STATUS OF TOLL INTEROPERABILITY

HEARING

BEFORE THE

SUBCOMMITTEE ON
TRANSPORTATION AND PUBLIC ASSETS

OF THE

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COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM

JASON CHAFFETZ, Utah, *Chairman*

C O N T E N T S

STATUS OF TOLL INTEROPERABILITY

Wednesday, September 30, 2015

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON TRANSPORTATION AND PUBLIC
ASSETS,
COMMITTEE ON OVERSIGHT AND GOVERNMENT REFORM,
Washington, D.C.

The subcommittee met, pursuant to call, at 2:06 p.m., in Room 2154, Rayburn House Office Building, Hon. John L. Mica [chairman of the subcommittee] presiding.

Present: Representatives Mica, Grothman, Duckworth, Watson Coleman, DeSaulnier, and Boyle.

Mr. MICA. Well, good afternoon. I would like to welcome everyone to the Subcommittee on Transportation and Public Assets, a subcommittee of the Government Oversight and Reform Committee, and welcome them to a hearing today that is entitled the "Status of Toll Interoperability."

While we don't have the crowd we had yesterday on Planned Parenthood or—I have been here through Whitewater and Travelgate and other hearings—I am very pleased that we do have the witnesses that we have and those who are attending, because this is one of our meat-and-potato hearings. All the hearings of this committee are not blockbusters, but many of them are very important and achieve some important things for the American people. And our focus today, again, is on the status of toll interoperability.

The order of business is I am going to open with an opening statement. I will yield to Mr. Boyle, who is serving as our ranking member. And any other members will have at least 10 legislative days to submit a statement for the record.

Without objection, so ordered.

Mr. MICA. So we may be joined by others. And we will be having votes, so we want to keep this moving.

Then we will hear from our witnesses, and I welcome them again. And then, after we hear from all four of our witnesses, we will go to questions.

So it won't be a long hearing. It won't be too brutal for our witnesses. In fact, I think it is one of those that everybody can come away with and see something positive as a result.

So, with that, I will start with my opening statement.

And it is pretty exciting for me—I had chaired the Transportation Committee, been on the Transportation Committee for more than two decades, honored to have leadership positions. Worked on the last transportation bill, which we did pass. They, I think, today are seeing the struggle and difficulty of passing major bills. Our

bill turned out, because of funding, to be a 2–1/4-year bill. So it wasn't a long-term, it didn't have a huge amount of financing, but it kept us moving. And that is the legislation we are working under today.

Within that legislation were a number of policy changes. And I have to tell a quick story about how this particular provision—I put in the bill a provision that, within a certain amount of time— and that time will lapse by October of 2016—all of the toll passes, the electronic devices that are used to access tolls, throughout the country would be interoperable.

It came about as a result of an incident—I have been married for 43 years and in Congress for 23. And most of the 23 years in Congress, at Thanksgiving I leave Washington. I go up I–95, and my mother-in-law, who passed away a couple of years ago, my wife and I would visit her for Thanksgiving or the holidays. And with me I would take my little pass from home, and I would put it in my briefcase, and when I got to the tollway, lo and behold, it didn't work.

It was prior to starting this legislation, and I called the staff and I said, well, maybe this is my mother-in-law provision, but when we do the bill, let's see if we can put a provision in.

First, we talked to folks and said, are they capable of producing an interoperable system and device, and is it technically feasible? And the answer was yes. And then the next thing was, how long would it take? And we thought we would give adequate time, and we would give about a little more than 3 years and then some to get this in place. But it is from a technical standpoint possible and a reasonable amount of time moving forward.

Now, it is a year from now when this bill kicks in. I will announce today that I will be providing some legislation which will be an incentive to make certain that this happens. Some of those in the industry may not like the incentive, but there will be a toll to pay if you aren't participating in this. I am not going to give you all the details, but there will be a toll and price to pay. I just want to have a little motivator to make certain the provision is moving forward.

And let me say at the outset that the industry has been great. They have come together. With the announcement of this hearing, Mr. Boyle, we have already accomplished some things. Some parties who couldn't quite agree, I think, on some issues have come together just most recently, even since the announcement of this hearing. And we continue to hope to hear and see that spirit of cooperation in getting what we hope achieved.

So the most important thing is, in our era, why should we have— this is just a sampling of the passes here, all the passes. Now, these are the big ones and the other size ones. We have all kinds of passes here, dozens of passes, electronic passes. And now the passes are actually getting a lot smaller. Here is some of them, little pieces.

But our goal is to make it convenient. Our goal is to move traffic on our congested interstates and our toll roads faster and accommodate people and not have the backup, not have the congestion they have experienced. So the driver does not have to stop. It is safer, again, and I think it will be a boon to everyone.

Each year, more than $13 billion is generated in electronic toll collection revenue, and it serves some 45 million customers. And I think the more convenient, the more people will use the system.

The Alliance for Toll Interoperability has made some very good efforts to identify business rules for exchanging and settling these transactions, and I think we can get even further, and we will. And we will work with you.

With the national interoperability, there must be regional interoperability, as well. The committee has learned that Florida, my State, has taken a lead, and we have seen some great combination already. Some of the Southern States and other States have already banded together—and regions—and you can use the same pass and go.

I am very pleased to announce today, and we will hear, hopefully, some more specifics about this.

Now, listen to this. With this pass here—I will just use this one; we don't want to give anybody too much credit here. But with this pass, we are very close to reaching an agreement.

And listen to this, Mr. Boyle, since you told me you drove from Maine to Florida——

Mr. BOYLE. Not quite Maine, but Boston all the way to——

Mr. MICA. Darn near close. Just up and across the way.

But you will be able to go down 95 from Maine to Florida, my State, up to your area in the Northeast with one pass. And that is a result of progress that has been made just in the last few days. So I compliment you on that. I want to hear more about that. And then we want the date when folks can do that.

So that is pretty exciting. You probably won't be using this one. You will probably be using one of these little stickers, but we will hear more about that.

So I believe that we have made some very positive steps towards achieving interoperability. While tolling is an essential tool to supplement revenues for transportation infrastructure—and, as you may know, also, in the last bill, we have started a whole bunch of projects.

I have a $2.4 billion one in central Florida. We have enough money to improve our interstate through central Florida, but we don't have enough money to expand it. So, through the public-private partnership, under construction now—and it is one hell of a mess already—we have through 20 miles of downtown Orlando underway—not planned, but underway—the construction of four additional lanes. And this will also be operated under a toll system.

I have mandated in the legislation all three lanes stay free, but we could use additional existing right of way, inside median, and other assets that sit there idly towards expanding capacity, having a way to pay it down, and having a way to construct it, and adding, again, capacity. And that frees up the free lane, so people who can't pay can go faster, and people who want to pay can help build, pay for, and pay down the cost of that improvement.

Tech startups are currently developing tolling solutions with a smartphone. I believe this will probably be one of the next ways that we will be paying not only for tolls but for many other things. Some people have already seen it. It is very innovative, but this is coming next.

I am also using this and other technology from this as a way to read in realtime the flow of traffic and very cost-effectively in realtime change the signalization and allow cars to flow faster and also more cars to be used in the same amount of capacity by getting people where they want to go.

So these two devices—again, this is almost passe—but will help us also, electronically and technically, move vehicles and traffic faster.

So the future will see cars talking to each other. I had a rental car this weekend; it talked to me. I got a little over in the wrong lane. It sure as hell woke me up. And I got a little too close to the car in front of me, and it sure as heck did have a conversation with me. In fact, I thought I had done something really wrong.

But we are on the verge of some incredible technology breakthroughs. And you all today are part of one that will make a big difference nationally.

We must be able to allow for a bridge to that environment as new technologies come to light, while remaining cognizant of consumer privacy. That privacy is a very important element.

So, this afternoon, I look forward to hearing your testimony. Pretty exciting to see something you proposed finally coming into fruition and reality. And I thank each and every one of you for being here. We look forward to working with you.

I am pleased to also finally ask unanimous consent that the testimony from Florida's Turnpike Enterprise and E–ZPass are entered into the record. They submitted that to me.

Without objection, so ordered.

Mr. MICA. And, of course, we will take any other requests in a similar manner.

Mr. MICA. With that, Mr. Boyle, welcome, and thank you. You are recognized.

Mr. BOYLE. Well, thank you, Mr. Chairman.

And I thank all of you who are gathered. And, as the chairman pointed out in the beginning, as we were both here yesterday, there might have been one or two more people at that hearing than this one. And while this issue might not have the sexiness of some others, actually, this is critically important. This is the real work of Congress and our government, and this is the kind of thing that goes on behind the scenes, doesn't get as much attention but, I suspect, will actually have a longer-lasting impact.

As Chairman Mica was mentioning, I am from Pennsylvania. I have driven almost every mile of I–95. I can say that from about New Hampshire to where I–95 ends, just south of Miami. And, about four or five times, I have driven it from Philadelphia down to Florida.

So I happen to be a big fan of E–ZPass. I am so glad that in the Northeast, when I drive, even on the frequent trip that I make from Philadelphia to Washington, that I am able to come here, despite going through Delaware and Maryland and sometimes over into Virginia, the fact that one system works for that.

Likewise, going east to west, as many people from Pennsylvania do, on the turnpike and the Jersey shore, we have interoperability. Now the question is, how do we do this as a country, as the United States?

