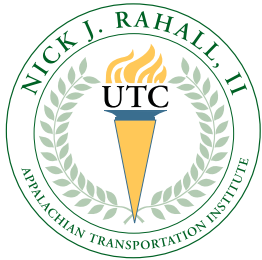


TRANSPORTATION

Building Jobs through Transportation **FOCUS** Year 11 Vol. 1 (2009)

News and Information from the Rahall Transportation Institute



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Partner Schools:



eCDL Partnership with WVDMV Wins Council of State Governments' Innovations Award

CHARLESTON, W.Va. - Gov. Joe Manchin and Congressman Nick Rahall jointly announced the award-winning partnership between the state Division of Motor Vehicles CDL section and the Rahall Transportation Institute (RTI).

The eCDL Program was developed to make the testing aspect of getting a Commercial driver's license free of fraud and paperless by utilizing a laptop computer with a Global Positioning System (GPS) to track the test. Other benefits of the program include savings of \$500,000 to the state and the decrease of the DMV state fleet by 60 percent.

Representatives from both organizations were in attendance Tuesday, August 18, 2009, in Winston-Salem, North Carolina at the Southern Legislative Conference of the Council of State Governments' (CSG) Annual Meeting. The winners of the 2009 Innovations Award, Southern Region, were an-



"The eCDL represents the best of West Virginia - creativity, innovation, and collaboration," Bob Plymale, RTI Director and CEO, said. "...RTI continuously fosters a collaborative environment and we look forward to more successful partnerships to develop new technology, improve safety, and enhance economic development in West Virginia and abroad."

nounced at a reception that evening, and the award will be presented to DMV and RTI at the Annual National Meeting in La Quinta, California, November 12-15. There, the eCDL program will compete against other regions, including the other Southern Region winner, the Kentucky Re-entry Hotline, for the national award.

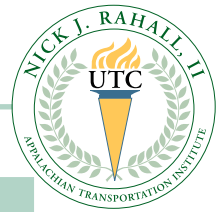
According to the CSG, the Innovations Awards Program was established in 1986 "to bring greater visibility to exemplary state programs and practices, and to fa-

cilitate the transfer of those successful experiences to other states. The program is the only comprehensive national awards program that focuses exclusively on state programs and policies."

"We're very proud that West Virginia is receiving national recognition for this deserving program," Gov. Joe Manchin said. "The WV eCDL Program was the first system of its kind in the nation. It was invented, developed, and directed by the DMV, in part-

CONTINUED PAGE 2: eCDL





RTI, Marshall University Host Society of American Military Engineers Premiere Winter Technical Conference in Huntington

by Dr. Wael Zatar

On Thursday, January 29, 2009, the Marshall University Student Chapter of the Society of American Military Engineers sponsored a winter technical conference at Marshall's Huntington campus. This effort was assisted by RTI and the West Virginia Division of Highways.

Over 100 practicing engineers and students attended the program, which featured eight speakers on various transportation related themes. Speakers included Tom Smith from the Federal Highways Administration, who outlined the future directions for the nation's transportation system, and WV Commissioner of Highways Paul Mattox, who described the upcoming year's program for the WVDOT.

Two speakers represented universities from outside West Virginia, Dr. Hany Farran from the California Polytechnic Institute at Pomona and Dr. Jeffrey Russell from the University of Wisconsin. Dr. Farran had a very entertaining presentation on the state of the art of long span suspension and cable stayed bridges, while Dr. Russell described a program being sponsored by the American Society of Civil Engineers which illustrated the knowledge that civil engineers should have to compete successfully in the 21st century. The thrust of this program is to eventually require the equivalent of a bachelors plus a masters degree in order to be registered as a professional engineer.

Mark Hammond, from the U. S. Army Corps of

Engineers discussed river transportation, while Donnie Williams of the WVDOH described the challenges in building and maintaining highways in West Virginia. One of the more interesting parts of his presentation included a discussion of how highway building and maintenance might be funded in West Virginia in the future. At the present, WV highway funding depends primarily upon two taxes—the state gasoline tax and the state privilege tax for registering vehicles. With the increase in gas mileage being accomplished through the use of hybrids, in particular, the revenue from the gas tax is stagnant. One suggested remedy is to charge users for mileage traveled rather than gasoline used.

