



Migrating to Nationwide Interoperability

*Question and Answers about Interoperability
(Resulting from the June 5, 2012 IBTTA webcast)*

www.ibtta.org/interoperability

In reading the questions, it is apparent some may think we have already made certain decisions about what we are going to include in the conceptual plan. That is not the case.

The point of this exercise is to elicit input related to these issues in advance of our making any suggestions about the details of how the path to interoperability would be laid out. For all questions that assume we have included or excluded certain elements in "the plan" - please refer back to this paragraph when reading the answer.

-- Marty Stone, Chair, IBTTA Interoperability Committee

Q: Since many recognize that the end-game for tolling will be all-roads and autonomous metering, could one path to interoperability be to overlay the existing 4 major systems with GPS/CELLULAR metering at the same time we make the existing systems interoperable for a mid-term solution? In the end, don't we need to phase out/reduce road-side-infrastructure - hopefully by 2035-2040 or so?

The assumption that DSRC infrastructure will not have a role in the future is not part of this discussion because it may not necessarily be the case. Germany and Austria both solved their nationwide truck tolling problem with two completely separate systems - both of which are successful - one is a 5.8 GHz DSRC system the other is a GPS-based system. This question assumes that a mileage-based user fee system will employ a certain type of technology - and there is no evidence to support that now. In fact, the efforts to go in that direction are beginning to shy away from GPS systems. The IOP steering committee discussions have been centered around not making decisions about what we do today based on educated guesses about what might be there tomorrow. We believe the conversation should be about what we have in place today and how we can attain near-term interoperability with the infrastructure that we now have - but in a manner that is open to evolving to new technologies in the future that might also be tied to other agendas (safety, gas-tax replacement, VMT, mobile commerce, etc.) More specifically, Germany uses GPS/GNSS with cellular and video for enforcement and vehicle ID and classification. Austria uses CEN278A1, 5.8 GHz. There are no plans at this time for GPS or GNSS (in Euro speak) to be layered onto anything in the future. GPS is the supporting technology for geo-location systems or gis-based applications like those on your smart phones. National truck tolling systems (except Austria) have found it more economical to use GPS/GNSS with cellular and DSRC more un-economical due to the installation of gantries across all roads. However, the trade-off varies with the price of the GPS units. It is envisaged in the future that each vehicle will be equipped with sufficient technology to calculate and interoperate with other vehicles (vehicle-2-vehicle) for predictive safety and its environment (vehicle-2-infrastructure) for telematics and ITS purposes. For the latter, tolling is just another ITS application. While GPS could be used for all roads and autonomous metering, it could also be done by the organic systems on a vehicle using the Engine Control Unit and the recording of vehicle miles travelled coupled with the VIN number for identity, classification and distance travelled. At this point, it would be a mistake for use to assume that GPS/GNSS is required for all roads and metering.

Submitted by: Bern Grush

Q: Since many people recognize that the end-game for tolling will be all-roads and autonomous metering, one way toward interoperability is to overlay the existing 4 major systems with GPS/CELLULAR metering at the same time we make the existing systems interoperable for a mid-term solution. In the end, we need to phase out/reduce road-side-infrastructure - hopefully by 2035-2040 or so.

Please see previous answer

Submitted by: Bern Grush

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: *Is IBTTA prepared to work directly with AAMVA and law enforcement agencies to drive a national standard for readable license plates?*

Yes -- this is already underway with Dave Kristick (a member of the IOP steering committee) participation with AMMVA - and with other organizations such as ATI and Federal Highways since AMVAA has the mandate to create a national database of vehicle registrations which was set in law several years ago.

Submitted by: Brent James

Q: *Why does the committee require registered accounts when we all know that the majority of the unique customers on the roadway (most of which we dont know) are infrequent user's? It seem's very ownerous of the industry to require registratrion when there are several models where unregistered account models do work(e.g. gift cards) and can be audited to protect against fraud.*

The steering committee generated the idea that the initial interoperability approach should focus on valid registered toll accounts - however, we recognize the system will likely evolve to include non-registered users and we should ensure the flexibility in our recommendations to allow for that evolution to occur. And, we should also be open to additional payment methods as suggested in thsi question. So, initially the committee agreed that to be "interoperable" there must be something to be interoperable with, some type of existing account.