PBS recently rebroadcast the 25th anniversary of their landmark Ken Burns documentary, "The Civil War." And it has been said that the Civil War changed the verbiage we use. Before the Civil War, the "United States" was said as a plural. After the Civil War, the "United States" was said as a singular.

Well, I think part of further strengthening that is the Interstate System. I think that one of the great achievements of President Eisenhower was the Interstate System. And making sure that we have interoperability on our electric tolling is part of that.

Now, I will read an opening statement for the record to get into more of the nitty-gritty, but please accept my thanks and appreciation for being here.

Highways remain the primary method of transportation in this Nation. According to the Census Bureau, highway mileage in the U.S. exceeded 4 million miles in 2009, including more than 46,000 interstate miles.

According to Federal Highway Administration, just under 6,000 miles of highway and bridge facilities in the U.S. are tolled, and the majority of States now have a tolled facility of some kind.

Most toll facilities now utilize some type of electronic collection system. I would add as a quick aside, some States, including Pennsylvania, I know, are experimenting with strictly electronic tolling and no longer an option for any other method of payment.

As a result of their individualized development, many toll authorities use transponder systems that are unique to them and not compatible with other systems. The MAP–21 legislation that Chairman Mica helped write requires that toll systems on Federal highways, "implement technologies or business practices that provide for the interoperability of electronic toll collection programs by next year."

Right now, groups in industry, as has been mentioned, are working on two different but complementary approaches to achieve interoperability. One group, led by the International Bridge, Tunnel, and Turnpike Association, is working to develop a national toll protocol, meaning in plain terms a transponder system that could be utilized at all toll facilities in the Nation.

Under this scenario, a single transponder system would be identified at all toll systems, would ultimately collect—would ultimately adopt this system, or utilize roadside equipment that could read the national transponder as well as their own unique transponder.

There are already several regions of the country in which local toll facilities have adopted an interoperable electronic toll collection system. The largest of these regional groups, as I mentioned previously, is E–ZPass, whose membership encompasses 15 States and 26 separate toll authorities and systems, including the Pennsylvania Turnpike Commission.

In 2014, there were nearly 17 million E–ZPass accounts and more than 28 million E–ZPass transponders in use, including two in the Boyle household. According to E–ZPass' Web site, the E–ZPass toll system collects more than $10 billion in annual revenue, including $7.8 billion collected electronically and more than $3 billion transferred among participating agencies as drivers move through tolled facilities in States other than their home State.

The E–ZPass system clearly demonstrates the advantages that could result from the creation of a single national transponder system.

A separate effort is underway that seeks to stitch together the so-called back-office operations of toll authorities. The objective of this effort, which is being lead by the Alliance for Toll Interoperability, is to enable systems to exchange information on toll system usage by the various account holders so that fares, and presumably fines, can be exchanged among the systems. This would achieve a form of interoperability that would not entail the use of a single national transponder system.

Certainly, while both efforts offer great promise to improve mobility in our Nation, each also understandably raises significant data security and privacy concerns. For example, toll systems will have data on a vehicle's registration and travel history, and they will have the credit card information associated with the driver's account. I am concerned to know what data standards are in place to protect this data as it is stored and especially if it is shared among tolling entities.

So I look forward to examining these issues in more detail today. And I thank very much the chairman for calling this hearing and his good work on this issue.

Mr. MICA. Thank you, Mr. Boyle.

And other members?

Mr. Grothman?

Our vice chairman, Ms. Watson Coleman, did you want to make a comment or statement now?

Mrs. WATSON COLEMAN. Well, thank you, Chairman. I just want to say that I thank you for calling this subcommittee meeting to order here and giving us this opportunity to examine an issue that is very important. We kind of take it for granted. It may not be on that—you know, the theatrics and drama of other issues, but it impacts our quality of life.

And I very much am a fan of E–ZPass. I use it to get back and forth from New Jersey to D.C. all the time. And I like not standing in line, waiting to throw my coins into the receptacle. But I also recognize that the movement of our traffic without having to stand in line is good for our climate and our environment.

So I am very interested in hearing your perspectives and our various roles and how Congress can and should help. Thank you.

Thank you, Mr. Chairman.

Mr. MICA. Thank you for your comments.

And we have left the record open.

And, furthermore, without objection, the chair is authorized to declare a recess at any time.

And, with that, I would like to now recognize and again welcome our witnesses.

I am pleased to welcome Mr. Jeffrey Lindley, Associate Administrator of the Office of Operations at the Federal Highway Administration, the Department of Transportation; Mr. Patrick Jones, executive director and CEO of the International Bridge, Tunnel, and Turnpike Association; Mr. James Eden, and he is president of the Alliance for Toll Interoperability; and Mr. Thomas Knuckey, who is the tolls technology sector manager at Atkins Global. Mr. Knuckey

is testifying today as is a volunteer member of the International Bridge and Tunnel Association's Interoperability Steering Committee and is chair of that organization's Roadside Operations Subcommittee.

Welcome, all.

According to our committee rules, we are going to now—this is an investigations and oversight subcommittee and committee. If you would stand and be sworn. Raise your right hand.

Do you swear to tell the whole truth and nothing but the truth before this subcommittee of Congress?

Let the record reflect that all of the witnesses answered in the affirmative.

And, again, we welcome you. I am not sure if—one or two faces look familiar. We limit the time to 5 minutes for a statement, and we will go through. You can also have additional information, data, submitted to the record with a request, and that will be made part of the record. I would like to get you to summarize, and then we will go through the panel and ask questions.

So, again, welcome.

And let me recognize first Mr. Jeffrey Lindley. And he is, again, the Associate Administrator, Office of Operations, at the Federal Highway Administration.

Welcome back. And you are recognized, sir.

WITNESS STATEMENTS

STATEMENT OF JEFFREY LINDLEY

Mr. LINDLEY. Thank you, Mr. Chairman. And good afternoon. Chairman Mica, Ranking Member Boyle, thank you for inviting me here today to discuss the MAP–21 provision regarding electronic toll collection, or ETC, interoperability. I am pleased to highlight FHWA's efforts for you today, as well as the progress we have seen the toll industry make toward implementation of the MAP–21 requirement.

Achieving of national interoperability of ETC systems is an important issue that affects motorists who travel frequently between regions, such as long-distance truckers, and people living in close proximity to two or more regions that use different ETC approaches. These users must maintain multiple ETC accounts and transponders or use other methods of payment which are often more expensive and can create congestion at toll collection points.

Although these users represent a fraction of the tens of millions of total ETC users, nationwide ETC interoperability would allow users to drive anywhere in the country without having to establish multiple accounts with ETC agencies or carry multiple tags.

Prior to the passage of MAP–21, FHWA implemented a toll interoperability provision under SAFETEA–LU. We issued a final rule in 2009, and, although we could not establish a national standard at that time, the rule required agencies to consider regional interoperability in developing their toll collection systems, which helped accelerate progress toward nationwide interoperability.

The E–ZPass Group provides a good example of regional interoperability. This consortium of 26 toll agencies in 15 States has

millions of interoperable devices in circulation and accounts for a significant portion of all toll transactions in the U.S.

With regard to implementing the MAP–21 provision, while FHWA believes that a solution identified and developed within the tolling industry presents the best opportunity for achieving nationwide interoperability, we are committed to helping implement the requirement and have engaged with the tolling industry on a regular basis.

FHWA meets regularly with IBTTA. In addition, we have met with ETC equipment manufacturers and back-office operating agencies. We monitor developments within the tolling industry and communicate with IBTTA and the equipment manufacturers to review implementation progress and identify actions that would help facilitate interoperability.

As other panelists today can attest, this industry-led approach is yielding progress. For example, more tolling agencies are moving to all-electronic tolling, where tolls for users without a recognized tag are collected through license plate recognition and billing.

IBTTA has developed a strategic plan and developed an open communications protocol based on the data requirements of current ETC transponder tags. This approach involves selecting a national transponder protocol that toll agencies could offer to their users who desire interregional or national interoperability while continuing to offer a traditional local or regional ETC transponder. The toll agencies would agree to read the national transponder and process interoperable transactions. Through equipment attrition, toll agencies would eventually transition to only national transponder tags.

Last year, the IBTTA Board of Directors adopted this protocol and recommended that all toll agencies make the protocol available to any customer who desires national interoperability. IBTTA's efforts have also revealed the need for realworld testing of the protocol to ensure it could coexist with current transponders and to allow a gradual migration to a single protocol.

For more near-term interoperability, the Alliance for Toll Interoperability has established a HUB pilot program that allows the exchange of toll transaction information among enrolled toll agencies, providing interoperability to users. Toll facilities in North Carolina, Georgia, and Florida now accept each other's tags. Likewise, toll facilities in Kansas, Oklahoma, and north Texas accept each other's tags. These are examples of agencies with different ETC protocols cooperating to offer users interoperability through advanced roadside readers and coordinated back-office billing processes.

Finally, one ETC tag vendor recently introduced a tag that allows a user to establish an account with the vendor that will provide interoperability among the Nation's major ETC systems. The tag vendor establishes accounts with each system and handles the billing for the individual user, issuing a single statement for the tolls plus an administrative fee.

An important aspect of this is now the availability of a North Carolina tag that offers interoperability with Georgia, Florida, and the E–ZPass facilities, which creates full East Coast interoperability for users who need it.

Mr. Chairman, thank you again for the invitation to appear here today on behalf of FHWA. This concludes my remarks, and I would be happy to answer your questions when the time comes.