RTI's employee Pete Dailey spoke on "Automatic Classification Yard Surveying with GNSS during Revenue Operations."

The final speaker for the day was the RTI and Marshall University's Dr. Wael Zatar. His presentation was entitled "Sustainable Structures with Fiber Reinforced Polymer Composites." Part of his talk focused on using fiber reinforced composites to retrofit structures such as bridges to protect against earthquake damage.

Corey Weaver, the S. A. M. E. student chapter president, was the master of ceremonies for the day, and he did a very good job. The program was introduced with brief welcoming remarks from MU President Kopp and CITE Dean Betsy Dulin.

FROM PAGE 1: eCDL

DMV Commissioner Joe Miller said of the award, "The West Virginia Division of Motor Vehicles is working toward making all of our programs state-of-the-art, and the eCDL project is an example of these efforts. I'm very pleased with the group of DMV employees that worked diligently on this project—Dempsey Totten, Wilbur Thaxton, Steve Shelton, and Mark Holmes, to name a few, and I feel they should be commended. Additionally, the partnership that arose from this project shows how groups can work together for a common goal with excellent, award-winning results."

RTI Director and CEO Bob Plymale expressed the importance of this nationally recognized partnership. "The eCDL represents the best of West Virginia – creativity, innovation, and collaboration," Bob Plymale, RTI Director and CEO said. "We couldn't have asked for better partners than the WV DMV and the FMCA. RTI continuously fosters a collaborative environment and we look forward to more successful partnerships to develop new technology, improve safety, and enhance economic development in West Virginia and abroad."

In 2003, 2007 and 2009, the West Virginia DMV CDL Program received funding from the Federal Motor Carrier Safety Association. This funding was used to work with the Rahall Transportation Institute to develop the software that applied the capabilities of the GPS to record and document verifiable skills tests.



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RTI

Rahall Transportation Institute to Develop Custom Software Application for First Responders to Maritime Emergencies

RTI has been selected to receive funding to develop and deploy a custom software application designed to assist first responders with maritime disasters and severe weather emergencies. RTI's Maritime Enhancement Institute will manage the project.

RTI's Maritime Enhancement Institute will collaborate with Operation Respond Institute in Washington, D.C. and AccuWeather of State College, Penn., to develop the custom maritime software application.

The funds are provided under the Federal Emergency Management Agency (FEMA) Port Security Grant Program and the State of West Virginia. The new application will be designed for use by all emergency responders in the 26 tri-state counties that border the Ohio River within the Port of Huntington. This unique public safety tool will be available on wireless handheld platforms and desktops. The technology will provide immediate, on-scene hazardous materials guidance for use in dealing with incidents involving maritime activities, highway freight transportation, and materials storage and distribution centers along the Ohio, Kanawha and Big Sandy Rivers. In addition, it will be equipped to provide incident-specific weather monitoring, severe weather displays and warnings.

"This innovative program will be customized to address the unique challenges associated with maritime disasters," Dana Robertson, former Director of the Maritime Institute at RTI said. "It will be equipped with a comprehensive, area-wide GIS platform adapted and formatted with electronic navigation charts, local and regional geographic features, and other attributes for use by public safety dispatch points to precisely locate river and river-related incidents."

Additional features of the software application will include critical security, hazmat, and operational safety data to assist in dispatching activities, such as determining the best access to a specific location. Professional meteorological assessments and severe weather response guidance will also be available with specific hazardous materials information and action guidance capabilities.

Partner School News:

2009 ASCE WV Section Annual Meeting Hosted in Montgomery

Many activities of the Student Chapter of the American Society of Civil Engineers (ASCE) at WVU Institute of Technology (WVU Tech) are made possible from support from RTI. Two such events in fall 2009 include the ASCE WV Section Annual Meeting and the ASCE Annual Christmas Dinner.

Four students, Rob Frazier, Mikael Sisson, Lee Hale and Andrea Friend, attended the ASCE WV ASCE Section Annual Meeting on September 19, 2009, in Charleston, WV. Students from WVU Tech, Fairmont State University, Bluefield State, and Marshall University made presentations on their proposed ASCE Student Chapter activities in the coming year. Other topics discussed during the meeting were the West Point Bridge Design Competition and the Infrastructure Report Card for 2009 for the WV Department of Highways. ASCE Section Officers were also elected.