Submitted by: Christopher Garlick

Q: *How many participants are on the call?*

145 people participated for the length of the webcast.

Submitted by: Daniel Papiernik

Q: *Clarification needed on the map showing protocols: North Carolina is currently using SeGo and IAG protocols, not 6c.*

No response required.

Submitted by: Daniel Papiernik

Q: *How can the IAG's associate member designation contribute to a North American toll interoperability solution?*

The IOP steering committee discussions recognized the value of the IAG developing an associate membership as a step toward creating the institutional infrastructure required to support initial inter-regional interoperability. The steering committee believes that we need institutional solutions such as the IAG approach, but we are open to other possibilities and have asked for input on a range on institutional options that include regional/inter-regional agreements and transaction exchange, centralized hubs and third-party providers of guaranteed payment accounts. The committee looks forward to input on these suggestions as well as other ideas that may be brought forward.

Submitted by: Dave Kristick

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: What is IBTTA's plan to forward this policy discussion toward an eventual set of workable solutions?

The schedule provided during the presentation indicates our desire to continue accepting input through the AET Summit meeting in Atlanta (and beyond) to the point that the steering committee can begin synthesizing a conceptual plan for discussion with the IBTTA board at the annual meeting in Orlando in September and then, based on their input, formulate a draft plan that can be presented in October and then vetted through to a final plan by the end of the year. This would still be a fairly high level plan that would be reported back to the House Transportation Infrastructure Committee.

Submitted by: Dave Kristick

Q: Explain more about what is involved with EETS

EETS is a EU directive and has not been taken up actively by the member states. The EU cannot force member states to adopt it. They must do it willingly. To date, no one including the EU has provided a business case for EETS! It is therefore a good reference for high level interoperability but has basic flaws that must be addressed. Please see the following link: http://ec.europa.eu/transport/publications/doc/2011-eets-european-electronic-toll-service_en.pdf

Submitted by: David Joyner

Q: What can the industry do in an AET environment about valid tags that are covered while entering tolling zones, and then claim there was a misread when they receive a violation notice?

This is really not an interoperability issue -- more of an operations issue that must be handled by local agency rules and operating procedures - and, through local law enforcement. However, with the use of video images in an interoperability exchange system, vehicle owner would be identified as an account holder and the account would be debited as if the tag was not covered. Even in the worse case, a citation is issued and received and the user has the option to appeal the citation based on the fact that his/her transponder did not register and it should have been recorded properly as a tag read - just like it works today for most agencies.

Submitted by: David Klinges

Q: The summary given about the MTA alternative was not correct. Please read the presentation on the IBTTA's website. MTA's alternative is not predicated on tag technology alone, instead it is predicated on a nationally interoperable framework that meets the business requirements of the IBTTA toll operator membership and it is one that will not compromise any toll operator's ability to collect tolls. For example, the chosen technology must lift a gate or read/write.

In an effort to summarize the MTA position, we may have generalized a bit too much -- however, it is clear that the feeling at MTA (which has been verbalized at a number of meetings) is that interoperability must be all inclusive -- that all agencies must participate for us to have "North American" interoperability -- and, for that to happen, it would likely require some type of mandate or legislation (possibly across national boundaries). The steering committee believed that it would be very difficult to meet the time-frames under discussion for initial inter-regional interoperability if we were to recommend both 100% participation and the type of functional requirements included in the MTA concepts. We believe that agencies should have the right to decide whether they

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

wish to participate in any national system (at least for the initial steps to interoperability) - giving them the flexibility to decide when and how it makes economic and operational sense for them to join such a system. Mandating a "chosen" technology and that the technology employed must lift someone's gates is counter to the discussions undertaken by the steering committee -- however, this issue is one that we want more input on. As we stated in the beginning - no decisions have been made and we want to understand the thoughts of all elements of the industry - public and private - about these issues before we move forward with development of recommendations for a conceptual plan.