[Prepared statement of Mr. Lindley follows:]

[Testimony can be found at: *https://oversight.house.gov/hearing/status-of-toll-interoperability/*]

Mr. MICA. Thank you, Mr. Lindley. And we will get back to you with questions.

But right now I am going to recognize Mr. Jones, who is the executive director and CEO of the International Bridge, Tunnel, and Turnpike Association.

Welcome, sir. And you are recognized.

STATEMENT OF PATRICK JONES

Mr. JONES. Chairman Mica, Ranking Member Boyle, and members of the subcommittee, my name is Patrick Jones. I am the executive director and CEO of the International Bridge, Tunnel, and Turnpike Association. I am honored to be here today.

IBTTA is the worldwide association for the owners and operators of toll facilities and the businesses that provide products and services to the industry. Our mission is to advance transportation solutions through tolling. Founded in 1932, IBTTA has more than 60 toll agency members in the United States and hundreds more in 20 countries on 6 continents.

We commend you, Chairman Mica, for your work on this committee and for your leadership and vision on the Transportation and Infrastructure Committee.

At the very outset, I want to acknowledge my industry colleagues on this panel: J.J. Eden, with the Alliance for Toll Interoperability; Tom Knuckey, representing the Roadside Operations Subcommittee of IBTTA's Interoperability Steering Committee; not on this panel but with us in spirit and extremely active in this process, Dave Kristick of the E–470 Public Highway Authority, who is chair of our Interoperability Steering Committee; PJ Wilkins of the E–ZPass Group, the largest multi-State region of electronic toll interoperability in the world, who submitted testimony for the record, seated here in the gallery; Diane Scaccetti, CEO of Florida's Turnpike Enterprise, who also submitted testimony for the record; the Interoperability Steering Committee; the Board of Directors of IBTTA; and all the members and staff of IBTTA. Without their collective efforts, we would not be where we are today.

IBTTA and its members are absolutely committed to the MAP–21 goal of achieving nationwide interoperability of electronic toll collection programs. We established the Interoperability Steering Committee in 2010 to focus on the tasks needed to achieve nationwide interoperability.

We have a simple vision: create a nationwide system of ETC interoperability in which any individual customer who chooses to do so may drive on any North American toll facility using a nationally interoperable transponder that is easy for the customer to use and cost-effective for the toll agencies. That transponder will have an open, nonproprietary protocol.

We recognize that MAP–21 set a deadline for nationwide interoperability not later than 4 years after the date of enactment of

this act. In fact, that deadline has been a catalyst to our industry, spurring tremendous activity that might not have been present without such a deadline.

Getting there by 2016 is very ambitious, and it will probably take a bit longer for the industry to cross the finish line. Having said that, we have made huge progress.

We have done our best to engage the entire North American tolling industry in the interoperability process, led by the steering committee. We have created the "National Interoperability Protocol Requirements Document," a consensus document representing the views of virtually all North American toll agencies that outlines all of the performance requirements and features that must reside in the national toll protocol. We have created business rules for nationwide interoperability that describe in nearly every way how toll agencies will work together to clear financial transactions.

Both the requirements document and the business rules have been adopted by the IBTTA Board of Directors. We have created a special panel to review and evaluate candidate protocols for conformance to the requirements document. We have retained a certifying body to oversee the testing and certification of the ETC protocols that are candidates to become the national protocol. And we have committed a quarter of a million dollars to pay for the first phase of this testing.

All of this has been accomplished with a workforce consisting of hundreds of industry volunteers who have donated their time and energy to get this right.

Once again, I am pleased and honored to be here today, and I look forward to responding to your questions.

[Prepared statement of Mr. Jones follows:]

[Testimony can be found at: *https://oversight.house.gov/hearing/status-of-toll-interoperability/*]

Mr. MICA. Thank you, Mr. Jones.

And we will go now to Mr. Eden, president of the Alliance for Toll Interoperability.

STATEMENT OF JAMES J. EDEN

Mr. EDEN. Good afternoon, Honorable Chairman and distinguished members of the committee. I am pleased to join this distinguished panel to discuss an issue of concern to Congress, the public, the transportation industry, and especially the toll community.

My name is James Eden, and I am vice president and director of tolling and managed lanes for AECOM, but today I am here as the president of the Alliance for Toll Interoperability, or ATI. And, as a volunteer for ATI, my statements and views represent my own opinions and that of ATI and are not of my employer, AECOM.

ATI was established in 2008 at a meeting with representatives from Texas, Florida, and North Carolina as a not-for-profit 501(c)(6) membership organization focusing solely on toll interoperability and has been an integral part in advancing the national interoperability effort ever since.

ATI was created and is wholly owned and governed by public toll agencies. It is currently comprised of 38 full and affiliate members spanning the United States and Canada. ATI funding is derived primarily from annual dues of $2,500 a year.

But, early on, ATI developed a plan to address several issues. The number one was the rapidly expanding highway-speed toll deployments, or ETC deployments, that did not have a cash option. ATI decided to focus on developing a customer service solution, or HUB. ATI developed a multitiered timeline designed to meet customer expectations as systems were deployed and converted to all-electronic toll collection.

The HUB was to be launched in phases. During phase 1, the HUB is capable of matching license plates from vehicles traveling in one State to valid accounts held in another State. This system does not include any personal information, as all data and personal information will continue to reside in existing toll agencies with an opt-in registration.

We deployed the license plate HUB first to provide the needed interoperability for AET systems with current camera technology. However, we plan on deploying a transponder-based HUB by October of 2016 that will allow agencies to have multiprotocol readers, exchange data and fares.

Some of ATI's other accomplishments to date are: We held a video shootout to bring missing advanced technology to the toll industry that had obsolete camera technology. The HUB was publicly bid and awarded to secure interagency flow in September of 2013. The HUB is scheduled to go live between Illinois and Florida in November of 2015.

ATI established a committee between AAMVA, E–ZPass, other DMVs, and the ATI Working Group, and IBTTA to develop a reciprocity template in 2012. This will allow toll regions, States, and others to adopt a uniform approach to handling toll violations across State lines. We worked in concert with regional interoperability solutions to achieve these goals.

However, the costs to participate in interoperability are significant, and the business case may be lacking for some agencies. Recognizing this, ATI is working on a change order with our vendors, and, in the process, we will enable toll agencies to operate for 1 year, with the only cost being that of transactions that are matched. It is anticipated that the period will show the value to the participants and encourage them to continue as ongoing members and support interoperability, as participation in the ATI HUB over the next few months is critical in order to hold our contracts with our technology vendors.

In summary, ATI has successfully developed a data network contractual structure to enable toll operators in North America to be interoperable through their customer service centers. The ATI HUB initiative is complementary to the efforts of IBTTA and the National Interoperability Committee. The industry at large has responded with action and effort to the MAP–21 legislation. And I personally applaud this committee, Congressman Mica, for drawing attention to this issue.

And, as an aside, it is not as easy as it looks. I was one of the founders of E–ZPass back when we did it, and it looks easy from the outset, but it was a rough road ahead.

Thank you.

[Prepared statement of Mr. Eden follows:]

[Testimony can be found at: *https://oversight.house.gov/hearing/status-of-toll-interoperability/*]

Mr. MICA. Thank you, Mr. Eden. Thank you for your testimony and also for your leadership on this issue.

We have less than 3 minutes to go to a vote.

Welcome, Ms. Duckworth, our ranking member. Mr. Boyle did a great job. He even read an excellent statement into the record. Did you want to comment for a second?

Ms. DUCKWORTH. Not at this time.

Mr. MICA. Okay.

But what we will do, rather than short Mr. Knuckey and your testimony, we will recess until 3:15, and we will reconvene. You all could relax for a few minutes. You don't have to stay there. Just be back here at 3:15. We will reconvene, hear from that witness, and then we will go to questions.

So we will stand in recess until then.

[Recess.]

Mr. MICA. I would like to call the subcommittee back to order.

We were going through our witnesses, and we had patient Mr. Knuckey waiting, and I would like to recognize him. He is the tolls technology sector manager at Atkins Global. And he is testifying today as a volunteer member of the International Bridge, Tunnel, and Turnpike Association's Interoperability Steering Committee and as chair of that organization's Roadside Operations Subcommittee.

So welcome.

And thanks again, everyone, for your patience during the vote. You are recognized.

STATEMENT OF THOMAS S. KNUCKEY

Mr. KNUCKEY. Thank you, Chairman Mica, Ranking Member Duckworth, members of the subcommittee, and guests. Good afternoon. My name is Tom Knuckey. I am providing this testimony as a volunteer member of IBTTA's Interoperability Steering Committee and as the chair of the Roadside Operations Subcommittee.

It is my hope today to represent the voices of more than 100 volunteers so as to provide more detail on the process and status the IBTTA committees have worked on. As a volunteer, my statements and views represent my own opinion and are not necessarily the opinion of my employer, Atkins North America.

IBTTA's committee and subcommittees have worked diligently to meet the MAP–21 requirements by planning for technology and business practices leading to electronic toll collection interoperability within North America in a manner that allows customers to establish a single account for use on all toll roads.

We envision customers with an IOP account with one agency could participate with any other toll agency. They can use the electronic toll lanes of any other participating agency nationwide. This would be accomplished in part by having toll systems read a common national interoperable transponder.

