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PERSPECTIVES ON WAGERING SYSTEM DESIGN

Sponsors:
Panel Session: Television Games Network, Inc.
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Moderator:
James Coil, Vice President, Engineering; Jockey Club Technology Services

Speakers:
Brendan Burgess, Vice President of Technology; United Tote
John Cargnello, CEO, Technical Systems; Testing North America
J. Curtis Linnell, Wagering Analyst; Thoroughbred Racing Protective Bureau

MR. STEVE BARHAM: I would like to get the panel started. I will introduce James Coil who is the executive vice-president and executive director from The Jockey Club Technology Services, and he's going to moderate the panel. James.

(Applause)

MR. JAMES COIL: Good morning. Welcome to the panel on wagering system design. We've got an exciting and timely topic this morning. There's been a whole lot of activity going on in the last year or so in this particular area. The goal of that activity is primarily to produce a more robust, secure and customer-friendly wagering environment.

Some of the projects that are in motion out there are the Wagering Transaction Protocol, or WTP development. It's got as its key goals host control, meaning the live host is aware of all wagers that take place on the live events, and wager transparency to collect data on the wagers so that you can provide increased security and marketing data.

There's also a request for proposal by a racing consortium that's in motion. That's an effort by the racetracks to create the next generation wagering system. A lot of you folks are participants in that process, I know.

And if you look out on the show floor you can see the tote companies have been busy as well. They have made great strides in improving their products over the last few years, and it shows.

The issues within wagering system design are a friendly and more customer-focused term that will improve the competitiveness of our product in the increasingly competitive online wagering world. We're also looking for greater transparency that will improve our security and will allow us to analyze how our new wagering products are doing and how they can be improved.

We're also looking for wagering data depositories. The wagering system depositories, that will be used to do the analysis, do security fraud detection, derivative analysis and give us a historical record of all the activities.

We're looking for better international integration. As the world becomes more 24-by-7, we hope to get our products out into the world marketplace and hopefully be able to take other international products into our markets.

And finally, we're looking for economies of scale. The system that's been developed today is a bit piecemeal and it's a little bit more distributed than we need so we think that if we are able to centralize some of that that we'll be able to gain some economy.

First on our panel today is Curtis Linnell. Curtis is a wagering analyst for TRPB. He's been involved in the racing consortium and the WTP process, and he's very familiar with international marketing. So, Curt.

MR. CURTIS LINNELL: Thank you for that introduction, James. We're going to try to coordinate a remote PowerPoint with my PowerPoint, so it should be a disaster, of course.

You can always tell when a group of technical people and engineers get together in a room because they talk about things like a wagering transaction protocol and they call it exciting. I see the looks of sheer excitement on your faces. So what I'm going to do is dip through the Racetrack Consortium Wagering Enterprise System Request for Proposal. That's a lot of words up there, and we'll do that in about 10, 12 minutes, and then we'll hold off on any questions you may have for after the presentation and after our colleagues here.

First of all, of course, a disclaimer. I thought a picture of Biosphere II was probably an apt picture to put forth as the disclaimer, being that it is a wholly contained ecosphere of its own right and sometimes the wagering and racing industry views itself as a wholly contained ecosphere. Little do we know that the real world impacts on us all of the time. That's always true in technology.

Let me read that for legal purposes. Contents of the presentation is mine, does not reflect the policy or opinions of Thoroughbred Racing Protective Bureau nor any

members of the Racetrack Consortium, which is very important because they all have legal counsel.

Obviously, anything quoted verbatim in the presentation requires my permission because I might be embarrassed if it is.

Okay. Wagering in the 21st Century. Just a couple, James touched on some of these when we started off. The one phenomenon or one aspect that we see in North America on wagering and increasingly around the world is wagering is a highly interdependent activity. Those locations that produce races, produce events for wagering, are also retailers.

You have retailers taking multiple hosts. You have hosts also hosting pari-mutuel pools from different locations, so you have a highly interconnected activity that goes on throughout the wagering world.

We have a need. Wagering needs verification and compliance. Wagering and gambling activity are subject to state and federal law. Wagering needs the verification that each wager that occurs is a verified legitimate wager. Also compliance. This gets into both our racing and racino perspective, compliance mechanism that across wagering company.

Rarely, a company exists in the world that doesn't have at least some level of compliance. You have a casino, you have a track, you have wagering platforms. All those are subject to a compliance layer. And then an observation that wagering itself in our current environment has effectively moved beyond the control of the host.