Four students and the ASCE faculty advisor from the WVU Tech ASCE Student Chapter attended the organization's statewide annual Christmas dinner December 3, 2009. The event was sponsored by ASCE-Charleston Branch, WV Society of Professional Engineers (WVSPE), and the American Council of Engineering Companies of WV (ACEC/WV). Those in attendance included Jared Bailey, James Lovejoy, Mathew Skeen, Mike Sisson, and the ASCE faculty advisor Jason Hill. An "Order of the Engineer" ceremony, in which Skeen participated, was also conducted before dinner.



Blankenship Honored as RTI Student of the Year at CUTC Banquet

Research Associate and Marshall University doctoral candidate Amy Blankenship was honored as RTI's "Student of the Year" at the 13th Annual Council of University Transportation Centers Awards Banquet January 9, 2010, in Washington, D.C.

Blankenship was chosen for her "personification of emerging transportation professionals of the future," said Dr. Diana Long, RTI Workforce Development Director and nominator. "Her expertise blends talents that complement the technical field of engineering and contribute to the workforce development of tenured and emerging workers."

As a doctoral candidate in higher education leadership, Blankenship is concentrating her studies in curriculum and instruction. Her research is aimed at developing and delivering geographic information system (GIS) skill sets to transportation professionals who have less than a baccalaureate degree, utilizing open-source training materials and distance learning.

Amy has spent her entire academic career at Marshall University, earning a bachelor of arts degree in English and master of science degree in environmental science and geography, with the latter including a graduate certificate in GIS.



For her master's thesis in geography, she applied GIS data to economic development, resulting in a study of small-town urban revitalization. Amy is currently in a shared position as a research associate at RTI and as an assistant professor of geography at Marshall Community and Technical College. She has also taught physical geography and economic geography at Marshall as a teaching assistant.

U.S. Rep. Rahall Honored with CUTC Lifetime Achievement Award

U.S. Rep. Nick J. Rahall, II was honored with the Council for University Transportation Center's (CUTC) Award for Lifetime Achievement in Transportation Research and Education at the organization's annual awards banquet January 9, 2010, in Washington, D.C.

The award was instituted in 2004 to honor individuals who contributed immensely throughout their professional lives to transportation research and education. Recipients have served primarily in government, business on non-governmental organizations and have legislatively, programmatically or administratively supported transportation research and education.

Rahall, who represents West Virginia's 3rd District, is Vice-Chairman of the Committee on Transportation and Infrastructure and one of its senior members. He serves on the subcommittees for Aviation; Highways and Transit; and Railroads Pipelines and Hazardous Materials. He is also Chairman of the Natural Resources Committee, which affords him a unique perspective on how transportation can impact the utilization of natural resources.

Actively involved with highway legislation since he was first elected in 1977, Rahall has promoted the construc-

tion of safe and modern highways in southern West Virginia and championed the efficient use of railroads and inland waterways. His "Three T's," Transportation, Technology and Tourism, guide his legislative efforts with transportation his top priority.

Rep. Rahall was instrumental in the passage of the 1998 Transportation Equity Act for the 21st Century, which established 33 University Transportation Centers, including RTI at Marshall University. RTI fosters innovation and collaboration to plan efficient and safe transportation systems and enhance economic development. RTI uses an integrated approach to intermodal transportation through research, technology, education and workforce development.

Finding alternative ways to use existing resources, developing new technology, and promoting transportation education demonstrates Rep. Rahall's commitment to building a stronger, safer and more efficient transportation system.

In 2002, Rep. Rahall succeeded in designating RTI as one of seven National Maritime Enhancement Institutes, which has contributed to additional research and education on inland waterways. Most recently, research and technology transfer efforts have expanded to include Intelligent Transportation Systems and workforce development programs.





RTI to Host 2010 National Rural Intelligent Transportation Systems Conference in Huntington, W.Va.

RTI was selected to host the National Rural Intelligent Transportation Systems Conference in Huntington, W.Va., in August 2010. The conference's theme will focus on incorporating the "3Ts" - Technology, Transportation and Tourism with Intelligent Transportation Systems (ITS) in rural settings that provide a unique set of challenges and objectives not found in urbanized areas.