There are various complexities to nationwide toll interoperability. One of these relates to the limitations of transponders and reader devices to be interoperable. Toll agencies have made major financial investments in eight existing protocols. These protocols can be

thought of as unique languages that the electronics use to speak such that the toll transponder in a vehicle can communicate to the toll reader, thereby linking the vehicle to an account in milliseconds as a customer makes the toll payment.

IBTTA's process has been to develop a requirements-based approach to select one of the existing protocols to become the national toll protocol. We created the Interoperability Steering Committee, and IBTTA then supported four subcommittees, each with specific responsibilities, including Governance, Interoperability Branding, Back-Office Operations, and the Roadside Operations Subcommittee, chaired by myself.

Our focus has been the development of a requirements-based approach for a national toll protocol. To accomplish this, in 2004 we published the industry consensus requirements document. We then shortlisted three of those existing eight protocols for further analysis. After this, we verified industry intent by asking both agencies and suppliers to nominate one of the three shortlisted protocols. All three received nominations and advanced to the next step.

The subcommittee then commissioned a special panel, including technical and legal experts in the industry, to review the supplier responses as to their ability to meet the published requirements. This past July, two of those protocols were approved to begin the testing efforts.

The next step is to test these two candidate protocols to validate technical conformance with the requirements. Earlier this year, IBTTA publicly procured the services of an independent testing entity, OmniAir Certification Services. Testing will be in phases.

Conformance testing is now under development to ensure the specification used to make the candidate protocols are in fact able to be built as specified by others. This is critical to protect the goal of adoption of an open technology that can be provided by multiple suppliers. This phase should be completed by January and is entirely funded by IBTTA.

The performance testing is the next phase. This will be used to ensure the candidate protocol devices meet the performance criteria of the requirements. This testing phase is currently unfunded and requires approximately $3 million in unidentified funds.

At the completion of testing, IBTTA will select a single national protocol for interoperability. IBTTA will then create a certification process to validate that suppliers seeking to sell IOP devices have in fact met the IOP requirements. With the certification process, toll agencies will then be able to procure and implement IOP national protocol standard devices.

We anticipate that all agencies will have to make some changes to their current tolling systems to support interoperability. This will likely require funding over time. This will take significant time, as agencies each have unique procurement processes. Once the IOP national toll protocol certification standard is in place, the suppliers will offer innovative solutions that ease the transition to nationwide IOP adoption through the use of multiprotocol transponders and readers.

This standards-based certification process should create the market environment for more competition and innovative industry approaches, such as integration of the national toll protocol into new

vehicle systems or perhaps into consumer electronics like smartphones.

Much progress has been made in the IBTTA approach, almost completely through volunteer efforts. The process is now at a critical point. Funding is required to perform professional testing services and create a certification process.

MAP–21 has provided the impetus for real interoperability progress. IBTTA has worked through complex issues and developed a process for national interoperability. The process has been defined, and the industry is preparing for interoperability.

Thank you.

[Prepared statement of Mr. Knuckey follows:]

[Testimony can be found at: *https://oversight.house.gov/hearing/status-of-toll-interoperability/*]

Mr. MICA. Thank you. I guess that concludes your statement?

Mr. KNUCKEY. Yes, sir.

Mr. MICA. Appreciate it.

And that concludes all four witnesses' statements.

Again, we thank you for joining us and being part of today's hearing.

We will turn now to questions, and I have some.

We have heard about, again, standards being developed. And you just spoke to that, Mr. Knuckey. When do you think that they would come up with a universal or acceptable national standard? What timeframe?

Mr. KNUCKEY. Our process is now that we are in the first phase of that testing of those two protocols that have so far cleared all the prescreening processes. We expect that to be complete by this January.

Mr. MICA. Well, that would be setting the standard and then testing afterwards.

Mr. KNUCKEY. Right. The standards are set——

Mr. MICA. And then you mentioned the testing; there, you estimated about $3 million in costs for the testing.

Okay, that will bring me over to Mr. Lindley.

Is there any assistance available from the Federal Government under any of our programs maybe they could apply for? Or have you applied for any? Do you know of any, like, research and development or category—I think this is pretty important. And it sounds like they are absorbing a lot of the cost, but maybe there could be some way there could be some shared participation.

Mr. LINDLEY. Yeah. We have looked at the possibility of using available research and technology funding to support elements of the testing that is planned, particularly the elements that help ensure that the technology is secure and reliable and works. We have not had discussions about funding potentially all of the testing, and we would be——

Mr. MICA. Well, again, it could be a partnership.

Mr. LINDLEY. Yeah.

Mr. MICA. But these are commercial ventures. I don't know of anybody doing this just for the good of the order. But it would be incumbent on them also to participate. But it may be a possibility to bring you all together, if you haven't, to discuss some participation, because there is a public benefit, I believe, in doing this.

But is that something that could be arranged, Mr. Lindley?

Mr. LINDLEY. I think we can certainly have more conversation about that.

Mr. MICA. Okay.

Mr. Eden, are you the one that would help lead that?

And, of course, you are the subcommittee chair, Mr. Knuckey. I am not sure the——

Mr. KNUCKEY. Yes, sir. It would be——

Mr. MICA. —pecking order.

Mr. KNUCKEY. —Mr. Jones.

Mr. MICA. Jones? Okay. Well——

Mr. JONES. Mr. Chairman, yes. We would be the ones to——

Mr. MICA. Got to get a commitment out of somebody before we get out of here.

Mr. JONES. —be a part of those conversations.

Mr. MICA. Okay.

Mr. JONES. Yeah.

Mr. MICA. Again, I think some type of partnership. My goal is to get you 1 year from now. I insisted on this hearing because they don't want to come a year from now and not have this done. And I think it is a fair—not a fair warning, but just working with you all—and I think you have done a great job to this point. Calling this hearing, I think, already brought some people closer together.

That would actually lead me to one of my—well, let me, before I get to my question about 95—okay. You get to a standard, and under TEA–LU or—I guess it was—must have been TEA–LU, we had done some preliminary work; then we did the MAP–21 requirement.

The standard, is it necessary for that to be adopted by DOT? Should we have some legislation that gives you additional authority? Is what they are doing adequate, or should there be something that we nail down a little bit further?

So first Mr. Lindley and then Mr. Jones.

Mr. LINDLEY. Yeah, Mr. Chairman, we believe that the industry is making sufficient progress and, you know, has the finish line in sight on this. So we would not be seeking any additional——

Mr. MICA. You have enough authority.

Mr. LINDLEY. Yeah.

Mr. MICA. And Mr. Jones?

Mr. JONES. Mr. Chairman, I would just harken back to a conversation that happened 4 1/2 years ago in a hearing of the Highways and Transit Subcommittee of the T&I Committee, when the then-president of IBTTA testified and the subject of interoperability came up. And Congressman DeFazio asked my president, Frank McCartney, about interoperability and said, "Look, if we just said we want this to happen, you know, we want you guys to make this happen and do it by a certain date, we don't tell you how to do it, we just tell you please do it, is that something that would be agreeable?" And his response was, "We would support that."

So our understanding, our belief from the language in MAP–21 is that we are not mandating—there wouldn't be a law to mandate a specific technology or set of business rules, that it would be in the hands of the industry to work that out.

Mr. MICA. Uh-huh. Okay. Well, again, I trust industry, but I am sort of like Reagan; I trust and verify. I have had industry come up when we created TSA, the airline industry. "If we take this responsibility of screening away from you—how much is it costing you now?" "A billion dollars." "Would you be willing to contribute that to help pay for this?" "Oh, yes, and it will relieve us of the liability," and, "Oh, yes," and all the promises made. Then, not only did they never meet that, now they have totally walked away from it.

So I just like to have things a little bit nailed down and make certain, again, that public interest is served. And it is something, I think, that will be advantageous to business, because you can conduct business nationally as opposed to just regionally or on a limited basis. But it does have some value and people can tweak it and people do play games, sometimes having set standards. So, again, there is a whole host of issues that we have to look at.

Thank you, again, for coming together before the hearing and meeting and making decisions. And, most recently, I am told that you are pretty close to a decision on agreement between Maine or the northern part of 95 down to Florida. Who can comment on that? When is it going to happen? When can I use my pass?

Mr. JONES. Mr. Chairman, I think I speak for all of us on the panel here that none of us can comment on that because none of us were present in the room when——

Mr. MICA. But you have heard about it?

Mr. JONES. We have heard about it, tangentially.

Mr. MICA. Okay. So should I—so I will subpoena them to testify and get them in here. But I think that would be an exciting development.

And the maps we have seen about the existing systems and coverage, it lends itself very well, particularly this part. I mean, members—Ms. Duckworth, it goes all the way over to Chicago. And I understand that the South has reached an agreement all the way towards California. Is that correct? Close to correct? No? I see some people are yes, some no.

Mr. EDEN. Yeah.

Mr. MICA. But it is not done?

Mr. EDEN. Currently, Texas, Oklahoma, Kansas will be interoperable within the next few months. California is actually talking to the State of Washington because they are switching to the same technology, so you are seeing interoperability happen in that region also. Florida is talking to Texas to combine that link, in addition.

So we are seeing a lot of interregional cooperation. And I personally think that is part of it. This is going to evolve. This is going to take a long time. You know, as you pick technologies, that is one piece. So you have the technologies piece, you have the standard that everybody agrees to, and then it has to be deployed. And that is——

Mr. MICA. Well, just so we get it done by next October. We have a lot of time until then to get it done.