Twenty years ago when we had wagering networks they were primarily based for a live operation that was location specific. We had hosting control by default because of the technology, because of the environment. Now that wagering is highly interdependent we no longer have a hosting controlled environment. So the goal is to identify a wagering enterprise system blueprint.

Now, if I advance my slide, and I don't advance your slide, yell at me, okay. The blueprint, we call it a blueprint, or at least I call it a blueprint because I was involved in just the design process of the RFP, the Request For Proposal. Later that blueprint became part of a request for proposal with business elements to it and later went out to market.

Again, I'm going back to just talking about the design. The first one is sort of a motherhood and apple pie, but it also shows direction. Let me read it enough that I need to, but it encompasses all elements of the wagering experience starting — starting from the customer — that's the most important thing, back through the distribution channel to production, so you start where the customer is and what the customer needs or requires in the development, back through to the production of the wagering system.

Along with that, encourage retailers to offer multiple wagering products. Obviously, that environment has to be secure. There has to be service differentiation. There has to be competition on those platforms between retailers for growth and also flexibility.

And then also involved are operational improvement, continuous operational improvement, and technological innovation. And I think that goes without saying.

This was my first shot at a Visio-diagram. I know that it looks like I didn't spend a whole lot of time on it, and I do apologize. I showed this to a friend of mine who knows me fairly well because I thought I was pretty proud of it and he looked at me and smiled and said, "Hey, they didn't have Visio in Saskatchewan when you grew up, did they?"

So I thought that was fairly evident.

This is today's wagering environment, again badly done. We have that center cloud, data cloud, in which what we have, of course, is a merged pool environment and information is traveling between hubs, and those hubs have various components off of them, and, of course, there's a multiplicity of hubs.

And again, each of those hubs were developed independently and for the purposes of serving a regional or local group of events. So the Racetrack Association Consortium, also known as the Racing Consortium, was brought together as an idea to be large enough to be a critical mass in the pari-mutuel industry in North America.

This was a very North American-centered rationalization focus. The five companies involved, New Jersey Sports and Exposition Authority, Magna Entertainment, Woodbine Entertainment, Churchill Downs and New York Racing Association, of course, as exporters and purely as exporters represent about 70 percent of the North American turnover. And also are of their own rights huge retailers and importers.

The Consortium themselves becomes multi-jurisdictional; racetracks in operations in 16 jurisdictions and, of course, they have account wagering operations in many more than 16 and retail products throughout North America and around the world.

So the seven aspects of the blueprint of the RFP design starting with customer-facing software — and we divided software and hardware from each other.

There had to be software that could be independent of hardware. Hardware is going to be, we think, increasingly a customer-provided platform, whether that's a P.C. in the house or a notebook or a personal information device or a cell phone, even though the Racetrack Consortium in this RFP needs hardware to supply, customers themselves will also provide hardware, so we have the customer interface device.

Obviously, communications network, that communication network needs to be robust, needs to be handling large volumes of transactions. A core wagering application. That, in fact, is tote. A totalizator and all the service layers that are around tote to produce a wagering engine.

The fifth element, secure data center. I use the term center as a singular because at the best in terms of a blueprint, North American wagering would be rationalized to one data center, obviously with the aspect of service level, there would most likely have to be a fully redundant second center, we can touch that briefly, but at its best would be one data center in which all wagers are compiled.

The sixth point, enterprise data warehouse, this is tracking every element of a wager from retailer to host and every element of that, a centralized data warehouse and then, of course, the help desk.

I'm going to briefly touch on each one of those. Host is in control but the customer is king, and I think this was one of the basic ideas that permeated the design process. We need a hosting control system, and I put the retailer first.

Let's go to that second point. The host will employ, and James touched on this, a wagering transaction protocol for authorizing all wager requests. Retailers will not be making wagers, they'll be making wager requests. That by definition does not become a wager until that's authorized by the host. A very different verification environment.

Having said that, and that sounds very controlled, and it is, the standards for accessing that wagering platform for the retailer after the verification is done that the retailer will have open standards for software interfacing.

We use the term plug and play. That's what plug and play means in this environment. You get the specs for what a wagering device, a wagering interface needs to be, and you can go out and design a wagering interface. So the specs are available.

Here's my second apology. My second try at Visio. Future wagering configuration. You see that big data center central tote, central core application right at the center which is highly secure, a highly accessible, and again, at best a single location, understandable there may have to be multiple locations but now we have, rather than pools being merged, we have wagers being verified by the host prior to issuance.

