

SESSION 4: LOCATION-BASED SERVICES

MR. QUARESIMA: Hello, everyone. If everyone could please take their seats, we are about to begin the panel on location-based services.

Well, thank you all for attending. As Commissioner Leibowitz pointed out this morning, location-based services have a lot of potential to help and be useful to a lot of people, but there are also many legal and policy issues surrounding their use.

So, I just wanted to begin by introducing everybody up on the podium. I am Rick Quaresima, I am an Assistant Director in the Division of Advertising Practices. Co-moderating with me is Peder Magee, and he is a Senior Attorney in the Division of Privacy and Identity Protection here at the FTC.

And going from the far end of the panel, we have Brian Knapp, who is the Chief Privacy Officer and Vice President of Corporate Affairs for Loopt, Incorporated. And then we have Michael Altschul, who is the Senior Vice President and General Counsel for CTIA -- the Wireless Association. And then we have Alissa Cooper, who is the Chief Computer Scientist for the Center of Democracy and

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Technology. Then we have Tony Bernard, who is the Vice President of Operations for Useful Networks, Inc. And then is Tim Lordan, Executive Director for the Internet Education Foundation. And then Fran Maier, who is the Executive Director and President of TRUSTe.

We are going to begin today with an overview of the location-based service technology and the current state of the market, and Brian Knapp from Loopt is going to give that to us, and then we are going to go on and each of the panelists will give essentially about a five-minute presentation overview, and then we are going to open it up for more of a roundtable or rectangular table panel discussion.

During the course of the discussion, again, I encourage questions in the form of the note cards or I actually encourage even more so the use of the microphones. I think that just makes it more interactive. So, let me just turn it over to Brian and we will kick it off.

MR. KNAPP: Good afternoon. I hope everybody is alive and awake after lunch. I will talk for about 10 or 15 minutes just trying to lay the foundation for location-based services. That foundation has serious implications for the regulatory and privacy best practices regime. So, we thought it was important to sort of kick off

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in that manner.

So, the agenda, we will go through some examples of location-based services and content, talk a little bit about Loopt itself, location-enhanced advertisements, and then we will jump into the fun part, which is the landscape of location technologies today.

Lots of acronyms. You are not going to be quizzed later, so you can go on Wikipedia and check it out, and then we will also talk a little bit more specifically about specific types of core location technologies.

So, what is available and what is coming? I think it is a very exciting time for the location-based services market. A number of things have converged such as handset capabilities, application service providers, and I think consumer demand to make this finally be the time of the location-based service. What can be location-enhanced, if you will? It is not necessarily just services that have location at their core, but any kind of information, content, news or service that benefits and benefits the consumer by being location-enhanced.

So, for example, Google mobile maps is a good one.

It will know what city you are in automatically as you start searching around on your map. Navigation has been out for a while. People like to tag their photos on Flickr to give

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a sense of location when they are out at a favorite event or somebody's place or they are out sightseeing.

When you talk about mobile coupons, everybody likes to use that horrible Starbucks example. I prefer movie tickets. So, you get off at 4:00 or 5:00, maybe Loews says, hey, there is this movie playing at 7:00 in your area and here is a dollar off on your movie ticket.

Again, family finder and fleet tracking have also been around for a while. All the major carriers offer those, including Sprint, Nextel and Verizon. There are some exciting things coming in terms of games and interactive playing as well.

Loopt is more commonly known as a family finder. We have branded ourself as your social compass. And what Loopt is intended to do is a next generation communications application that allows you to connect, share and explore with your friends and family around you. We launched on Boost Mobile in September 2006. We have been available on the Sprint Nextel network for about a year, and we have recently announced a partnership with Verizon Wireless as well. We have plans for off-deck versions of our application as well on the BlackBerry and the iPhone.

The next couple of slides will show you sort of what the Loopt environment is like. Basically, it is an

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application on your phone, right now it is a Java or a Brew application. That does not really matter, but it does matter. It depends on what kind of handset you are on. And it shows you what is happening with your friends, what they are broadcasting, what they are up to on a map. It does use live location, automatically updated in the background.

That is important because the paradigm for friend finders that came before Loopt had it a little backwards.

You had to log on and send your location to your friends.

Well, your friends want to know your location when they are ready to hang out, when they are ready to see what you are up to. Otherwise, it was not a whole lot better than text messaging. It would kind of be like your MySpace profile only being available when you happen to be logged onto MySpace.

