

From the President



One reason I chose “A Bridge to the Future” as the theme for my year as IBTTA President is my connection to the Golden Gate Bridge and my passion for large bridges all over the world. Another reason is the incredible metaphorical power of bridges.

As the global recession has worsened and businesses everywhere are battering down the hatches, I’ve come to realize that this theme is even more than a metaphor; it is an attitude and a clearly articulated intention that our association IS and WILL BE a bridge to the future.

I’m proud to be leading IBTTA at this moment in history. Our industry offers powerful solutions to important mobility and quality of life issues worldwide. At our Tampa meeting in June, Marty Stone related a story about two customers who said the opening of the Selmon Expressway allowed them to spend an extra hour every day with their children. This is a perfect reminder that we are really about improving the quality of life in our communities.

I cannot emphasize enough the growing importance of tolling and direct user charging around the world. Here in the United States, two major congressional commissions recently pledged their support for mileage based charging to replace the fuel tax as the primary means to fund road transportation. We in the toll industry know all about mileage based fees. It’s what we do. Mileage based fees are part of our past and our future. With expertise in finance, technology, traffic management, operations, and customer service, IBTTA members have an opportunity to help write transportation history. We have a chance to DRIVE the coming economic recovery and the creation of more sustainable transportation.

I’m confident and excited about our industry’s future. In spite of the weak global economy, I believe the best days of our industry are ahead of us. We create what we focus on. If we focus on doom, we create it. But if we focus instead on opportunity, then we create that. We should be mindful of the many challenges we face, but we should focus our attention on the tremendous opportunities that lie before us.

Kary Witt

From the Executive Director and CEO



Two years ago, we published an issue of Tollways under the theme “Convergence of Technology, Finance and Policy.” The current issue of Tollways addresses similar themes. As Kary Witt notes in his letter on the previous page, two congressional commissions recently expressed their support for a vehicle miles traveled (VMT) charge to replace the fuel tax as the primary means to fund road transportation. Our industry has anticipated this move for a long time and it represents the convergence of technology, finance, and public policy. The technology that allows electronic toll collection not only makes it easier to collect tolls on toll supported road facilities; this technology also makes it possible for politicians and elected officials to envision a way to fund surface transportation based on actual use of the road system, time of day, the congestion characteristics of various stretches of highway, even the passenger loads, performance and emissions characteristics of the vehicles themselves.

The articles in this issue of Tollways all speak to a vision for transportation policy and funding that was articulated quite well during a Forum on the Future of Highway Transportation in America that IBTTA held in July 2005. During that forum, Ed Regan of Wilbur Smith Associates helped give voice to a future transportation vision that many in our industry have been trying to articulate.

“Consider a scenario,” Ed Regan said, “where 20 years from now we’ve moved to a mileage-based fee and every vehicle in America is equipped with some type of device to be able to do that. We’ll probably need to be able to allocate revenue by specific route and all the different things you’ve heard me talk



about before. If that's the case, then that decision gives the intelligent transportation system (ITS) community the perfect killer application that they've been looking for over the last five years. The biggest problem with ITS and all the benefits it offers is finding a way to finance it. Well, if the driving force of the technology is the basic foundation for how we pay for highways in America and it gets installed in every vehicle on the assembly line, now all of a sudden the onboard unit is going to be in place to support all kinds of additional services. It also creates a situation where we now have a direct linkage between the use of this commodity, transportation capacity, and what we pay for it. That is a fundamental requirement for any type of movement toward a performance based investment strategy, the whole idea of being held accountable. If you don't actually pay directly for what you use, then you don't really have the built-in incentive for one road to be operated better than any other."

The articles in this issue of Tollways all speak to different aspects of the vision Ed Regan and others helped to articulate in the Future Forum we held more than four years ago. We hope you enjoy this collection of articles that underscore the convergence of technology, finance and policy.



Patrick D. Jones

Tollways



Tollways strives to be a principal agenda-setting publication for the transportation profession, providing a serious source of original thinking to advance the performance of organizations engaged in tolling and other direct user-fee financed transportation services and their leaders. *Tollways* is published by the International Bridge, Tunnel and Turnpike Association and distributed to its member company representatives. IBTTA also distributes copies of each issue to members of Congress and other key policy makers at the federal, state and local levels of government.

Publisher

Patrick D. Jones
Executive Director
& CEO, IBTTA
pjones@ibtta.org

Editorial and Creative Director

Wanda Klayman
Deputy Executive
Director, IBTTA
wklayman@ibtta.org

Project Editor

Christine A. DeJoy
cadejoy@comcast.org

Design

**Bremmer & Goris
Communications**
www.goris.com

Editorial Advisory Board

Michael Ascher

Edward J. DeLozier
E-470 Public Highway
Authority

Neil Gray
IBTTA

Nigel C. Lewis
The Louis Berger Group

Timothy McGuckin
OmniAir Consortium, Inc.

Jean Mesqui
Association
Professionnelle
Autoroutes et Ouvrages à
Péage—ASFA

Edward J. Regan III
Wilbur Smith Associates

George Tanner

Harold W. Worrall, P.E.
Transportation
Innovations, Inc.

George P. Zilocchi
GeoPat Consulting LLC

Publishing in *Tollways* Submitted articles are reviewed by members of the *Tollways* Editorial Advisory Board and other peer reviewers. Author guidelines are available at www.ibtta.org. For additional copies, permissions and reprints, please email wklayman@ibtta.org or call 202.659.4620.

Tollways is published by the International Bridge, Tunnel and Turnpike Association.

*Opinions expressed in *Tollways* articles are those of the authors. IBTTA does not endorse trademarked products mentioned in *Tollways*; their inclusion is solely at the discretion of the authors.*

Table of Contents



- 3** IntelliDriveSM and the Open Road
Greg Krueger, P.E.; Lee T. Mixon, P.E.; and J. Kyle Garrett



- 15** Has the Time Come for a US RFID Standard, 5.9?
Harold W. Worrall, Ph.D., P.E.



- 23** Cash Collection in a Cashless System
Jim Wilson, PMP



- 31** Exploring Alternative Models for Procuring Back Office Software and Services
Fred Philipson

POLICY AND FINANCE



- 43** Humpty Dumpty Infrastructure
Bob Prieto



- 57** The Case for Two-Tier Congestion Pricing on Urban Tollways
Robert W. Poole, Jr.



- 65** Bus Toll Lanes: A New Transit—Toll Partnership to Improve Mobility
Martin Stone, Ph.D., AICP, with contributions from Joe Waggoner



- 75** Vehicle Miles Traveled
Daniel Baxter