Dr. Andrew Nichols, RTI Research Associate, said, "The purpose of the conference is to provide an opportunity for transportation professionals to share research, education and technology transfer ideas on issues that are pertinent to our areas. In addition to participating in break-out sessions and listening to presentations from experts in the field, we will provide networking opportunities for rural transportation professionals to share information and ideas that may solve the transportation needs of our respective regions."

RTI Director Bob Plymale said that because RTI is based in the only state located entirely within the Appalachian region, "We understand the challenges and needs of expanding and maintaining intelligent transportation systems in rural areas."

RTI will work closely with the West Virginia Department of Transportation, the West Virginia ITS America Chapter and Meetings Northwest to make the conference a success. Bruce Kenney, ITS Project Manager with the WV-DOT, said, "The conference will be a great opportunity to showcase ITS projects that are underway in the state. With our management center and future statewide ITS applications, our ITS initiative literally adds a third dimension to our transportation infrastructure, which also allows the WVDOT to partner with various state and regional stakeholders in promoting transportation safety and mobility."

Tom Smith of the Federal Highway Administration, who has been instrumental in developing ITS projects at the Rahall Transportation Institute, said "We plan to use the conference as an opportunity to share and explore education, safety, security and efficiency issues that are specific to rural intelligent transportation systems. We also want to increase the visibility of ITS in this region by including smaller agencies and constituents that could potentially benefit from these ITS projects. By the time of this conference, we believe that West Virginia will be able to showcase some of the best success stories in the nation in rural ITS. Those successes will be due in large part to the great partnership that exists in this area between WVDOT, RTI and FHWA."

Approximately 300 transportation professionals from across the United States are expected to attend the five day conference. These professionals will represent other state transportation agencies, academic institutions, consultants and equipment vendors.

Steve Albert, director of the Western Transportation Institute in Bozeman, Mont., said, "Bringing the NRITS conference back to the east coast and the unique transportation, economic development and partnership provide a great opportunity for RTI and West Virginia to showcase how they are addressing rural transportation challenges. ITS America and the Rural Stakeholder Group look forward to working together in partnership to bringing national rural ITS experience to WV, and vice versa."

For more than 15 years, ITS America has been the foremost advocate for the development and deployment of intelligent transportation systems in the U.S. ITS America members come from private corporations, public agencies, academic institutions and research centers. ITS America Members share a common goal: to improve the safety, security and efficiency of the nation's transportation system for the traveling public through the deployment of ITS.



Partner School News:

RTI Assists in Faculty Development Activities at WVUIT

Submitted by Dr. Steven Leftwich

Several faculty development activities in the Civil Engineering Department at West Virginia University Institute of Technology (WVU Tech) were made possible by assistance from RTI. Research activities, professional development courses and conference participation for four Principal Investigats included:

Dr. Steven Leftwich (PI)

- Earned 8.0 Professional Development Hours for participating in the “Practical Connection Design for Economical Steel Structures” seminar presented by the American Institute of Steel Construction (AISC), December 2009, Charleston, WV. This practice-oriented seminar focused on how to design and evaluate the connections in a project.
- Attended the “Society of American Military Engineers (SAME) Winter Technical Conference,” January 2010, Marshall University, Huntington, WV.
- Earned 4.0 Professional Development Hours for participating in the seminar titled “Boundaries Along Streams and Roads in West Virginia,” at Bridgemont Community and Technical College, June 2010, Montgomery, WV.
- Earned 4.0 Professional Development Hours for participating in the seminar titled “Obtaining, Interpreting and Correcting Legal Descriptions; and Tips for Determining Preliminary Boundary Locations,” at Bridgemont Community and Technical College, June 2010, Montgomery, WV.
- Earned 8.0 Professional Development Hours for participating in the seminar titled “Efficient Analysis for Steel Design using the 2005 AISC Specification” at the American Institute of Steel Construction (AISC), April 2010, Cincinnati, OH.

Dr. Jason Hill (Co-PI)

- Attended the seminar titled “West Virginia Stormwater Management,” December 2009, Charleston, WV.
- Accompanied a group of civil engineering students who competed at the 2010 ASCE Virginias’ Conference at Catholic University in Washington, D.C.