So, while we do automatically update your location in the background, obviously that sharing of location is completely within your control. It is only shared with friends in your network of friends that you have accepted and opted in to share your location with. You can turn your location on and off at any time. You can block certain friends and you can even set your location manually, which is important for those of us who sometimes do not like our friends and family to know the places we go hang out.

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It is important for a more serious reason as well, actually, and that is the unwitting use case, or the stalking case. So, if someone is being forced to use an application like Loopt in a stalking situation, they can put their location on manual, spoof their location for a moment in time and the victim can, at that time, move to safety.

The next couple of slides will just show you again sort of Loopt in action. Your favorite band is playing, you can look at your Loopt friends on the application, group message them and show them where the band is playing.

Location is the essence of mobility. It is what makes mobile devices different from all the rest. So, we think at the center of that mobile experience is your location and, again, broadcasting that location to friends and family and then using it to find things to do with those folks that you do connect with.

And, again, just another slide again showing a little bit about the environment. You will see we will be in Nob Hill, San Francisco there, rocking out to the band.

You can take a picture of the band that you are playing and send a note out to your friends, broadcast it in your blog. We have a Facebook application where you can distribute that information as well. We plan to move toward allowing our customers to distribute their Loopt geo blogs

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and in broadcasts in more and more places around the web.

Location has advertisements. So, Loopt announced a partnership with CBS Mobile Interactive. The idea here is that consumers benefit from location-enhanced advertisements. Advertisers obviously benefit and so do the publishers and ad networks that are selling those ads.

This is just one example, you might be surfing on your mobile device, go to CBS Sports Mobile and see a location-enhanced advertisement that is contextually relevant based on your time of day and your location. So, that is sort of the fun stuff, all the applications and information that can be location-enhanced and then the advertisements that would go along with them.

So, the question is how is this accomplished now and how is it going to be accomplished as we move forward?

There is a number of both synergistic but competing location technologies out there today. We will go through at a very high level some of the specific attributes of each one. These have been driven by regulatory requirements, such as E-911, by market needs, and it has now created a fairly complex set of standards and proprietary approaches and potentially different privacy regimes, and that is why it is important to talk about the specifics around these technologies.

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Again, we will go through all of these in a little bit greater detail, and particularly, on this lovely side.

So, it is not quite as scary as it looks. There are five main ways of sourcing location. The first two use a fairly common technique and what we think we will see is the most common technique that is out there. There are either base stations for WiFi internet access or to make phone calls.

Those base stations, obviously, they are pretty well stuck in the ground. So, they have a location that you are able to determine. You can collect the IDs of those base stations or WiFi access points along with their location into a database.

What you would then need to find out the location of a device is for that device to simply tell you which WiFi base stations or cell towers it is near. What are the approximate signal strengths between that device and those towers? So, you can see again, as you move around -- so, if you are on your laptop right now and you bring up a bunch of wireless networks, WiFi access points, those are all grounded in a certain location. You have a certain signal strength on your computer vis-a-vis each one of those wireless access points.

Now, if your computer sends just that information out to a company that has a database and WiFi access points

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in its location, it is able to create a fairly accurate determination of your location. I will talk a little more specifically about each one of these, but just to run through it, it says WiFi Mac address approach probably covers about less than 2 or 3 percent of the market today, but it is growing and it is growing quickly.

iPhone is probably the biggest example. It is not a method connected at all to wireless carriers and the necessary databases to make it work have been collected by private companies, such as Google and Sky Hook. Relatively high accuracy. Cell ID address, approximately 5 or 6 percent coverage of the market right now. Some are in BlackBerry, some Windows mobile devices, some Sony Ericssons, et cetera.

Traditionally, these cell ID databases, again, the ID and the location of the cell towers that make your phone work have been managed by wireless carriers, but, again, Google and some other companies have now collected and maintained this information independently. Google Mobile My Maps is probably the best example of this kind of location determination and service.

Now, if you take these first two and if you look at an iPhone, it has both WiFi access to get on the internet and it can make phone calls so it has a cell ID approach.

Using a hybrid of these, you can create a very accurate

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location on the iPhone without any wireless carrier involvement. There is also a growing number of Nokia Symbian phones that are AGPS enabled and that has been provided by Nokia itself.

This middle row here is an example of wireless carrier network-based approaches. It requires information coming off the wireless carrier network to create a location determination. E-OTD is not used in the U.S. TDOA is what the GSM-based carriers have used to comply with E-911. That is why you also see debate, these different technologies in the E-911 space in terms of what should be the exact accuracy, because depending on which technology the specific carrier is using, that greatly affects their ability to precisely locate a device at a given time.