In the interim, I understand that license plates will also be used as sort of an interim technology. Can someone explain what is going on there?

Mr. EDEN. Yeah, that is the ATI initiative, where we are taking license plate reads from one State—and all we have is the license plate number and the State; we don't have any personal information—and then putting it into a database and matching it against license plate numbers in another State.

So if you are driving from Pennsylvania to Florida and you have an account in Florida and you use your transponder in Pennsylvania, they will pull it up, and they will say, "Well, we don't have an account in Pennsylvania." They will send it to ATI. ATI will say, "Oh, that license plate matches the account in Florida," which, by opening that account, you opt in to that program. So then we will be able to say, "Okay, these two match," and Florida will deduct that amount from your account, and it will be transparent to the user.

Mr. MICA. Okay.

The other question that always arises is privacy and the data that you have. Are there adequate safeguards in place, or do we need some additional safeguards legislatively to protect the personal information?

Mr. EDEN. Well, the way we are setting up ATI, for instance, we don't have any personal data. We are not housing anything. There is no database of personal information.

And, to date, I am not aware of any—and I don't like to say this because every time somebody says their system has never been hacked, somebody takes it as a challenge. But there has not been a major breach in any toll agency, you know, that has created anything like that.

But everything is—it is a computer system. It is open. But I don't see any need for legislation. I don't know what legislation you could pass to actually help with that. The fact that that data is held in multiple locations across the country and not one centralized database also helps.

Mr. MICA. Okay.

Well, I may have some additional questions. I want to give Ms. Duckworth, who came in late, an opportunity both for any comment she wants to make and questions.

So whatever time you need, I yield.

Ms. DUCKWORTH. Thank you, Mr. Chairman. And thank you for holding this hearing.

Gentlemen, thank you for coming here.

I think the ideal from a consumer's perspective is that you can get in your car anywhere in the continental U.S. and get to any part of the continental U.S. and never have to change systems.

And I am wondering about the regional nature of these systems and what does toll interoperability really mean. Are we moving towards that model at some point, where you can get in anywhere and navigate? Or is it going to be, you know, the Atlantic seaboard bloc down to Florida, Texas, and then you have California here. Is there a move to try to get to that?

Mr. JONES. So, Ranking Member Duckworth, thank you for the question, and thank you for having all of us here.

We have all testified about the efforts that have been made to bring about national interoperability. And the goal of all of us on the industry side is to make it as simple as possible for the con-

sumer and as cost-effective as possible for the agencies. That is the goal that we are working toward, that there would be—any customer who wanted to drive on any toll system in the country would be able to do so using a single tag, a tag that meets the national toll protocol that we have developed, that our industry has developed, that is both open and nonproprietary.

So we are moving toward that goal. And all of the regional interoperability is contributing to that. You are seeing a knitting together of the existing regions of interoperability to begin to make that happen.

Ms. DUCKWORTH. Are there any issues with individual States' finances? I come from Illinois, and we have some significant challenges in our State, obviously. Are there significant challenges for States that need to adopt some of the new technology within their tollway authorities? And anything that you think might be a stumbling block that you would need help with, or the States, that we need to keep our eyes open for?

For example, if you have a State that is using the transponders but, you know, you need to install the license plate readers, as well, what those costs would—what those challenges are for States across the Nation.

Mr. EDEN. Yeah, I believe that there are going to be some challenges for some State toll agencies, especially the smaller ones. It depends what technology is chosen and what it will cost to swap out a reader or even, you know, eventually phase out the transponder to that national standard. That is why I have been talking about this happening over a period of time.

So you are talking, you know, like, E–ZPass, I believe, has 3,800 lanes of equipment. So a swap-out of equipment of that magnitude is substantial. And if you do it on the transponder side, which I don't believe we would have to, you know, you are talking about millions of transponders to change. It is like changing your credit cards; you know how difficult that can be.

So I think there are going to be some financial challenges across the country from some individual States, some not. Some not. Even with ATI, signing up with the program, where we are saying, hey, look, we will do it for basically the transaction cost for the first year, there has been some reluctance because it is still a cost, it is still something they have to do.

So I think, definitely, it is going to be a financial issue on the actual implementation side for some agencies.

Ms. DUCKWORTH. So, with that, sort of, building on what the chairman asked earlier, which is, he said if you have an agreement by January of 2016, tell me where you think you can be by December of 2016. If you have an agreement in January, by the close of 2016, where do you see?

Mr. KNUCKEY. I will start with a response on that, Ranking Member Duckworth.

By 2016, by the end of 2016, we hope—assuming we can have some funding for the testing, the critical performance testing area, we expect by the end of 2016, by hopefully this time to the end of 2016, we will have the process far enough along where we can have a certification process where industry can bring their devices to a certification service where there will be tested and certified as

being interoperable. And what that does is opens up the opportunity for agencies to procure that certified device for national toll interoperability.

Ms. DUCKWORTH. So then we could start seeing some of this in consumers' hands by 2017?

Mr. KNUCKEY. It depends on the procurement sequence of the individual agencies——

Ms. DUCKWORTH. Right.

Mr. KNUCKEY. —but as soon as they have the financial means to do that and the business rule aspects worked out, yes.

Ms. DUCKWORTH. Is there any potential for using the system in order to offset some of the cost in terms of commercializing any portion of it? You know, you have this data that you are tracking for commercial trucking companies, the like. Is there any way to commercialize any of this in order to raise any kind of funds from the system?

I mean, this is a trove of data, right? Just as we are very concerned—I am deeply concerned about data breaches and the security and privacy of individual consumers' data, and I think that it has to be more than—the answer has to be more than, "We have never been hacked, we have never heard of anybody being hacked, so it probably won't happen." That is not a good enough answer. And we will get to that.

But on the other side of that is this is data that could potentially, I would think, be of value to commercial entities. And is there any way of looking at—is there any opportunities there?

Mr. EDEN. Frankly, ATI has been approached by a couple of commercial entities, both on the data mining side—and, again, there is a fine line there on the data privacy side, so you have to be careful.

And, also, on probably the hottest electronic market right now is electronic payment systems. And, you know, once you put a transponder in a car that can do financial transactions, there are a lot of other industries, you know, even municipal parking, you know, commercial parking, fast food, all that type of stuff.

But it is a balance between privacy and the commercialization and the mix of government and private entities. So I guess the short answer is, yes, but I think we have to proceed very cautiously in that area.

Ms. DUCKWORTH. With that said, what is the industry doing to be sure that, as these emerging potentials—as this potential emerges, that you are safeguarding privacy issues? Is there a subcommittee or a joint work group or a task force?

I mean, Mr. Lindley, does, you know, the Department have any insight and potential into how to govern the potential commercialization of the data?

Mr. LINDLEY. We have not had any discussions about how to commercialize the data. The toll collection data does get used in some applications, like traffic data collection, interaction with travel information, but none of those applications currently generate revenue. They go to public agencies, and then that information is shared.

Ms. DUCKWORTH. I am concerned. I mean, I think there is potential, but I am concerned about the security and safety of that data.

And I think that, as we acknowledge, as your panel has acknowledged, if there is potential to make money, somebody is going to figure out a way to make money off of it. And if that is the case, then we should now on the front end be prepared to put in the safeguards so that we can make money off of it but in a way that protects the consumers.

And, with that, I yield back, Mr. Chairman.

Mr. MICA. Thank you.

Mr. Grothman?

Mr. GROTHMAN. Thank you. I would just like to thank the chairman for holding this hearing. I think it was said this is going to be an exciting hearing. I don't find it exciting, but it was an enjoyable hearing nonetheless.

I am trying to figure out who to give this question to. We will ask Mr. Jones.

Say, for every dollar collected a State gets off this, how much do you guys in general take? How much in general, the company that runs these tolls, how much do they take of that?

Mr. JONES. If I understand your question, you want to know—could you come at me with that again?

Mr. GROTHMAN. Let's say you got $100—in the State of Wisconsin, we don't have tolls right now, but if the day comes when we get tolls, if I pay $100 in tolls to the State of Wisconsin or $100 tolls on the freeway, how much goes to either the upkeep of the toll system or the company that administers it or whatever?

Mr. JONES. Well, it is a good question. And, Congressman, it is going to depend a lot on the individual configuration and environment of each toll system.

Certainly, electronic toll collection, I can tell you the cost to actually collect the revenue has gone down significantly since it was first introduced in the late 1980s. And there is probably some variation from agency to agency as to the actual cost to collect that.

So I am probably not the best person to tell you a specific percentage. I would defer to my colleagues.

Mr. GROTHMAN. Sure. We will go on to—I don't know, whoever.

Mr. Eden?

Mr. EDEN. First, all the costs, as far as implementing the system and maintaining them, goes back to the individual agencies. So the State of Florida, Tampa, Hillsboro, you know, individually does that.

As Pat said, it depends on a lot of factors, you know, how many violations they are getting, how they have to track it down, et cetera. But, basically, it costs probably around 10 to 15 cents a transaction, for an electronic toll collection transaction.

Now, currently, under video, it is more because somebody has to read the video. There is automatic, you know, optical character recognition, but, you know, somebody wants to verify that that is there.

And then, also, currently, under that, which makes it a little bit more complicated, if there is not a—currently, without ATI, if there is not an account on file, somebody has to look that up through DMV, send letters out, usually three, which would cost the postage and everything else, which significantly ups that cost of collection.