This isn't my field but I'll touch on it anyway, enterprise data warehouse. Economies, and obviously economies to scale with the five or a number of those five companies involved, and perhaps others, but a database that captured every element of the wagering process at the highest level of granularity, and it's one database.

So there's proprietary systems in which each individual company can extract their information from that database, but the database is singular.

Again, reflecting how wagering is a highly integrated environment, the RFP itself is a highly integrated presentation. Individual companies, of course, still use their own management software for extraction of that data and with all the security elements around that data warehouse to make sure that information is proprietary to each company.

The secure data center. And this, I think, is fundamental to the blueprint design of the future. Right now we have 50-odd totalizator hubs throughout North America, each one producing an activity that was designed for a very different purpose 15 or 20 years ago, and even though there has been a degree of rationalization, this takes it to its nth degree in which there's a highly secured data center in which not specified for a jurisdiction but at the best place it should be for its function that's accessible by host regulatory agencies and the central security database and all the rest of the permitted access.

Obviously there will have to be — I'm not an engineer but I learned a lot about three 9's of service or four 9's or what that meant, and it was actually mind-numbing, but for the service levels required in the design, there has to be a fully redundant, switchable backup that's always on.

The security data center also has multiple points of entry, and I should say the design itself, the RFP as itself, is designed for multiple points entered for additional racetrack associations. The racetrack associations by using the same design blueprint can now add to this, to this project.

Communications network, again, is always up. Central core network. Obviously is able to efficiently handle wagering transactions, and wagering authorizations. That goes without saying. It's integrated connectivity end to end and it's secure, and that's critical.

The business model, the requirements of the business model for wagering in North America for the future is a secure environment, and it's not security purely through proprietary information, it's secure because of security layers and infrastructures built on it.

And last but not least is the help desk. We came up with this term before IBM started running their series of commercials, so I think we can take credit for it. We'll put in a call for complaint to them, but something that can support every aspect of the wagering process end to end.

We get a lot of — when there's a problem, not that that happens often, but when there's a problem in the wagering chains daily there is finger pointing. Not that anyone is incapable of solving that, but there's multi-handoffs in that wagering process, it continues to get handed off, and so there's a lack of integration to solve a wagering problem.

This help desk is to address that. It's to address each element of the wagering process and make that integrated. And then able to monitor the wagering process as a whole and produce performance benchmarks. And I think that goes without saying. And that's part of that continuous improvement approach.

I told you you were going to be engrossed with excitement. Anyway, thank you very much. We'll hold off the questions until later. I think this is fairly straightforward and I do see this as a way to address some of the concerns we have in the wagering world in the current environment.

Thank you very much.

(Applause)

MR. COIL: Thanks, Curt.

Next up we have John Cargnello from Technical Systems Testing. He's the founder and CEO. His company certifies online wagering systems in Canada, the U.K. and other countries all over the world. He's going to speak to the state of online gaming worldwide and how integrity is insured. John.

MR. JOHN CARGNELLO: Good morning and thank you for inviting me. I realize we have some time pressures here so I'll try and make up a bit of time but still cover the important points.

First, will you let me introduce myself and introduce Technical Systems Testing for those of you who don't know who we are. What we are is an ATF, Accredited Testing Facility, for gambling systems and we've been doing this for 12 years. We work with both the terrestrial gambling and the interactive gambling environment.

Now, what we essentially do is we evaluate systems and make sure that they are fair, safe, secure and auditable. To do that we're working with suppliers, regulators, operators, pretty much around the world, and that's where we come from. In terms of our experience specifically related to this area is that if you look at these online gambling sites in really properly regulated jurisdictions, we've certified something like 70 percent of those worldwide to this day. That includes Canada's first online pari-mutuel system. It includes the first wireless interface betting system, and recently we're currently performing a certification for the Tasmanian Gaming Commission for the Betfair system.

Now, we don't have a lot of time here so I'm going to concentrate on a couple of these areas. Let me say that when we review online gambling systems we look at exposures and we look at what can go wrong. Now, I don't have too much time to go into all these areas, but let me talk about one particular area, and that's the area of hacking and cracking, which is pretty much close to everybody's heart, you know, when you talk about these online systems.