AGPS probably has the broadest coverage, 45 to 50 percent range. That is assisted GPS. That is all the A means there. It is in the U.S. primarily on what are known as CDMA-based carriers, Sprint-Nextel, Verizon Wireless, Nextel iDEN. It is one of the most accurate approaches and one of the least taxing on the network.

I think I have to keep moving through here. Nobody is waving me off quite yet though. I will skip this slide, but it just shows a very high level overview of what we were just talking about. The device is talking back and forth

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to a database. It, again, has the geographic location of certain base stations or towers. The device is telling it what it is seeing around it, which ones it is near and its approximate signal strength, vis-a-vis, each one.

So, the WiFi app-based method, again, iPhone is a good example. I want to mention iPod is a good example as well. So, my iTouch cannot make phone calls. It can be located using this method. So, we are not just talking about phones any more. We are talking about any type of mobile device with WiFi or Internet access.

Again, private entities have collected these WiMac Mac addressed databases. Sky Hook is probably the best example, and they claimed to have mapped signals of over 70 percent of the U.S. with more than 40 million access points around the world. And Sky Hook, in fact, just made an announcement today, they are going to have a developer program where they are going to let developers of mobile apps use their location determination technology to create location-enhanced content and advertisements.

We talked a little bit about all these and, again, the cell ID address, in and of itself, not particularly accurate. It also, and we will talk about this in the next slide, can be part of the assist in the AGPS equation. It is a similar prose to WiFi. Again, it is a database, knows

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the IDs of the cell towers and their geographic location and uses that to determine the location of a device.

TDOA, again, I will just pull that one out. Very network intensive, needs network-based information to find the location of the device and, basically, has the reverse approach to the others because it asks the network to find out where the device is. It knows the device is connected to one base station and asks the base station towers around it to say, hey, are you seeing this device and how close is it to you? So, again, very network intensive and not necessarily the best approach for commercial LBS services.

Just two slides left. AGPS is probably the ideal location technology and, again, it is fairly widespread. One thing I did want to mention is, again, the A or the assist can be almost anything that helps the GPS chip get off to an efficient start. So, the GPS chip, the global positioning satellites, it is looking for satellites in the air. So, if it knows where to start, it can find satellites that are going to give it the best signal, the most precise location a lot quicker and it can also find a clean line into those satellites. So, the assist just needs to get the device within about 30 kilometers or so to help the GPS chip get started.

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Now, again, that assist data has traditionally been cell ID, but it could also be a WiFi Mac address. It could be user-generated. It could be the last known location fix.

That is all you would need to assist the GPS chip and get a very precise and clean location fix.

Then the last slide here is a couple of things about autonomous GPS. Many of the smart devices, in particular now, are coming with autonomous GPS. It does not rely on the cellular network. Usage costs are, therefore, dramatically decreased. There are actually, in some countries such as Europe, separate GPS POCs. You hook that onto your phone through a Bluetooth and then you have GPS on your phone, GPS services on your phone in that way. But without the assist, this does have some disadvantages, particularly if you are in an indoor environment or somewhere where it cannot get a good fix and it can be very power intensive.

I hope that was somewhat helpful and that you picked up some of it. I had to go pretty quickly, but thank you very much for your time.

(Applause.)

MR. QUARESIMA: Thank you, Brian. Now, we will turn it over to Mike Altschul.

MR. ALTSCHUL: Thank you very much. Just building

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on Brian's presentation, CTIA has filed, in the record of this workshop, a paper that has visited each of the major carriers' websites and provides information, if you are interested, on what the national wireless carriers are currently offering today in the way of location-based services, the broad range of applications. So, we have done the work. You do not have to. And we have the websites and links that you need.

Also attached to the paper is a set of the location-based service guidelines, the industry best practices that the Association has recently developed and our board has endorsed. And they are also available on the CTIA website at CTIA.org. This is actually our second attempt at developing a set of guidelines for location-based services.

For the communications lawyers in the room, back in 1999, Congress amended the Telecom Act and added location as one of the elements of a customer's service records that was afforded enhanced privacy protection under the section of the Communications Act known as Section 222 or the Customer Proprietary Network Information Rules.

For non-wired services, this means call detail records, who you call, when you call them from your wired phone. Those rules apply to wireless phones as well. And

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since 1999, the location of the user is covered by the Communications Act. But, interestingly enough, it turns out that Section 222, as well-meaning as it was at the time, gives the responsibility to the account holder, not the user. And, as Brian described, many of the applications that we have seen deployed most successfully it is really the user who has the most interest and should have the most control over the use of their location information.