Dr. Valerian Kwigizile (Co-PI)

- Represented WVUIT at the 56th Annual North American Meetings of the Regional Science Association International (RSAI) Conference, November 2009, San Francisco, CA. Dr. Kwigizile attended four transportation-related sessions that included: (1) Impact of Transportation Pricing, (2) Travel Behavior, (3) Commuting and its Impacts, and (4) Travel Forecasting. At the Travel Forecasting session, Dr. Kwigizile also presented the paper titled “Impact of Land Use and Location on Work Trips: Las Vegas Case.”
- Represented WVUIT at the 89th Annual Meeting of the Transportation Research Board (TRB), January 2010, Washington, D.C. Dr. Kwigizile attended three sessions that include: (1) Innovation in Travel Demand Forecasting, (2) Truck and Bus Safety Research, and (3) Road Safety Evaluation. In addition, Dr. Kwigizile presented two papers that he co-authored which include (1) “Safety Characteristics of Unconventional Continuous Green Through Lane Intersections” and (2) “Synchronizing Roadway and Traffic Operations Influencing Bus Crashes.”

Dr. Yoon-Si Lee (Co-PI)

- Attended “Strengthening and Rehabilitation of Highway Structures with FRP Composites in West Virginia,” seminar October 2009, Morgantown, WV.
- Earned 8.0 Professional Development Hours by participating in the “Practical Connection Design for Economical Steel Structures” seminar at the American Institute of Steel Construction (AISC), December 2009, Charleston, WV.
- Earned 8.0 Professional Development Hours by participating in the AISC seminar titled “Efficient Analysis for Steel Design using the 2005 AISC Specification,” 8.0 PDHs, April 2010, Cincinnati, OH.





FLL LEGO Robotics Competition Trains Students, Teachers

On Saturday, December 12, 2009, RTI hosted the regional FIRST LEGO League (FLL) “Smart Move” Challenge, at the Morrow Library on Marshall University’s Huntington campus.

This year’s competition, “Transforming Transportation,” called for teams to research and present their own creative solutions for accessing people, places, goods and services in the safest, most efficient way possible.

“At RTI we encourage innovation, communication, and collaboration in transportation through research and applied science,” Bob Plymale, RTI Director and CEO, said. “This challenge applies those same ideals and gives our young people the opportunity to tackle situations they will face as adults.”

Nearly 200 students from Cabell, Wayne and Mason counties participated in FLL, an international robotics program that ignites an enthusiasm for discovery, science, and technology in students ages 5 to 14.

Using LEGO MINDSTORMS technologies and LEGO materials while working with mentors, students spent eight weeks learning engineering and computer programming principles as they designed and built a fully

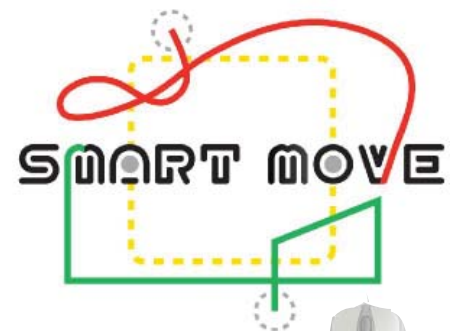
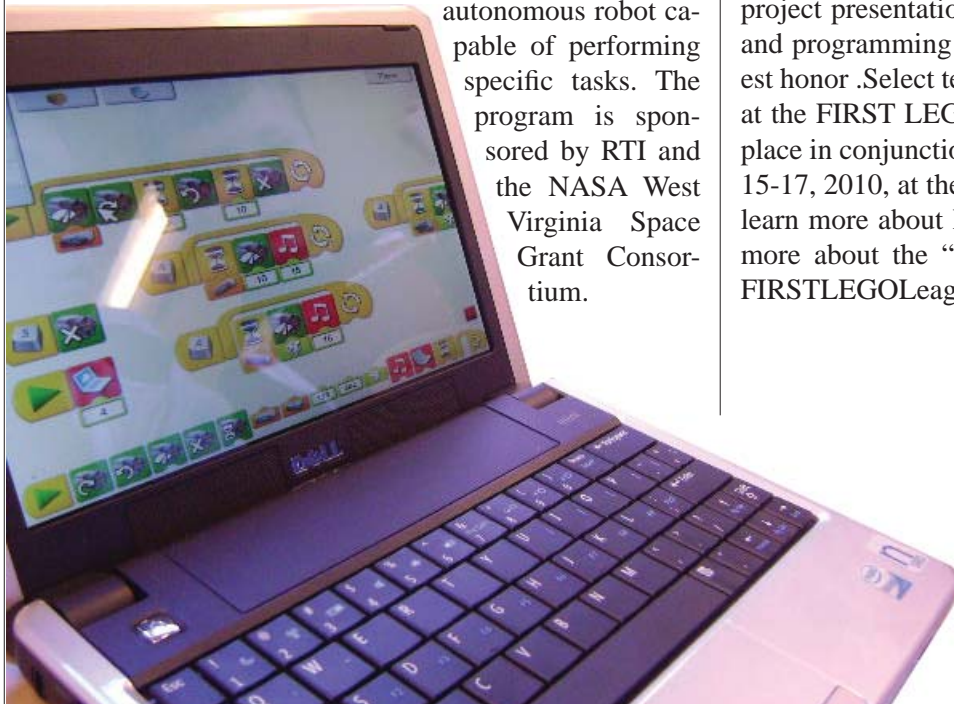
autonomous robot capable of performing specific tasks. The program is sponsored by RTI and the NASA West Virginia Space Grant Consortium.