So all this will reduce the cost.

As far as the groups, I wasn't real clear on the question. Pat's organization, IBTTA, is not for profit. They don't get any revenue from that. Neither does the ATI. It is just a bunch of toll agencies, so we don't get any revenue. It all goes back too.

Mr. GROTHMAN. Well, there has to be a general number, though, right?

Mr. EDEN. Okay.

Mr. GROTHMAN. I mean, if the State of Wisconsin in 1 year gets—I have no idea what it would be—a million dollars, for every million dollars, I assume if I am putting a million dollars in the cash box or a million dollars on—I guess Illinois calls it the I–PASS—I don't know if it is Illinois or interstate—how much of that million dollars that I pay works its way to the Wisconsin Department of Revenue?

Nobody knows?

Mr. EDEN. It is a tough question.

Mr. GROTHMAN. In this computerized age, nobody knows?

Mr. JONES. Well, it is also a factor that—again, I would return to my original statement that it is going to depend on the individual agency and their operations. What may happen in New York may be different from what happens in California, Pennsylvania, Texas.

Mr. GROTHMAN. Absolutely. But you must have an idea. Is it 1 cent a dollar? Is it 5 cents a dollar? Is it 15 cents a dollar? I mean, give me a couple. Say this is what it costs in New York, this is what it costs in Florida.

Mr. JONES. Yeah. We can show you studies that the cost of all electronic toll collection is down around 5 or less than 5 percent of the value of the toll.

Mr. GROTHMAN. And it would be 5 cents to the company, plus what the State kicks in to set up this stuff and maintain it?

Mr. JONES. Well, I don't know what you mean when you say it is 5 cents to the company. So, in other words——

Mr. GROTHMAN. Okay, 5 cents to the system. If I am the State of Wisconsin and I decide I am going to build a new interstate and on this interstate I am going to toll it, I can expect probably, if somebody says, yeah, let's go the toll route, I can expect that for every dollar that the motorist pays for their I–PASS or whatever that 95 cents will go to the State of Wisconsin. Is that accurate?

Mr. JONES. In a mature, all-electronic toll collection system, yes, I would say you are probably in that range.

Mr. GROTHMAN. Is that accurate, you other guys?

Mr. EDEN. Yeah, if you are just looking at the cost of toll collection and not the cost of operation of the roadway and the debt services and everything else that is involved in that, but if you are just purely looking at the toll collection cost versus the toll, you know, the 5- to 10-cent ranges, and it is all electronic and you have enough people that it is 80 percent or more using that electronic transponder and not a lookup, that is a good number. That is why I keep qualifying it.

Mr. GROTHMAN. Am I already 8 minutes over, or what is this here?

Mr. MICA. Just go ahead.

Mr. GROTHMAN. Okay. That is the benefit of being one of the diligent, caring, conscientious legislators here.

So, okay, you said that is in a mature system, 5 cents. You kind of imply if it is not a mature system it will be higher. Is that right?

Mr. EDEN. Yeah. What generally happens when you implement any kind of toll collection system, it takes a while to get the tags out there, to get people to actually buy them.

I was the COO for North Carolina, and we put a brand-new road—it was a greenfield road—in. So there was no toll roads in the State. And it takes a while for people to—they will drive on the road, but they don't have a transponder. So, at that point, they are not account holders; you have to look them up.

So it takes a while to market, get that penetration rate up into that mature system where they are just going through and you don't have to do anything with the transaction except to read it. That is why the mature system—and, generally, it takes a year, year and a half, 2 years to actually get up to that, you know, 70-, 80-percent penetration rate.

Mr. GROTHMAN. Okay. I mean, for years and years—and I rarely leave my district now since I got this job, but years ago when I used to drive into Illinois, you know, they had the cash boxes and you throw the quarters in or whatever. Then, I take it, it was a lot more, huh, back in those days?

Mr. EDEN. Well, yeah, let me—cost of cash collection actually is a lot higher than electronic toll collection.

Mr. GROTHMAN. That is what I mean. It used to be a lot more.

Mr. EDEN. Yeah. I mean, you know, you are paying for somebody to count that money. In the cases of the coin boxes, they used to throw—I remember Garden State Parkway. You know, there is a lot of change that doesn't make the basket. It falls on the ground, and people try to scrape it up and things like that. But there is cost to doing all that. And then there is all the staff cost to collect it and the armored-car cost and everything else.

Where, electronic toll collection, basically you drive through, and you collect the money. And there are credit card fees, et cetera, and it depends on your discount rates you have with the credit card companies and that, but, you know, the credit card is guaranteeing the fee, so it is a much easier, less costly transaction.

Mr. GROTHMAN. Okay. So I can expect the State of Wisconsin, if I report back to these guys, about a nickel off the top for the collection, plus whatever it costs to set up these things all over the highway.

Mr. EDEN. Yeah. And, generally, most toll agencies purchase the equipment up front. Now, some agencies run their own back office; however, most contract. There are a couple vendors—I don't know if they are in the room—you know, that actually do that. But, you know, so that would be a cost, and that is a bid contract negotiated.

Mr. GROTHMAN. Okay. And is there a study that says how much is saved per dollar collected to maintain the capital cost or whatever it is? Is that another penny? Two pennies? Do you know?

Mr. EDEN. Well, capital cost of the systems themselves, there are a couple things, and it depends on the type of systems. For instance, if you have—what type of classification system, how you are

trying to determine if it is a car or a truck or what type of truck type deal. So that adds to the complexity of the systems also.

Also, if you are tying it into your intelligent transportation systems, your ITS systems for smart city and things like that, a lot of people are looking at that today.

So, again, it is not an easy answer just to say——

Mr. GROTHMAN. I know it depends, but there must be a study. One to 3 cents? Five to 7 cents?

Mr. EDEN. I don't have the study.

Mr. GROTHMAN. Nobody knows. A mystery. Okay.

Well, I would like to thank my chairman for indulging me.

Mr. MICA. Thank you. And it is an exciting hearing for me. Rarely around here can you make things happen, and it takes a while. We haven't got this totally in place, but you see it coming together, and I think it will be beneficial.

It is interesting, though, just to—you don't have any toll roads?

Mr. GROTHMAN. No, we don't.

Mr. MICA. Just in my district, around my district, I bet I have 150 miles of toll roads in central Florida and growing. And to expand the highway system, we did put the public-private partnerships, which is a means now to expand capacity and pay for it.

Let me yield to the patient Ms. Duckworth.

Ms. DUCKWORTH. Thank you, Mr. Chairman.

I, too, have many, many toll roads around us. And, in fact, we have a new one that is being formed that, thanks to the great Secretary Ray LaHood, we were able to actually extend and upgrade the Elgin-O'Hare Expressway and were given the decision to be allowed to actually toll an existing roadway that was not a toll road before because it is a short distance. But it is going to mean tremendous, tremendous opportunity for growth in the western O'Hare Airport area. So I shout out to Secretary LaHood and the Department of Transportation and all the team that worked on that.

I want to go back to the cost of implementing. The chairman actually showed me this Ziploc bag with all the different transponders in it. And I remember what it was like when I switched from my old I–PASS transponder—yep, I had one just like this—to the smaller one, which I have in my car now.

What is the cost of switching all of these out? If you go to this new system, I would imagine that there is an upfront cost, an investment cost, in either getting the consumers to bring these old systems back, mail them back, something to switch to eventually. I guess there is just this nifty little tag that you stick on your door. What does that cost?

I mean, if we start to implement this, are we looking at a significant investment cost just for these things and for the consumers? Would there be additional costs? Would the consumers have to pay for the devices to start off with? How does that work?

Mr. EDEN. Well, we will both answer. I guess I will start.

I think ideally what would happen, we would switch the reader part first. So if we had a common, we would go to a multiprotocol reader that would read the initial—whatever the agency is using, if it is E–ZPass, E–ZPass, and whatever they went to, 6X, whatever that is going to be. Right? And, therefore, people would be able to

use their existing transponders until they expired normally. And then there would be a swap-out to whatever that new transponder is.

Mr. KNUCKEY. We have looked at some of the costs of transponders. We conducted a nationwide survey as we started this process. And we found transponder costs range from the sub-$1 to the $25 range, with an average around $10 or so.

But the transponder cost would only be necessary for those agencies that had to adopt the new technology. We anticipate that one of the national protocols will already be in use—or the chosen single national protocol will already be in use at many agencies. So agencies that already have that chosen protocol in use wouldn't have a cost of transponders. Other agencies would.

And it is hard to project the exact cost of that until we know which is the winning protocol, so to say. But we would expect it would be hundreds and millions of dollars, ultimately.

Ms. DUCKWORTH. Up front, just for the implementation?

Mr. KNUCKEY. Over the transition period to replace it.

Ms. DUCKWORTH. Thank you.

I yield back, Mr. Chairman.

Mr. MICA. Well, thank you. And thank you for participating.

Do you have another question? Yeah, go ahead. And I have a couple.

Mr. GROTHMAN. When you gave me that 5-percent number, I assume—and, again, we don't have this in my State—but I assume that you probably usually always have a person at every cash box, right, just in case I show up and I don't have the I–PASS or, you know, whatever.

For that 5 percent, do you folks pay for the guy or gal at the cash box, or is that on the State?

Mr. JONES. Well, just as a practical matter, if you were going to introduce tolling in your State——

Mr. GROTHMAN. Right.