Not only that, it is not just carriers that are providing location-based service applications today. Google through their Google Maps application, OnStar through the GPS capability of the automobile, and others are able to provide location-based services without relying on the carrier or the carrier's network for that information. And, of course, carriers can provide a user's location information, provide it to a third party location-based applications provider and, again, come within an unclear area of the statute.

So, when we set out to develop our best practices this time around, we wanted to come up with a uniform set of rules so customers did not have to hire a communications lawyer to determine whether or not their iPhone happened to be accessing a network using the WiFi interface or the AT&T commercial spectrum interface. So, the rules actually might

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be different depending on which of the radios in the one device were being used. We wanted a uniform set of requirements and expectations so customers could be comfortable that their privacy would be protected and the use would be within their control and understanding, and in that way, help ensure the good deployment and rapid take-up of these services.

So, the focus of our standards is on the location-based service user whose privacy is most at risk if the location information is misused. The CTIA guidelines, however, also recognize that there are circumstances like child safety, like an employer who provides employees with phones, where the account holder rather than the user is the appropriate person who should decide whether location-based service information should be used or disclosed to third parties.

So, we started, as everybody who comes to these workshops should start, with the Federal Trade Commission's own privacy policies. And, of course, the two pillars of internet privacy rules the Federal Trade Commission has been developing for over a decade now are user notice and consent.

And those are the pillars that our guidelines are built upon as well.

So, the first element of any set of best practices in this area is that the location-based service providers

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must inform users about how the location information will be used, disclosed and protected. And it has to be done clearly, in clear language and the like so that a user can make an informed decision whether or not to authorize disclosure of their location or to use the location-based service.

Anticipating some questions, our guidelines do not dictate the form, placement or manner of delivery of the notices or the content of the notices. But we draw on the guidance from prior FTC actions that the disclosures need to be understandable, in plain language, not misleading, all the usual touchstones here.

Second, once the disclosure has been made, the user has to consent to use a location-based service or authorize the disclosure of information. And in addition to being able to invoke or authorize the use, the user must have the ability to revoke any such authorization. Here again, the consent may vary with the type of service. The consent may be implicit, it may be included in the user's terms and conditions, it can be provided electronically as one of the screens in invoking a service through a subscription, whatever. But in all cases, the location-based service provider has the burden of obtaining informed consent before

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initiating or using location-based services.

We were at the development of these best practices for quite some time, more than a year, and we had started out by taking use cases of each of the applications that we were aware of. It turned out we were getting farther and farther from ever finishing this project because just as we had wrapped up one use case, it turned out two or three other totally different and new applications not only had been proposed or announced, but actually deployed in the marketplace and we were finding ourselves falling farther and farther behind the real world.

So, our guidelines really accept the fact that this is both a nascent industry, it is an industry that is deployed in providing a lot of very good and attractive location-based services, but try to balance that with the need for flexibility and to establish the high level principles and responsibilities all location-based service providers have to build into their service offering.

So, in addition to the two pillars or key elements of notice and consent, we have also drawn from prior FTC learning in this area to ensure that anyone providing a location-based service recognizes the need, they have to be responsible for maintaining the security of a user's location information. You do not want it to be hacked or displayed

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inadvertently to anyone other than who the user has given consent to.

There has always been an issue on retention and storage of this information, sort of a first cousin of security. Again, before going off into this business, location-based service providers need to think through and develop business practices for retaining this information only as long as they need it for the service the user has actually authorized.

We are building in a basis for reporting any kind of abuses and complaints. At the moment, we are interested in hearing about all of this, so we can get smarter and refine the process and, of course, this is not very surprising, everybody needs to comply with all sorts of applicable laws, particularly laws that apply to children and as well as providing access to law enforcement when they have appropriate court orders and process for location information.

This is the last slide just by coincidence. The Association has undertaken an effort. This is part of it.

But our websites and outreach to other groups are important parts as well, to educate both our own industry and developers about these guidelines, but also the public and end users.

And we have a compliance procedure where we encourage all

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the location-based services that reflect and have incorporated these guidelines to promote that fact.

Here is the website information for actually downloading a copy of the best practices. www.CTIA.org will get you where you want and you can just type in location best practices if you do not want to copy the full URL or you can email me. I have a brand new and great email address, mike@CTIA.org. So, thank you very much.

(Applause.)