Submitted by: David Moretti

Q: There are already hundreds - probably thousands - of multi-protocol readers deployed by major toll agencies. This should not be construed as something that 'could be done' since it is already being done. It seems that this should be seen as the cornerstone and other things explored as supplements to it rather than alternatives to it.

The discussions of the steering committee support this thought. This point is documented in the information that will be posted on the IBTTA website -- and is one of the reasons that multi-protocol readers and multi-protocol tags are identified as part of the likely solutions for near-term inter-regional interoperability. To go along with the associate membership approach within the IAG, there still needs to be some method of solving the technology issues if we are to provide customers with a reliable approach to inter-regional interoperability. And, multi-protocol readers could well be the basis for national/North American DSRC interoperability if adopted on a more widespread basis. However, all multi-protocol readers installed are not reading all the protocols that are in the various regions. While vendors may claim their multi-protocol readers read up to eight or more protocols, we have not seen proof that all eight are resident, active and accurate in the read zone simultaneously. We recently have seen testing of the ability to employ 2 or 3 protocols simultaneously. Hence, we are seeing the first generation of this approach. The committee believes this is a viable approach to help resolve incompatible protocols used in regions and some members may chose this route to a higher level of interoperability. But, the feeling of the committee is that there are multiple paths that members will travel on the road to interoperability - video, multiprotocol readers, multiple readers, use of external certified service providers and interagency or multi-state agreements. In addition, combinations of these approaches. As such, we believe that each agency ought to have the ability to choose its own route and it is expected that we will advance down the road to greater interoperability in stages as more agencies adopt the available options - as long as those options are based on uniform standards that can be tested and certified.

Submitted by: Dick Schnacke

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: There was no mention of the availability of the Electronic Payment Services National Interoperability Specification which is an important first step to establishing a national third party transaction processor. Do you think this might have changed the poll results if mentioned?

EPSNIS, developed by Omni-Air is identified in the committee materials posted on the IBTTA website. Unfortunately, the webcast was too short to discuss a number of the nuances related to the disparate technologies we have to deal with and the lack of intuitional and financial infrastructure. The EPSNIS is certainly one of the solutions that could play a role in evolving to interoperability - however, it is not the only one. As an example, the Florida Turnpike Enterprise has been working on a Uniform Financial Message (UFM) that could also be beneficial in supporting the move to interoperability.

Submitted by: Ed Mulka

Q: No, I mean "where". On our AET system, we see vehicles from outside our region and so am wondering if interoperability is also including concepts of sharing information on unregistered license plates for billing and enforcement collection or if it is considered a separate topic.

It is a separate, but closely related topic - one that could be addressed within the same institutional and financial infrastructure we develop to support interoperability - however, this may involved privacy and legal concerns if the customer has not opted into sharing such information. The committee discussed the issue of agencies "sharing" information gained from DMV with others outside of their jurisdiction. Often times there are privacy laws that restrict this information to those approved for access.

Submitted by: Jagdip Mann

Q: Where unregistered not precluded from AET, does interoperability as defined include the sharing of information on unregistered vehicles for toll violation/collection enforcement?

Please see previous question.

Submitted by: Jagdip Mann

Q: Do you see MVC reluctance to share data for billing purposes as opposed to violation enforcement being a big obstacle in video-based interoperability?

Not as we described it - because we are focusing first on valid registered account holders. It is one of the issues that must be addressed if we were to eventually include unregistered drivers in the interoperability system. However, we do not see that as a central theme within the approach to initial interoperability. Video toll collection (VTC) is a function of the business rules of each independent toll agency and, while the same institutions that support interoperability could also support VTC (it would make sense to leverage the investment in this infrastructure), they are still exclusive operations. For example, one agency could participate in an interoperability system by sending their image transactions to a hub for exchange and payment and they could also use that hub to process their out-of-state unidentified VTC customers and their violations while another agency might just use the hub to process their interoperability exchanges but only send violations because their business rules do not include VTC post-paid transactions.