Now, in traditional systems, whether you were making a bet at the track, whether you were doing it at an off-track terminal or doing it over the telephone, the security of the system really relied on the physical security of the room in which the tote system was contained. Right. And the use of proprietary protocols which were known only to a few people that communicated with their system and as a result the relative difficulty of obtaining to access to that wagering system anonymously.

This has all changed with the Internet. What we have with the Internet is you can access that system from your browsers at home. You can access it by a singular phone, you can access it by a PDA.

What does that mean in terms of exposures or what exposures does that introduce? Well, the biggest thing that you have to realize is when you're talking about these Internet protocol systems you make the system extremely accessible to just about everybody in the world.

Effectively, what you have done is you've given everybody access to your system. Not only have you given everybody access to your system but you've given them the potential to do that anonymously, so they can come, they can look at your system, they can poke around and they can test your system's vulnerability. And if they find vulnerability what they can do is they can automate various attack tasks, so some kid can write a script that can distribute that script to thousands of frames or other hackers over the Internet and all of a sudden you can be facing literally thousands of attacks on the vulnerable points of your system.

Now, what does that mean in terms of how do you deal with these sort of exposures? When we look at interactive gambling systems, regardless of whether it's a wagering system, it's a betting exchange, it's a gaming system, it's a sports book, we look at a number of standard areas. We look at the front-end application itself, which means we look at the system, including all the user interfaces in that account establishment.

We make sure that the system does what it's supposed to do. We look at the back-end infrastructure of the system, which means the communications networks, the firewalls, the encryption methodologies, the logical and physical security protections that are common to all online systems.

When we've completed our review, what we do is we lock down the system. That means we remove all unnecessary access, including access by ourselves and by the system developers and by the auditors, and we lock down that system so we make sure that only essential people have access to that system. And we take a baseline of the system, which means that what we do is we take an actual electronic signature of that system, and the electronic signature can be used from that point forward for actual control purposes to look at what changes have been made to the system from that time onwards.

Now, for anyone who is in this business, you would know that security is not just about systems, so it's also important to insure that there are controls in place to

make sure that if things go wrong or when things go wrong they are detected and corrected. This is not just electronic controls, but it can be things as simple as segregation of duties and administrative controls.

And finally we look at ongoing maintenance.

Now, when we test the system or when we evaluate the system, we evaluate that system in a particular point in time. But these are very, very dynamic systems and when you maintain these systems, when you make changes to these systems, it's important to insure that you don't introduce new vulnerabilities which were innate originally.

Again, because of the lack of time I'm not going to talk about how we deal with each of these things specifically, but let me say that there certainly, there are controls in place, there are mechanisms in place to make sure that you can do these. There are industry best practices which apply not only to gambling systems but they apply to financial systems, they apply to systems like eBay, they apply to military systems, and they are the same sort of controls that we apply to online wagering systems when we evaluate them.

And despite the fact that these systems have been subject to criticism, I'm not aware of one instance where a properly regulated or properly designed interactive gambling system has been compromised.

Now, you can say to these exposures we'll put you off, but if they put you off, what's going to happen is you are going to be left behind, so let me — I just want to say that it is possible to deal with these exposures.

Now, the good thing from your point of view is that where you're going others have already been before, so others have paved the way. You don't have to reinvent the wheel. For example, in Australia, where I come from, there is something called the AUS model. Now the AUS model is a document which is being used as guideline in developing interactive gambling systems worldwide. It's a guide for incorporating adequate levels of protection for any online gambling system.

If you don't do things properly, you need a technical standards document, you need to really get out there and you have to say what sort of controls should my system incorporate so everybody is working to the same level of knowledge.

That doesn't matter, doesn't make any difference whether you're a developer of the system, whether you're an operator of the system, whether you're an auditor, whether you're a testing lab, there should be technical standards documents which tells you what you should have in your system.

Now again, there are already technical systems documents out there. For example, the CPMA developed a technical standards document for the online systems in Canada, and I'm sure they would be willing to share those documents with other people if they were asked.

The final thing is independent testing and certification. Now, I'm not just saying this because I happen to be a testing lab, but what we find is that independent testing and certification basically offers a fresh perspective to any system. And we always uncover vulnerabilities. I would underline always.

It doesn't matter if the system is a brand new system or has been operating for years. The reason that we uncover these vulnerabilities is really two things.

First of all, this is what we do, we are specialists in this particular area. And the second thing is that even though a lot of the things that we point out are known to people who develop these systems, they are often operated or directed by completely different set of agenda, and that agenda is normally more concerned with meeting deadlines than incorporating the necessary controls in the systems.