MR. QUARESIMA: All right, thank you, Mike. Now, I will turn it over to Alissa.

MS. COOPER: Hi, I am Alissa Cooper. I am the Chief Computer Scientist at the Center for Democracy and Technology. I know a number of lawyers who like to play technologists on occasion. I am a technologist who is going to play lawyer today.

CDT is a 501(C)(3) non-profit public policy organization dedicated to promoting democratic values and protecting Constitutional liberties on the open internet, and that includes the mobile internet and other mobile media.

We have a long involvement with privacy issues and with wireless issues dating back to the mid-nineties when we worked on the Communications Assistance to Law Enforcement Act, also known as CALEA.

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We have been heavily involved in debates about government access to wireless information and on commercial wireless privacy issues at the FCC and in other venues. We have also been heavily involved in recent work on behavioral advertising, most recently here at the FTC with the town hall meeting that was held in November and comments on the proposed principles that the staff put out following the town hall.

In our comments to the FTC, we actually included location information in our sensitive data category. So, we thought that location information deserved some special protection beyond what other kinds of information get in the behavioral advertising context. And part of the reasoning behind that is because we do feel that location information is unique in a number of ways. It can be collected all the time and everywhere, so unlike when you are surfing the web, you have to go to a website in order for the information about that site visit to be collected. You have to make a phone call in order for information about that call on a landline to be collected.

But your location information is often being collected from your device all the time and you are usually carrying it with you. So, it is ubiquitous in that sense.

Location information can also reveal potentially sensitive destinations like medical clinics and government

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buildings. It can be used for physical tracking, and Brian alluded to this, as did the Commissioner this morning, when he talked about big brother and ex-boyfriend. Location information can allow someone else to actually know where you are, whether it is the government or some sort of stalking situation.

Finally, location information can defy user's expectations. I think when a lot of people are walking down the street and they walk by the coffee shop, they do not necessarily expect an ad for a latte to pop up on their phone.

Even though their phone changes time zones when they change time zones, they do not necessarily understand that it is being used as a location tracking device or that it could be used that way.

A recent study out of the Samuelson Clinic Berkeley, they surveyed approximately 1,000 people and 35 percent of them disagreed with the statement that carrying a cell phone could give law enforcement the ability to track them. So, people do not quite understand that your cell phone or your other mobile device is beaming your location information.

As far as existing laws related to location information, Michael touched on the CPNI rules. I think the key there is that they only apply to telecommunications

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carriers. As he said and as Brian said, there are many, many other entities coming into this space right now.

The other law that we have in this space is the Anti-Pretexting Law that Congress passed in 2006, which prohibits the sale or transfer of the same kinds of information that the CPNI rules cover. And what the anti-pre-texting law did was it added IP-enabled voice services into the mix. So, while the CPNI rules cover telecommunications carriers, the anti-pretexting law covers telecommunications carriers and IP-enabled voice carriers, but it only applies to the sale or transfer of information, including location information. It does not apply to use and disclosure the way that the CPNI rules do. So, you start to see that there is kind of this patchwork, there are different entities covered by the different laws, and sometimes they apply to use and sometimes they apply to sale.

But there is no single standard that applies to all the services and companies that are collecting, using or disclosing location information. From a consumer prospective, that lack of clarity can be confusing. I doubt, in my mind, as to when you are using a service on your device whether you know which provider is providing it to you, if it is an applications provider, if it is a telecommunications

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carrier, and even bigger doubt whether you know which of those entities are covered by which regulations and which ones are held under the law to provide you higher protection and which ones are not. So, it is a little bit of a confusing state for consumers.

Similarly, with respect to government access to location information, there is no explicit standard that explains what the government needs to do in order to get access to either real-time or historical location information. There is a statute that says what they cannot use. So, CALEA talks about the fact that the government cannot use an order that authorizes a pen register or a trap and trace. Those are the devices used for wire taps to get phone numbers off of the wire. So, that kind of order is not sufficient for the government to be able to get access to location information.

But there is no statute that says what is sufficient or what the government needs to do in order to get access, whether it be the super warrant which is required for full-on wiretaps or a more generalized warrant which would require the government to prove probable cause of criminality before a judge in order to get access to the information or something else. There just is not a standard.

There have been close to two dozen Federal

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magistrate judges who have ruled on this exact question of what the government needs to do in order to get access to location information, and a significant majority have ruled that a warrant is required for access to real-time data, but some have disagreed with that. There is also a significant disagreement about whether real-time information, so prospectively tracking someone, and historical information should be held to different standards or not.