Submitted by: Joel Falk

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: *You mention challenges associated with video tolling, I agree but what about highly accurate ALPR capable of state ID, have you investigated this concept?*

It is the advances in video imaging, ALPR, OCR and other image techniques that have led the steering committee to include video as part of the interoperability solution.

Submitted by: John Dalinsky

Q: *In your estimation, will interoperability increase or decrease the cost effectiveness of toll collection in the short and long term.*

Interoperability, as being demonstrated in the current ATI pilot project, should not add any significant costs (unless an agency has no cameras and decides they wish to participate in the video exchange). If an agency has a violation system in place, then this merely gives them another opportunity to get paid - to "scrub" those violations before issuing a citation. In fact, the system should offer agencies the chance to increase their net revenues because they are now collecting on many transactions that probably never would have generated any revenue - and, it should be noted that these are transactions that the agency already spent time and money processing only to find out that they could not identify the customer.

Submitted by: John Doan

Q: *Recent focus seems to have been on East Coast interoperability. What about the rest of the country?*

Actually, there are a number of activities underway on the west coast and in the southwest - unfortunately, we did not have the time to go into detail. They are all documented in the materials that are being posted on the IBTTA website. Specifically, the 6C working group includes the states of Washington, Colorado, Utah and Georgia with participation by Florida, North Carolina and a representative of the IAG. The ATI pilot project has included Texas and Oklahoma and Colorado. these are buy two of the activities underway.

Submitted by: Anonymous

Q: *What is the Federal role in establishing national interoperability?*

The FHWA has had a mandate from Congress to investigate interoperability since the last appropriations but has done little to nothing about it.

Submitted by: Anonymous

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: American Roads has demonstrated a mobile phone application that accomplishes interoperability for agency account holders and those without accounts. System meets mobile use in vehicle requirements

The steering committee has identified the need for us to be open to new technologies and payment systems and we understand that it is very likely that we will see these types of innovations becoming more acceptable and desirable by customers - therefore, we have stated that interoperability should be positioned to accommodate multiple payment approaches.

Submitted by: Neal Belitsky

Q: Do you foresee integration of individual toll accounts in urban areas with other account-based mobility services - for example parking and public transit - in essence, regional interoperability for all transportation modes?

Yes, the steering committee discussed at length the opportunity for agencies participating in a system of national interoperability to incorporate other products and services (parking, transit, mobile commerce, etc.) into the accounts that would be accepted within the system. The ability to add these types of services would be at the option of the local providers. For example, local toll agencies, state toll systems or regional toll consortiums could partner with transit and/or parking agencies to allow payment for these services. As such, those locations could also be in position to accept payments from accounts that are interoperable with those groups.

Submitted by: Phil Silver

Q: I am concerned with the 2016 goal date. What makes us believe we can migrate to an interoperable system in such a short time frame, given the enormous number of toll lanes in North America?

We believe that by 2016 a substantial interoperability system will be in place. Will it be perfect? Will it be universal? Will it have 100% participation across North America? Maybe not. But, we do believe that inter-regional interoperability will be in place that will satisfy a vast number of registered toll account holders and the elected officials who have indicated a desire for interoperability to be functional within that type of time frame.

Submitted by: PJ Wilkins

Q: Can they embed RFID chips in license plates?

Yes -- this has been researched by 3M - however there are technology challenges to this approach. 3M, in cooperation with Transcore, did successfully test an Electronic Vehicle Registration system using the Transcore sticker tag a number of years ago - however, the project was curtailed because of feedback from the states about privacy considerations. Technically, it would still be a viable approach today -- and is being employed in other parts of the world.

Submitted by: Rachel Bell

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: The MTA presentation DOES NOT require a common technology. It allows for multiple technologies. Please read it more carefully.

