

# NEWS



TRANSPORTATION RESEARCH BOARD

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For Immediate Release  
News Release

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## **PAPER ON LONG GREEN TIMES/CYCLES AT CONGESTED TRAFFIC SIGNALS WINS TRB'S MICKLE AWARD**

*“Long Green Times and Cycles at Congested Traffic Signals”* is the winner of the Transportation Research Board’s (TRB’s) 2009 D. Grant Mickle Award for the outstanding paper in the field of operation, safety, and maintenance of transportation facilities. The award, named for the Board’s Executive Director from 1964 to 1966, will be presented on January 11, 2010, at the Thomas B. Deen Distinguished Lecture and Presentation of Outstanding Paper Awards during the Board’s 89th Annual Meeting. The authors are Richard W. Denney, Jr., of Iteris, Inc., Virginia; Eddie J. Curtis, Jr., of the Federal Highway Administration (FHWA), Georgia; and K. Larry Head of the University of Arizona. The award-winning paper has been published in the *Transportation Research Record: Journal of the Transportation Research Board*, No. 2128.

Field data was collected and simulation experiments were conducted based on an intersection in Virginia to test the hypothesis that headways increase with very long green times, and to test the commonly held assumption that throughput increases with longer cycles. The results showed that headways increase with very long green times as a result of departing turning

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vehicles, and that this effect can cause a significant increase in overall average approach headways. The results also showed that maximum throughput, defined as the point where additional offered load could not be served, did not increase with longer cycles. In simulation, increasing the cycle caused a reduction in throughput as a result of increasing the effect of departing turning traffic on the average headway.

Richard Denney is an Associate Vice President of Iteris, Inc. Prior to that, he served in the public sector with the Texas Department of Transportation and the cities of Austin and San Antonio. In a career of nearly 30 years, Denney is a sought-after speaker on traffic operations topics and has been a leader in traffic signal operations and systems, traffic equipment communications standards, ITS systems engineering and implementation. Active in TRB since the early 1980s, he holds multiple registrations as a professional engineer. Denney holds an undergraduate degree from Texas A&M University and a master's degree from the University of Texas at Austin—both degrees in civil engineering with a strong specialization in traffic engineering and operations.

Eddie Curtis is a Traffic Management Specialist with the FHWA Resource Center and Headquarters Office of Operations, where he manages the Arterial Management Program responsible for providing research, guidance and outreach to advance arterial operations and traffic signal management. He has 14 years of experience in traffic signal operations and has held positions with the City of Los Angeles and PB Farradyne. Curtis holds a bachelor's degree in civil engineering from California State University, Los Angeles. He is also a licensed professional engineer in California.

K. Larry Head is currently the Department Head and an Associate Professor of Systems and Industrial Engineering at The University of Arizona. Before a six-year stint in the private sector, he served for four years as an Assistant Professor of Systems and Industrial Engineering at The University of Arizona. In the private sector, Head was a Senior Vice President and Director of Research and Development of Siemens ITS, where he supervised the development of traffic management system software and advanced traffic signal controller firmware as well as a variety of research and development projects. He is the current chair of the TRB Committee on Traffic Signal Systems. Head holds a Ph.D. in systems and industrial engineering from the University of Arizona.

More than 10,000 policy makers, administrators, practitioners, researchers, and representatives of government, industry, and academic institutions are expected to attend the Transportation Research Board (TRB) 89th Annual Meeting, in Washington, DC, January 10-14, 2010. The meeting, held at the Marriott Wardman Park, Omni Shoreham, and Hilton Washington hotels, includes more than 3,000 presentations in 600 sessions and workshops covering all aspects of transportation.

The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. TRB facilitates the sharing of information on transportation practice and policy by researchers and practitioners; stimulates research and offers research management services that promote technical excellence; provides expert advice on transportation policy and programs; and disseminates research results broadly and encourages their implementation. A major focal point of TRB's activities, the Annual Meeting provides an opportunity for transportation professionals from all over the world to exchange information of common interest.

Organized in 1920, TRB is a division of the National Academies, which include the National Academy of Sciences, National Academy of Engineering, Institute of Medicine, and National Research Council. The nation turns to the National Academies for independent, objective advice on issues that affect people's lives worldwide.

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