Mr. JONES. —you are probably not going to create cash booths. You are going to initiate it all-electronic. And you have an advantage that way because you don't have a history of all these booths existing.

So the recommendation would be and probably the best practice would be to start with an all-electronic system. So you eliminate that particular toll collection, you know, human toll collection cost.

Mr. GROTHMAN. Okay. But then how do I—if I show up and I have no change, what do I do?

Mr. EDEN. Basically, that is where the license plate comes in. So if you don't have an account—let me walk through all-electronic first.

So in an all-electronic system, that marketing time I talked about where you go and you buy the transponder and you put money on the account and you would have the device to put in your windshield, then you would just be able to drive through at highway speeds. Basically, the toll collection system at that point, it works like a sign gantry, just like an overhead sign gantry, nothing else. So it has made it really simple for State DOTs and other people to implement, like, on managed lanes. And inexpensive.

However, if you don't have an account or something happens and your transponder doesn't read, that is where the backup comes in, and it is the license plate. So we will always have to have the license plate in an electronic system for a backup to that system.

So if you don't have an account, it will read the license plate. And in the case of ATI, they would send it to us. And if you had to count someplace else, it would be okay. If you didn't have an account anyplace, they would go to your State DMV, and the State DMV would then send that toll agency your license plate and information. And they would mail you an invoice, probably with the fee on it that is going to cost you a little bit more, because it costs them more to process that transaction.

Mr. GROTHMAN. Okay. Thank you much.

Mr. MICA. Well, this is all an educating process, as you can see, for me, for Members of Congress, and the public.

But there is some exciting technology. I took Mr. DeSaulnier up to New York, and we saw the using of the electronic pass in their realtime traffic management system. And that is pretty exciting, when you can take the signal from the pass, read it, and change out the signals, which moves traffic in very expedited fashion. And now they are doing that with a cell phone signal, too.

Well, speaking of cell phone, how long before this device you think will be used? Are there any systems that now use this?

Mr. KNUCKEY. I think, once we have a standard, industry will have something they can develop towards——

Mr. MICA. Yeah. Some little kid as part——

Mr. KNUCKEY. There actually are some that are experimenting with that, to be able to link your phone to a transponder. And so that is a potential.

Mr. MICA. Yesterday, I met with the president of Greyhound, and he says, "You know, we have an app that can—we can identify any Greyhound bus wherever it is right now and when it is going to be at its destination." And he was showing me the app. I said, "Wow, that is great technology. How did you develop it?" He said, "We hired a bunch of kids." I guess they were basically college kids and young kids. There was more than 100. And they developed that, basically, for Greyhound. It was done by giving these little wiz kids that challenge.

And it is in use. And you can tell where any bus is anytime, when it is going to get to wherever it is. So all you have to do is give it to a bunch of kids and they will figure it out, once you get your standards up.

Mr. EDEN. Yeah, I am glad you mention that because, again, on the ATI side, we have had discussions with car suppliers, car manufacturers, and cell phone companies. And the cell phone companies had a problem with, how do we determine who of the four people in the car are actually paying?

Mr. MICA. Yeah.

Mr. EDEN. But technology is advancing. Every time we turn around, there is something new. I just got this in the mail yesterday. I am not going to tell you whose it is, but it is a card that holds all my credit cards and a whole bunch of other information that is tied to my cell phone.

So if you can do that with this and Apple and Google and everybody are working with cell phones tied into the car, I am sure they could do the same thing eventually with the car and the cell phone.

So I think that is going to be evolving technology. As far as timeframe, it is probably 5 years away maybe. That is just me guessing.

Mr. MICA. Well, we are all surprised at the technology advances. We have been joined by Mr. DeSaulnier.

I was just mentioning about our trip and seeing what they were doing. Did you have any questions?

Mr. DESAULNIER. No. It has probably all been said. But just following your comments, Mr. Chairman, just a question—and maybe it is because I am from the San Francisco Bay area—of making sure that transponders may be, as you alluded to, ancient technology in 2, 5 years.

So I know the California Highway Patrol is buying plate readers right now. To your point about whether there are two or three people in the HOV lane, part of the technology is so that they can do that without having a unit out there. Or electronic license plates. I have been told that electronic license plates—the people who are trying to sell that will tell you that that will facilitate a more accurate, more secure form of technology.

So, as you do all this, it is all great stuff, but anticipating the technology is going to change so you don't have to go back out again and put a lot of money into the infrastructure, to the degree you can do that.

Mr. EDEN. Yeah, I think——

Mr. MICA. I——

Mr. DESAULNIER. I am sorry.

Mr. MICA. I was just going to ask Mr. Lindley if there had been any thought to requiring a bar code on a vehicle.

Mr. DESAULNIER. Yeah. Telematics in a car can almost tell the manufacturers almost everything they want to know anyway, so——

Mr. MICA. I mean, I remember working in the rail industry when I was in college, and we used to take down the number of each boxcar. And today they are read instantaneously; they know where every boxcar is. You stop and think of the implications there. If it is embedded somewhere in the vehicle, you could find out where it is. There is just a whole host of things from safety and security.

But I think we are going to see a lot of that, probably. The age is just dawning. And many vehicles, as we know, are embedded, and we have already had issues. Maybe that might be the subject of a hearing, protecting your car from getting hacked.

But any comment, Mr. Lindley?

Mr. LINDLEY. We haven't had any thought around requiring a bar code, if you will. There is technology that folks can opt in to that allows devices to be connected into their, you know, existing system so that they can be tracked if they get stolen. But that is strictly a consumer opt-in technology, not a requirement.

Mr. MICA. Well, we also appreciate your willingness to hopefully get with these folks, if there is any way we can partner in helping them on the testing aspect. The goal is to get this place as soon as possible.

And we might want to sit down with you as we are developing finalization of the successor to MAP–21 because we do have some requirements under that law for compliance by next October. I want to have a practical pathway to get this done—not overbearing but also something to hold your feet to the fire. And I will provide that at the appropriate time. Some months out, but it is going to come, because, again, I think sometimes we have a responsibility in Congress to make certain things happen.

But I appreciate everyone's willingness to participate today, get sort of a reading, run the scanner over where we are on this project. And I thank members for their participation.

There being no further business, again, I thank the panelists for coming. We will go ahead and we adjourn this subcommittee. Thank you.

[Whereupon, at 4:07 p.m., the subcommittee was adjourned.]

APPENDIX

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Material Submitted for the Hearing Record

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TESTIMONY OF DIANE GUTIERREZ-SCACCETTI
PERTAINING TO THE STATUS OF
NATIONAL TOLL INTEROPERABILITY
SUBCOMMITTEE ON TRANSPORTATION AND PUBLIC ASSETS
WEDNESDAY, SEPTEMBER 30, 2015

Chairman Mica, and members of the Subcommittee, thank you for the opportunity to submit written testimony outlining progress toward national toll interoperability. I am Diane Gutierrez-Scaccetti, Executive Director and CEO of Florida's Turnpike Enterprise, a district of the Florida Department of Transportation ("FDOT"). This testimony is submitted on behalf of Florida's Turnpike Enterprise/FDOT, Miami-Dade Expressway Authority and Tampa Hillsborough Expressway Authority.

Let me say at the outset that the inclusion of a target date for national toll interoperability implementation in MAP-21 has served as a significant motivator and sparked toll agencies across the country to focus efforts towards achieving this important goal.

There has been significant industry activity during the past three years. Speaking for Florida, I am happy to report that we are well on our way to completing southern regional interoperability. Through the development of the 7-member Southern Regional Interoperability Group, conversations quickly led to the first interoperable relationships. Today, Florida's SunPass, Georgia's PeachPass and North Carolina' Quick Pass are fully interoperable. This collaborative effort was accomplished while respecting each state's installed technology base. While Florida and North Carolina use the same tolling protocol, Georgia uses a different toll protocol. That hurdle was overcome with the result that customers are able to travel among the three states using their home state's transponder. I am pleased to report that South Carolina's Palmetto Pass is joining us as an interoperable partner with an expected implementation in early 2nd quarter of 2016.

To the west of Florida, Texas, Oklahoma and Kansas toll agencies are establishing a similar regional interoperable network. With Texas serving as a Central US toll processing hub and Florida serving as a Southern US toll processing hub, the next step is to connect these two hubs

to each other for toll processing. The end product is an interoperable network of seven states allowing customers to travel the larger region seamlessly with the transponder currently mounted in their windshield. The target date for implementation of this broader network is the 3rd quarter of 2016. It is important to note that we continue to support Alabama and Louisiana in their tolling efforts and hope to include them as interoperable partners in this network in the near future.

There are two other important efforts underway at this time. First, Florida and the Bay Area Toll Authority, located in the San Francisco Bay Area, have commenced discussions to develop a west coast interoperable model. For the time being, this interoperable model will rely on image-based toll processing, instead of transponder-based toll processing. In time, however, this may be converted to transponder-based toll processing as each agency examines the opportunity to use a common toll protocol.

Finally, discussions between the IAG (E-ZPass) and the southern regional interoperable states have reconvened. In a meeting held on September 23, 2015, significant progress was made toward developing the model that will allow for interoperability along the I-95 corridor. In deference to the governance structure of the IAG, which will hold an Executive Committee Meeting early next month, it would not be appropriate for me to discuss the next steps in our discussion other than to say that representatives of the IAG will be joining the next meeting of the Southern Regional Interoperability Group in November. It is my belief that these steps towards collaboration are indicative of the ability for common ground to be uncovered and interoperability along this corridor to be achieved sooner rather than later.