Mandating that a "chosen" technology must lift someone's gates or must accommodate a local agency's read-write requirements is counter to the discussions undertaken by the steering committee. The committee has focused the discussions on how to identify valid registered customers from away agencies and/or regions using free-flow tolling lanes (dedicated free-flow lanes - without gate, ORT lanes, express lanes, HOT/managed lanes, etc.) - not lanes that require customers to stop. In other words, we have focused on "reading" valid customers - not how to ensure those customers technologies would operate a home agency's unique equipment. This is a way for agencies with free-flow toll lanes to convert "violators" or unidentified customers (depending on their business rules) into paying customers with little additional effort - through the exchange of electronic information (either ETC reads or image reads) that result in guaranteed payments for valid customers from the participating agencies. It adds very little in terms of risk or cost to the participating agencies and should result in the generation of additional revenues. All agencies with free-flow lanes employ cameras - thus all of these agencies, if they wish, could participate in this system with very little additional cost to the agency. And, this is meant to be the first step in our path to interoperability - not the end game. However, this issue is one that we want more input on. As we stated in the beginning - no decisions have been made and we want to understand the thoughts of all elements of the industry - public and private - about these issues before we move forward with development of recommendations for a conceptual plan. We want to hear from public agencies and private operators on these issues. Are there other agencies who think we should mandate technologies that would operate 100% of the ETC-driven toll gates throughout the country? Do you think the steering committee is correct in focusing on the free-flow ETC environment? Do you think the committee is correct to be focusing on making neighboring regions interoperable first as we evolve toward a uniform North American system?

Submitted by: Robert Redding

Q: How will you ensure that proposed interoperable technologies will meet the business and performance requirements of the agencies?

This is an excellent question. If you go to the materials posted on the IBTTA website, you will see an explanation of a pro-forma testing and certification process identified by Tim McGuckin, one of the steering committee vice-chairs and the Executive Director of OmniAir. Existing agencies, states and regions are in position today to identify their approach for achieving interoperability. Because of the extremely large number of agencies, states and registered customers within the IAG, there is already an assumption that, in the short term, it would be unlikely that the IAG would alter its ETC protocol - until such time that the IAG decides to either adopt a multi-protocol approach or change to a different protocol. In any case, the IAG is in position to identify the operational requirements for transponder technology for outside organizations (associate members and/or third party providers) who wish to be ETC interoperable with the IAG -- and OmniAir (or any other organization designated by the IAG) could set up a testing and certification program as described in the write-up provided by the IOP steering committee.

Submitted by: Robert Redding

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: Would all registered accounts require a tag technology? In other words, are you proposing that an account holder could provide only a license plate and not be required to have a transponder?

This also is an important question. Basically you are asking if the type of valid accounts included in the initial interoperability approach would include ETC accounts (transponder-based) only or a combination of ETC and VTC (license-plate-based) accounts? There are some who think yes and others who think no. This is one of those issues that we need input on as we move forward with developing the conceptual plan. But, remember, in the area of interoperability, video is not meant to be a primary approach for toll collection. It is strictly meant to cover the gap that exists between ETC and violations. For inter-regional interoperability, video would be used to collect money that most agencies would never see because these are transactions from customers who have valid accounts outside of the home agency's region. For example -- if a Peach Pass customer from Georgia drives on the New Jersey Turnpike today and uses a free-flowing ETC lane, the Turnpike would photograph that vehicle and then, based on their internal business process, decide whether or not to issue a violation. Most agencies do not try to collect violations from "out-of-region" vehicles - they think it costs too much. But, in the world of interoperability, the photo information could be submitted to a hub of participating toll agencies (assume Georgia is a participating state) - and, if the customer is identified as an valid account holder from Georgia, the transaction is exchanged and the Jersey Turnpike gets paid. If it does not work (bad images, info not correct on the account, etc. etc.), then the Turnpike is no worse off than they were before. They are still in position to follow their internal business rules and deal with the violation as they normally would. This is a way to reduce their leakage - not increase it. This inter-regional approach to interoperability (employing video) would change none of the IAG internal operating procedures. All IAG states and agencies would operate the same way they do today, unless the IAG decides to change that. A NJ E-ZPass customers driving through NY but not generating an ETC read would be handled exactly the same way it is handled today - unless the IAG decides to change that. This would only be for registered toll customers from outside of the IAG -- the south, mid-west, Canada, etc. from participating agencies who guarantee payment for the transactions identified on your roads. It is money you likely would never collect (in free flow lanes).