Okay. Once again, I'm sorry about going through this so briefly, but we are trying to catch up some time here, but I would be happy to take questions on any of these areas at the end of the session.

(Applause)

MR. COIL: Thanks, John. Next up we have Brendan Burgess who is vice-president of technology for United Tote. United has been participating in the WTP process and is a respondent to the RFP.

MR. BRENDAN BURGESS: Thanks, James. Just wanted to make a couple of quick statements before I started. Curtis made a very nice technical presentation to do with the various levels of the RFP business, and United Tote is heavily involved in the business. We're also providing a very large amount of domain knowledge with our partners CDS and Microsoft, Bearing Point and MCI (Teri) Data.

So we're very behind this effort and it's going to support our major customers and a lot of other customers in the future.

However, that being said, we have a lot of other customers. We have 120 customers in the U.S. and the rest of the world. And by no means are we going to leave them behind and not continue to develop our existing systems.

One point I also would like to make is that technology is nothing without content, and developing technology without the wider view of more sales and increasing your business opportunity is not going to get you anywhere.

The original question as part of this panel was is the current wagering system supplying what the industry needs. One of the ways we thought about it is we really don't know that. What we know is that there's customers out there at the racetrack and there's a picture of some at Belmont, I think, and they have demands on tracks and the tracks tell us what they want.

And this is what our customers are asking for. They are asking us for systems flexibility, they want us to be able to respond quickly to the changes, to implement new wagering types, to be able to do something for them that they ask for without it taking forever or being impossible. I'll go into this a bit further later.

They want to be able to interface other services, the CRM services, the video distribution services, odds, player tracking, database services, and that should be easy. It should be something that in the future will become increasingly easier with standardization. And I'll go into that a little bit further later.

They also want enhanced client functionality. By that I mean any kind of functionality facing the clients, be that on a terminal, self-servers and any other device where you actually interact with the system to entertain yourself and wager. I'll go into that later, too, if I've got time.

Security and transparency of transactions and data. The system can't be a black box. It has to be able to show everything that's happening at any stage of the transaction and that's — it's something that's required and it's something that we're doing with our database and in the future with the assistance of data.

And the last one is wide ranging product distribution. The ability to put terminals everywhere at the track, in carrels, at the restaurants, further than that at OTBs, various other methods including now the Internet.

Just briefly, the way United Tote looks at product development is a little pyramid here. We see the foundation of our current technology, our tote system and back office system. Layered on top of that is product distribution through our terminals, and on top of the terminals and client systems are the wagering applications which include the straightforward wagering applications and other kinds of innovative games and contests.

And all of that leads up to the patron experience. If we don't provide to tracks and eventually to the customer a good experience, we're going to fail.

So just going on to the system's flexibility, today we've got — the tote systems have evolved to be very efficient, very tightly couple code, transacting thousands and thousands of transactions very reliably and it's led to a very closed and tightly coupled architecture.

And so that means if a programmer needs to make changes to the code, he's got to be very aware of any other side effects. Has to be a lot of testing involved. It makes it very critical and very difficult to make even minor changes to the system.

The lack of standards prevent the ready adoption of third party services. You have to reinvent the wheel every time. It's not just the tote systems; the other systems as well. If everybody has a different way of talking, it makes it very difficult and it causes you to do the work over and over again.

So in the future code readers in the software allows us software developers not to have to design the wheel over and over again many, many times in their source code and have the potential for errors and just poor inefficiency. And standard protocols and interfaces will allow people to easily adopt other services.

Okay. Here's an example of some flexibility and contact distribution. Currently on our terminals we allow advertising to be distributed to the terminals. You will see that out there in the booth. It's pretty powerful.

Content. An example of a Fantabet Leader Board, this is some new ideas and new ways of trying to use our distributor platform of terminals and whatever else is available to us — the Internet — to distribute the content.

Let's see. Interfacing to other services. So that's at the racetrack our customers want us to be able to easily connect to the services of their choice. They may want to use a state-of-art player tracking system or state-of-the-art CRM system, or because of their economic situation or their requirements they may choose to use a lower quality service but one that provides their needs, so they should be able to switch at any time and do that without a lot of lag, and that can be done through using service oriented architectures and standard protocols and connections.

One example in the book I was reading that kind of brings this down to a really easy level to understand, if you have a stereo system at home and you have a CD player and a tuner and a turntable and an amplifier, that is a system that's connected. Every component doesn't know about the other component, but it works.

