ongoing project to develop, maintain and update a regional GIS system for the Appalachian Development Highway System (ADHS).

After RTI successfully developed a web-based GIS for a major undertaking of the ADHS Cost to Complete Estimate in 2007 used by the ARC, Federal Highway Administration (FHWA) and the Departments of Transportation (DOTs) of 13 Appalachian States with emerging Web 2.0 trends and the release of ESRI ArcGIS Server 9.3, there is a need to update the ADHS Cost to Complete Estimate web-based GIS to the new standards and new functions such as using existing base maps and images well developed and managed by ESRI, Google or Bing.

This success also encouraged the ARC and RTI to look for new ways of leveraging the web-based ADHS GIS towards including an economic development aspect in Appalachia. This led to the vision of extending the ADHS Cost to Complete platform into a new GIS system that would integrate transportation and economic development data into a single web-based GIS - the Appalachian Regional Transportation and Economic Management Information System (ARTEMIS).

To date, RTI has successfully implemented the first phase of implementing these upgrades, creating an updated web-based GIS for the ADHS Cost to Complete and a prototype for the ARTEMIS platform.



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Upcoming Events

Conferences/Transportation Seminar Series/Technology Transfer Activities

- March 28-30, 2011** 24th Annual GIS-T Symposium, Hershey, PA
- April 5-6, 2011** eCDL Product Demonstration at USDOT's HQ, Washington, DC
- April 5-6, 2011** Marine Highways and Logistics Conference, Baltimore, Maryland
- April 7, 2011** Cyberinfrastructure Day at Marshall University
- May 1-3, 2011** I-TED 2011, Charleston, WV
- June 6-10, 2011** 2011 Leadership Development Conference, Washington, DC

Pre-K thru 12/Community Outreach Events

- March 31, 2011** West Point Bridge Design Contest, WV Statewide Qualifying Round Ends
- May 14-20, 2011** National Transportation Week Activities
- June 28-July 3, 2011** West Virginia Operation Lifesaver Rail Camp, Camp Pinnacle, Hardy County, WV
- July 25-29, 2011** Young Builders LEGO Camp
- July 25-29, 2011** Technology Building LEGO Camp
- August 1-5, 2011** Technology Art LEGO Camp
- August 1-5, 2011** Robotics Mini Challenges Lego Camp

Register online at www.njrati.org or call Sandra Jones at (304) 696-7098.

Upcoming
Events

Rahall Transportation Institute
 P.O. Box 5425
 Huntington, WV 25703-0425
 1-800-284-9853
www.njrati.org

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