Submitted by: Robert Redding

Q: Are the findings (future) from the ATI's HUB pilot going to be incorporated into the plan for interoperability to be presented to congress?

The results of the ATI hub and the subsequent RFP's and other activities have been a key part of the discussion of the committee. ATI has had a spout on the IOP Steering Committee since the beginning of this effort and a number of the steering committee members are founding members of ATI and most of the ATI members are also members of IBTTA.

Submitted by: Roberto Macias

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: What role can IBTTA play to help accelerate the elimination of the technology gap among toll agencies?

By creating this committee and then the IBTTA board making interoperability a key part of the organizations strategic plan drew significant attention to the issue of interoperability. Those two steps have already energized the private sector and many public agencies to begin the search for solutions - both technical and institutional. However, as pointed out in our posted materials, there are efforts underway outside of IBTTA - efforts related to the 6C tag, to multi-protocol readers and tags that are being market-driven. The IOP committee and its steering committee members have been help to communicate and coordinate those activities. But, ultimately, the best thing we can do is to create a conceptual plan that achieves a high level of consensus within the toll industry and to make that happen we need the active participation by as many public and private members as possible.

Submitted by: Saïd Majdi

Q: If the main beneficiaries of nationwide interoperability are motor carriers and video tolling is not a viable solution for tolling trucks, shouldn't video tolling be removed as an option for achieving nationwide interoperability?

Trucks definitely present a different set of problems. Just because video does not provide a solution for trucks (unless your agency has front cameras - then it works fine), the steering committee does not believe we should eliminate video as a viable solution for cars. The problem for trucking companies (and independent long-haul truckers) today is not that they need multiple technologies - its' that they need multiple accounts to support those transponders. Most of the trucking interests we have talked with indicate they have no problem carrying more than one transponder in their rigs - what they want is not to have a separate account for each transponder. This is a problem that could be solved by the third model suggested in the IOP solide presentation - the third party providers - who could possibly provide a set of transponders (or a multi-protocol transponder) tied to one central toll account that would provide guaranteed payments to toll operators for truckers across regions and even possibly nationwide. Based on the earlier question of GPS and GNSS using cellular technology, the idea of a truck that has a GPS/GNSS with cellular and DSRC technology could also be a participant in the interoperability concpet. Europe, specifically France, is currently doing both truck eco-tolling and regular tolling using a GPS device that also has a DSRC integrated to interface and perform the tolling function. Their are other GPS/GNSS systems that use the GPS location in conjunction with the DSRC read to help validate the event and provide a stronger audit trail for tolling, refueling and other payment or charging events.

Submitted by: Saïd Majdi

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: *Please comment on the advancement of reciprocity between states for the enforcement of tolls. Is this something the Committee sees pertinent to the topic of Nationwide Interoperability.*

This also is a closely related topic, but not a function of interoperability. Interstate enforcement for toll evasion is not associated with registered customers with valid accounts. However, it is a subject of great importance to toll agencies and one that could be addressed by infrastructure developed in support of interoperability - therefore it is a problem that could benefit from what we develop.

Submitted by: Scott Hooton

Q: *Has interoperability been achieved outside of the US*

We actually have good models of interoperability within the US - and, considering that the IAG, Florida, Texas and California are all by themselves larger than many countries, we could easily use any of their models for a national model. Our problem is that they are all different - both technically and institutionally. While other countries have achieved interoperability (Scotland is a good example), they have not done anything there that isn't being done in some fashion within one of the four interoperable regions of the US.