In closing, it is important to emphasize that almost all toll agencies across the country are undertaking activities to make national toll interoperability possible. From the installation of multi-protocol readers to streamlining the types of transponders offered, it is these activities coupled with a collegial approach that will enable us to reach the goal of national toll interoperability.

Thank you for the opportunity to update you on this important initiative.

TESTIMONY SUBMITTED FOR THE RECORD

OVERSIGHT AND GOVERNMENT REFORM COMMITTEE

SUBCOMMITTEE ON TRANSPORTATION AND PUBLIC ASSETS

UNITED STATES HOUSE OF REPRESENTATIVES

STATUS OF TOLL INTEROPERABILITY

SEPTEMBER 30, 2015

WASHINGTON, DC

Oversight and Government Reform Committee
Subcommittee on Transportation and Public Assets
United States House of Representatives

September 30, 2015

"Status of Toll Interoperability"

Introduction

Chairman Mica, Ranking Member Duckworth, and members of the subcommittee. Thank you for allowing me to provide this written testimony for the record. My name is P.J. Wilkins, and I am the Executive Director of the E-ZPass Interagency Group. Let me start by saying that I am personally a firm believer in toll interoperability. Interoperability is in fact the only reason the E-ZPass program exists!

In the late 1980's and early 1990's representatives from seven toll agencies in three states got together to start discussions on the impact of electronic toll collection on their existing operations and to determine how these agencies who shared so many customers might cooperate in bringing about a seamless network in order to simplify toll collection across agency boundaries and state lines. This was the genesis of what has today become the E-ZPass Interagency Group.

E-ZPass is not a company, but rather an association of mostly public toll agencies with one singular purpose....to be interoperable with one another for the benefit of our customers. It is our only purpose and is something we do exceedingly well.

Today, E-ZPass has grown to include 26 toll agencies in 15 states. We have over 30 million toll tags deployed and we process about 85% of all toll revenue nationwide. Our members are comprised of both public and private toll agencies, operating roads, bridges and tunnels in a very large geographic area stretching from Maine to North Carolina, and west to Illinois. Until very recently, E-ZPass

was the only group that processed interoperable toll transactions across state lines.

26 Agencies in 15 States
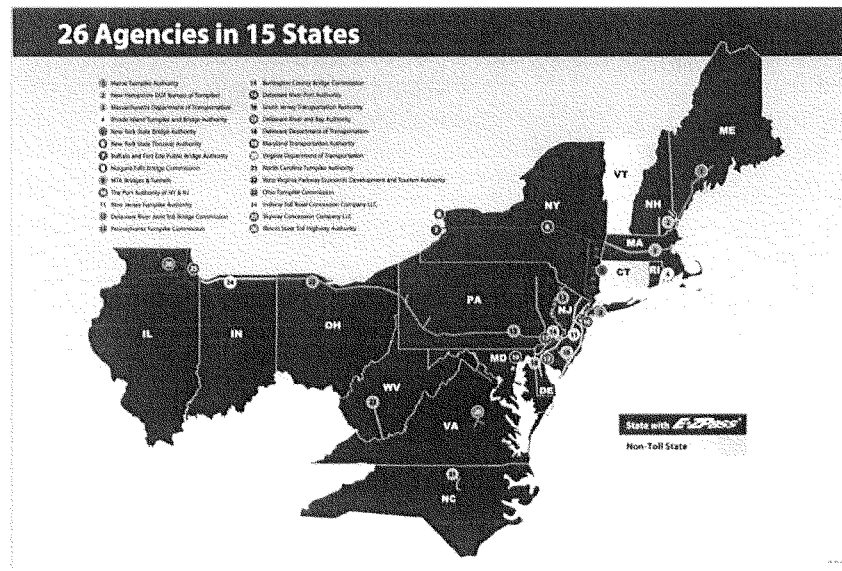
This regional interoperability model works, and works well, as evidenced by the E-ZPass Group's successful interoperability for almost a quarter-century. The regional model has many successes to point to, such as the multi-state E-ZPass network, SunPass in Florida, TxTAG in Texas and FasTrak in California.

In each of these interoperable regions, the toll agencies adopted common technologies and common business rules that allow the agencies to communicate toll payment between each other. This is the cornerstone for interoperability.

The Quest for National Interoperability of Electronic Toll Collection Programs

There has long been discussion within the toll industry about the necessity of expanded interoperability. It is a common held belief that there is no business model that supports the creation of such a national network, with potentially one exception, being the commercial vehicle segment, and that is more easily addressed. The fact is that the overwhelming majority of private vehicle operators do not travel coast to coast or inter-regionally. Our customers do not clamor for this ability and are not generally willing to pay to achieve it.

We do however believe that with this expanded interoperability, there may be some opportunity to increase the utilization of electronic tolling lanes for a number of customers who would otherwise be utilizing the manual cash lanes. This benefit, along with a few others have propelled the toll industry to study national interoperability for a number of years.

The International Bridge Tunnel and Turnpike Association (IBTTA) has traditionally been where the toll agencies have turned to gain insight on industry advances and share best practices. It was natural that IBTTA would take on a leadership role in the national interoperability effort. These efforts started well before the MAP21 legislation would provide a further catalyst toward that goal.

Much Progress Has Been Made

Achieving national interoperability of electronic toll collection systems is by no means an easy task. Toll agencies have evolved to electronic tolling on timetables dictated by local conditions, including customer base, funding, and political considerations. They therefore have deployed equipment that is in varying stages of useful life, and they are keen to maximize their investment and minimize the cost of additional equipment purchases before it is necessary.

Toll agencies have also procured their systems in the manner common to public agencies, being a public procurement process. Each agency, following its prescribed rules, then selected the best candidate system for implementation.

Since these were generally individual agency procurement efforts, they were not all common technologies. Eventually this would lead to seven distinct protocols, which can be thought of as seven separate languages, with no ability to understand one another, and therefore no ability to be interoperable.

The process undertaken by our industry, and being led by IBTTA, may not be the easiest or quickest path to interoperability, but it is one that all toll operators had a voice in and is designed to meet the operational requirements of the individual agencies, no matter which region they are in. Would it have been easier for all to join an existing regional program such as E-ZPass or SunPass? Yes. Would that have been a quicker route to interoperability? Yes again. In the end we determined it best to embark on a path that took into account all requirements of the operators instead of fitting them into a pre-existing box. Some toll agencies have very simple operations, while others operate in a very complex requirement. This process will ensure each requirement is carefully cataloged and the capability is built into the national system.

A significant achievement was the adoption of a requirements based process, which resulted in technical specifications for a national toll protocol that toll operators will implement to facilitate interoperability. Agencies may continue to deploy and utilize the toll tags they currently use, thereby respecting the investment made in those tags. Some agencies may however need to upgrade their existing in-lane systems in order to read the national toll protocol tag.

National interoperability is much more complicated than just picking out a common technology for all to use. In fact, the technology portion of this problem isn't the largest hurdle in our way to success. Over 23 years of interoperability has shown the E-ZPass Group members that it is the critical back office functions, the business rules, the accounting and the governance elements that are most important to achieving the ultimate goal of having a seamless but accurate system.

We have been hard at work developing file specifications, business rules and governance rules that will result in a seamless system for our customers, while

allowing the toll agencies to protect the integrity of the system and provide the great customer service they are known for.

Achieving national interoperability is further complicated due to the inherent cost toll agencies will need to bear to convert technologies and back office systems to a common system. These costs are not insignificant and are generally costs that are planned many years in advance of the actual need. Finding funding to purchase and integrate this equipment in these days of tightened budgets will be difficult for most agencies.

It is important that we not rush this initiative, as there is much at stake, including risk to revenue and to the level of customer service. We need to ensure we get this right.

The E-ZPass Group has been a willing partner in this activity, and we have committed ourselves, along with a great deal of resources, to achieving the goal of a national interoperable system.

Conclusion

The requirements-based approach to national interoperability being undertaken by the toll agencies and IBTTA can and will work if given proper time, effort and funding. The toll agencies will be faced with difficult choices, and will likely need to set aside individual agency preferences to ensure the best solution moves forward for the industry as a whole.

The senior agency representatives working on this complex problem are in the best position to make the ultimate decisions as to the eventual national toll protocol, and we are confident that given the necessary resources they will succeed.

We are today faced with two critical needs on the path to interoperability. The first is funding, both for the immediate need for testing of candidate protocols, as

well as for sourcing of replacement toll systems by those agencies needing to do so to become interoperable. An initial investment of approximately $3 million is needed to get the testing process underway. Without that funding there is no way to move the current process forward.

The second critical need is for the toll agencies to have a path to interstate toll violation reciprocity, as the number of potential violations will multiply once an interoperable system is in place. A mechanism must be found to bring states to the table as willing partners/participants in order to achieve this reciprocity so that the revenues expected by the agencies and states will actually materialize.

Once again, the members of the E-ZPass Interagency Group are committed to the achievement of a nationally interoperable system and will continue working with our industry partners to achieve that goal.

Thank you for allowing us to present this testimony for the record.

P.J. Wilkins
Executive Director   302-577-1333
E-ZPass Group   pj.wilkins@e-zpassiag.com

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