You go out to Best Buy and you buy a really fancy stereo system, 5.1 Dolby, you look at the back there's a million connectors on there, there's digital, digital with RCA, everything, but you know what, the good old RCA connects everything up. Just a wire and a connector, it works with video, it works with audio, it allows you to take a new component and connect it up.

So to us the standardization of the protocol, which is the wire and the connections which is the ends of the RCA connectors and the interfaces and services which is the components, that's what we're talking about, make it easy to connect to and you'll have the future systems.

Here's an example of Web service that can go out and verify a Social Security number and by going through a Web services directory you can find the kind of service you want to use. You can interact with the vendor of that service and you can then bring that into your application to do that function.

Enhanced client functionality. Today we need to distribute product on all kinds of terminals. You will see that all kinds of user interface technologies are used. They should be standard based, they should be able to work across platforms and they should provide a common user experience.

Okay. So in the future, getting back to the standardization, it will allow the customers to choose exactly what they want. They'll be able to choose what they are using based on their own preference, it's not what the vendor, the tote vendors says you have to use because this is what we connect to, they'll be able to decide I want to use something else. And if it makes sense, they can easily adopt it.

Here's an example of an enhanced user interface, interface with integrated TV tuner. Basically, at racetracks in carrels we take off-the-shelf P.C., self-service P.C., put a video card in there, we drop it in, replace the existing TV set, we provide full wagering interface and video integrated into one product.

Greatest feature of this product is that you don't have to tune the TV channel. You go to a racetrack and look at the up/down buttons on TVs they are always worn out from people hunting around trying to find their TV channel. This will actually tune based on what track you're at.

Here's another example of enhanced client functionality. This is a power tool we call the Exacta Explosion. Basically presents you a way of cherry picking the full page on an exacta or quinella and allows you to edit the amount of bets you want to choose by row, column, sort by runners or odds.

Here's another example of a product that I put up here, a blatant ad that shows you that the United Tote terminal is being recognized by Casino Journal as one of the top 20 gaming products. It includes all the features that are required by the RTC for their customer interface device, and I'm pretty proud of that product.

Security and transparency of transactional data. We provide currently the ability for you to analyze your data through Web-based reporting using Crystal Reports. We have a real-time database feed that's connected to our tote system. We have the ability to have dashboards drilled down. Anybody within your organization who has the required access can actually get the information, it's not necessarily hidden from anybody.

You can use it for business intelligence and the persistent data line there is if you build persistence into your system no matter where it is, if there's a malfunction in your system, wherever that transaction is, even before it's processed by the actual call, wagering applications can be recovered, so you have the ability to recover and not lose any transactions.

And then ultimately the wagers transaction protocol reveals all end-to-end transactions.

As a platform for distributing content, currently we have thousands of P.C.-based devices that are running suitable operating system for distributing all kinds of products. You can project your content down to these, reprogram them and also add advertising and other kinds of games. It's a platform for delivering content that still hasn't been imagined, but it's out there, it's available, we just need the product.

And, of course, other points of distribution are cell phones, Internet, PDAs, gaming consoles, X-Boxes.

One thing that enables wide distribution of the product is cashless wagering. We have a product called the Fast Bet Card that starts off as an anonymous toting card. Basically a plastic voucher, but it enables you to operate off-the-shelf hardware that doesn't have bill acceptors, coin acceptors or other kind of monetary things other than using this card.

And here's pictures of some of the distribution vehicles, the terminals, off-the-shelf hardware, cell phones, PDAs, wireless devices.

Here's some pictures of Churchill Downs with in seat carrels with IWP terminals running a wagering application and television. Undirected terminals in restaurant environment.

Okay. So summing up, customers want system flexibility, the ability to choose their own service and not have any company, the tote company telling them they can't do it. They want the client devices to have great functionality and do what's needed. They need security and they need to get this stuff out there because if it's not out there, there's no product, the technology is got going to help you. Thank you.

(Applause)

MR. COIL: Thanks, Brendan. We are a little pressed for time. The previous panel ran long but I'm sure there are some questions and we'll take a few minutes and get them out there.

A VOICE: One of the questions I had is both Curtis and Brendan were talking about the migration of service architecture and service infrastructure. What are some of the challenges do you foresee addressing those compared to the integrity and liability of cohesive system?

MR. LINNELL: That's definitely an engineers's question.