Submitted by: Sean Hill

Q: *How do agencies anticipate changing procurement rules and processes to enable the private sector to participate?*

This is a subject that needs to be address as we work through the institutional problems. The likelihood is there will not be a lot of detail in the first iteration of a conceptual plan. However, it is still an important element - to find simpler ways for agencies to adopt standardized practices, technologies and business rules in a way that does not proliferate more unique requirements for private sector providers. The development of technology and payment standards, testing and certification is the process we have suggested for the path - now we have to begin putting some meat on those bones. This again is an area that we would like to see input from both the public and private sectors.

Submitted by: Shannon Swank

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: As part of the process do you anticipate speaking with individual firms to analyze approaches that could fit with your plan?

We would like to hear the thoughts of individual firms and agencies. All members of IBTTA may provide input and initiate conversations with the steering committee or with the IBTTA staff at any time. We are structuring a formal method for providing input through the IBTTA interoperability webpage - that would be a good first approach.

Submitted by: Shannon Swank

Q: As part of the process do you intend to analyze procurement methods for making it faster and easier for Authorities to connect to the private sector? For example, retail providers can easily connect and change vendors for transaction processing services that should not require a long procurement with heavy financial sureties like bonds, etc.

This is an issue that needs to be addressed as we develop more detailed plans. It makes sense to develop more standardized procurement methods as well as approaches to vendor certification that would simplify the procurement process for hardware, software and services. We believe that IBTTA is perfectly positioned to take the leadership in this area, but it is not a main focus of the IOP committee at this time.

Submitted by: Shannon Swank

Jordi Graells, President
Patrick D. Jones, Executive Director & CEO

Q: *I'd like some clarification on the MTA's presentation on Interoperability as posted after the Tuesday Webinar to make sure I understand what it is suggesting: my interpretation is that their position boils down to this: interoperability would be achieved when any tag or tag-equivalent technology (cell phone, etc.) that passes muster can be linked to a valid customer account and if there's not a valid customer account linked to something somewhere that generates a good transaction, that is beyond the scope of interoperability and left up to each individual agency to collect/enforce/forego/write off. Is that correct?*

I'd also like to understand how/where the ATI Interoperability Hub fits into MTA's proposed approach to interoperability. Would it essentially allow individual agencies to opt in to interoperability based on license plate images alone?

Thank you for the question. You are essentially correct in your interpretation of the MTA proposal. The first step is to establish a set of requirements that meet the business and operational needs of the toll agencies. Candidate technologies (note plural) could be qualified if they meet those requirements. Then, toll agencies could install equipment representing one, some, or all of the technologies that qualify. Customers would establish accounts and receive one of the devices associated with one of the qualified technologies. In this manner, all customers have an interoperable device (could be tag, phone, GPS, etc. if they can meet the requirements of interoperability) and can thus travel to away agencies no matter how those agencies operate. In this way operational considerations such as entry/exit, customer feedback for HOT lanes, and gated lanes can be interoperable with agencies that have other operational environments. Customers that do not have an interoperable device would be handled by the local agency in whatever manner they see fit. This might involve video imaging, in-lane manual processing, or other operational procedures. License plates would not be interoperable devices since they cannot meet the operation requirements of the toll industry at large.

In this framework, agencies might choose to use multi-protocol readers, multiple readers, multi-protocol tags, or other technical solutions to read and write to "away" devices. Thus, there is no need for the industry to adopt a single technology. However, each of the devices distributed to customers must be able to operate in all "away" environments.

MTA believes that this framework is very workable, does not require short term adoption of a single standard, and allows for the maximum amount of interoperability without causing operators to change their operational environments (and take revenue risks that would often accompany such changes)."

Submitted by: Linda Spock

Answered by: MTA Bridges & Tunnels

This is the end of the first round of questions that were submitted via the webcast and through www.ibtta.org/interoperability through June 12, 2012. Questions will continue to be tracked, compiled, and answered every few weeks. Questions about this document can be directed to Cheryle Arnold, carnold@ibtta.org.