“This is a fun way to introduce younger students to science, technology, engineering and mathematics – or STEM,” Linda Hamilton, LEGO Robotics Outreach Coordinator at RTI, said. “It’s exciting to follow them through the discovery process.”

At the event students demonstrated problem-solving, creative thinking, teamwork and sportsmanship skills they developed during the program.

The FLL competition is judged in four areas: project presentation; robot performance; technical design and programming of the robot; and teamwork. The highest honor .Select teams have the opportunity to participate at the FIRST LEGO League World Festival, which takes place in conjunction with the FIRST Championship, April 15-17, 2010, at the Georgia Dome in Atlanta, Georgia. To learn more about FIRST, go to www.usfirst.org. To learn more about the “Smart Move” Challenge, go to www.FIRSTLEGOLeague.org.





Upcoming Events

Conferences/Transportation Seminar Series/Technology Transfer Activities

| | |
|----------------------------|---|
| March 11-13, 2010 | Transportation Research Forum, Washington, D.C. |
| March 11, 2010 | Trails Day at the Legislature, Charleston, W.Va. |
| March 21-26, 2010 | American Concrete Institute (ACI) Spring Convention, Chicago, Ill. |
| April 12-14, 2010 | 23rd Annual GIS-T Symposium "Mountains of Opportunity," Charleston, W.Va. |
| May 3-5, 2010 | Intelligent Transportation Systems America Annual Meeting, Houston, TX |
| May 4-5, 2010 | 2010 Precast/Prestressed Concrete Institute (PCI) Central Region Meeting, Louisville, Ky. |
| May 16-22, 2010 | National Transportation Week Activities |
| May 28-June 2, 2010 | Precast/Prestressed Concrete Institute (PCI) Convention/Annual National Bridge Conference and FIB, Washington, D.C. |
| June 7-10, 2010 | West Virginia Association of Geospatial Professionals Conference, Huntington, W.Va. |
| July 12-16, 2010 | ESRI Annual User Conference, San Diego, CA |
| August 1-4, 2010 | National Rural ITS Conference, Huntington, W.Va. |
| August 3-5, 2010 | Geohazards Impacting Transportation in the Appalachian Region, Columbus, Ohio |
| August 26-27, 2010 | National Off-Highway Vehicle Conservation Council Annual Meeting, Great Falls, MT |

Pre-K thru 12/Community Outreach Events

| | |
|-----------------------------|---|
| May 14-15, 2010 | West Point Bridge Design Contest, Huntington, W.Va. |
| May 16-22, 2010 | National Transportation Week Activities |
| May 24, 2010 | PATH Golf Tournament with the Huntington Area Chamber of Commerce YPC Group, Twin Silos Golf Course, Lavalette, W.Va. |
| June 2010 | LEGO Robotics Camps, visit www.marshall.edu/LEGO for a complete list of courses and locations. |
| June 27-July 2, 2010 | WVOL Rail Camp, Camp Echo, Cabins, WV |

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

Upcoming
Events

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