MR. COIL: Did everyone catch that question? Bill, could you repeat that? Could we have a microphone in the audience? Please.

A VOICE: The question I had is both Curtis and Brendan spoke about migrating to a service architecture and opening the world up, promoting a level of reading that's currently unimagined potentially for a great deal of gain. The question I have is what do you see as the obstacles, the hurdles technologically or business-wise in switching to a service-oriented architecture and how do you mitigate those to keep the level of reliability and availability that we actually currently have in a cohesive system?

MR. LINNELL: Let me start by taking a crack at that. There are challenges, and obviously the design blueprint from the Racetrack Association Consortium that didn't take on some of those challenges that the migration would involve, but there certainly are and perhaps not completely to answer your question, we're also dealing in an environment of legacy regulations and lots of those regulations are on existing systems which we have to take on.

So it is a mult — I mean, there's a tremendous amount of challenges out there and part of the migration to that environment is going to be a step-by-step approach, but part of my design or part of what I presented as a design is the future model and didn't address that but you're right, those challenges are there.

MR. BURGESS: I'll answer your question. To start with, I believe that the future is going to be open systems and not closed systems whether we like it or not, and the other aspect of it is this is a future-looking observation that systems testing, security issues, authentication, they are being addressed by standards, bodies like OASIS, the Organization for the Advancement of Structured Information Systems, The W3C Group.

As time progresses the difficulties that are part of these service-oriented architecture will be worked out and what that will do for us, it will allow vendors to compete based on the quality of their products, by how flexible they are and how well they suit the customer's need and not by the constraint, the constraint of a closed system.

MR. COIL: I'll make one comment on that. I think there's also a distinction between the core of the system which won't necessarily be purely services-oriented architecture and the customer-facing devices which are best served by that type of design.

If you don't mind, I'm going to open it up to some other questions since we are short of time rather than make it a dialogue.

A VOICE: Question for John. John, how frequently do you go in and update a system after you have gone in and certified and implemented the system? How often would you be called back and make sure that the data is current?

MR. CARGNELLO: Okay. That's a good question because one of the things that people say to us, well, you certify a system at a certain point in time. How do you assure that it remains, the integrity of the system remains there?

Really, this is no different from what traditionally is being done in financial environments where the auditor is going and looking at a system and it's a banking system and they say, right, it's fine at year end, but how do you insure that the banking system remains, performs in the same sort of way throughout the year?

And that is what I mean if the system does what it's supposed to do initially and then you have controls in place to make sure that the system, that if you make

changes to the system, they don't corrupt what's already there, you don't have a problem.

I mean, what we do is, quite simply, is that when you look at a major system, let's say a wagering system that we would say that on an ongoing basis there are three types of changes you could make to the system; they could be trivial changes which we really we don't care about, or the regulators don't care about.

There could be changes which could be looked at retrospectively in an annual audit, and then there might be some very significant changes during the course of the system that say a regulator or an operator might say that this system needs to be recertified.

But those are the changes. Might happen perhaps like once or twice a year, so once the system is certified we're not in there all the time.

MR. COIL: Thank you. I have one question for Curtis, and Brendan you may want to speak to this as well. Something I get approached with a lot is when we look at the system contemplated by the RFP, how do we transition from what we have today to the system that's being replaced?

MR. LINNELL: Well, I won't take on that question directly because, I mean, that in and of itself is a huge challenge and I'm sure will be addressed in a business case environment by responses to the RFP itself. Certainly when we were part of the design group many of those migration challenges were right up front and were discussed.

I mean, we attempted to put a blueprint that was the future wagering system as it rationally we thought should be the case. You have to have an end goal and then you can develop the migration to that system because business has to be ongoing, and I think that was a bit what Bill touched on, too.

MR. BURGESS: I'll put my two cents worth in here. I think the development of the enterprise wagering system is going to support legacy systems for a long, long time. Maybe forever. Depends. Because, once again, it's going to be driven by business, right, and the quality and the adoption of the service. If the enterprise wagering system doesn't function economically for every customer, then the total adoption of that is going to depend on that system being a high quality service that makes sense and is going to be affordable and provide everyone their needs.

If it doesn't do that, it's not going to be worth it, it's not going to happen, right. So you have to look at it once again from the business side of things and not the technology side of things.

MR. COIL: Okay. Thanks. Any other questions?

Okay. Well, thank you to the panel. Thank you.

(Applause)