Now, based on standards for other kinds of government surveillance based on the fact that new technologies allow surveillance in ways that were completely unimagined just a decade or two ago, we believe that a probable cause warrant is the right standard for both real-time and historical tracking data. And, again, if you ask people going back to the study just out of the Samuelson Clinic, 73 percent of the people who they surveyed thought that a warrant where the government has to prove to a judge probable cause of criminality is the right standard.

Again, here I think the goal should be building trust in these kinds of applications. There are so many new applications on the horizon. Brian showed the chart of six different categories, just broad categories of ways that location information can be used, and I think a clearer framework would allow consumers a more trusting springboard

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in order to start using some of these applications.

MR. QUARESIMA: Thank you, Alissa. Let me turn it over to Tony.

MR. BERNARD: Thanks, Rick. I would like to first say thank you to the FTC for establishing this panel and for allowing us the opportunity to come speak and for all of you for your interest in location services.

Useful Networks is a Denver based start-up founded in July 2006 by two wireless and location pioneers, Brian Levin and David Hose. We were formed for the purpose of building applications for and providing aggregation services to the consumer location market.

A lot of people have questions about the role of an aggregator. I think you heard a bit this morning about what SMS aggregators do. As we think about the role of an aggregator, we have two key stakeholders. One is a wireless operator who is not going to let a variety of third parties connect to their network infrastructure in an untrusted manner, and even if they were willing to do that, they do not have the resources to properly manage the emerging third parties who are going to add location to their applications.

So, as you see a migration from location as a utility and things like Chaperone and Navigator to location

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as a feature, whether for usability for added functionality, like a friend finder for a social network, companies will not want to become location experts. They will depend on companies like Useful Networks to help them navigate the myriad of issues. I think you heard about a few, one from Brian in terms of all the different location technologies that are out there. Companies need help understanding how to use those, and operators need help managing the companies who do want to use those.

Beyond the technology, the key from an aggregation perspective here, some of the points that Alissa was bringing up in terms of helping third parties deal with the different rules and regulations in this environment. So, Useful Networks developed an aggregation platform with a platform-based policy manager that I will talk about a bit more here in a second.

In terms of market segments, we are focused on social networks, gaming and entertainment, mobile search as well as mobile advertising, which we see as four distinct opportunities from the consumer's perspective of how location could be used and should be controlled.

In terms of the company experience, we have been operating a cross carrier friend finder that we call SNIFF, the Social Network Integrated Friend Finder. We have been

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operating with Scandinavian operators and recently launched it in the U.K. and expect to bring that service here to the United States in the third and fourth quarter of this year.

SNIFF answers the simple question, where are you in a fun and simple way. We actually allow people to start a SNIFF with a text message. So, assuming you have established a location relationship with a close friend, we call that a location-ship. You can send a text message to the short code, SNIFF, and say SNIFF Peder. And assuming Peder has given me permission to and is willing to be found at that time, I will get Peder's location returned via SMS and then I can see it on a map and those things of things.

So, we focused on making the service simple and intuitive to use. I believe certainly with location services they are complex enough that if you can relate it to things people are used to doing today, and everybody is comfortable with sending a text message, that is a nice way to educate people about the ease of use of such a service.

In addition to the mobile experience, we have a companion Facebook application, understanding there may be different points in time where people want to locate their friends or manage the rules by which they locate their friends

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or allow themselves to be located.

As I mentioned, the service itself is predicated on permission and privacy at its very foundation. I talked generally about our policy manager, the policy manager is a server-based application that our SNIFF application ties into for a multi-tiered privacy model that first starts with rules and regulations and legal requirements that are just standard for the geography in which that service is being offered.

A layer on top of that is the operator specific layer. So, for example, operator A may be less restrictive than operator B where operator B may say, well, I am not going to give people enough rope to hang themselves even if they understand the service. So, for example, I am going to require them to be notified every time they are located, whether they want to be or not.

Then, thirdly and most importantly, is the end user control over that information.

So, it is based on three core premises, I believe most of which Mike hit on earlier, which is, first, there has to be information provided to the user about how that location information will be used, how it will be stored and how it will be shared. On top of that, the user has to be able to provide that informed consent and those consent

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records must be stored and maintained in a very auditable way in case there is ever an issue.

Thirdly, the user has to have full control over how that information is going to be used whether it is blocking a particular friend, going globally invisible if they do not just want to be found or toggling things like notifications to be sent for every time they are located by a given individual. We think with a multi-tiered model there, it allows for flexibility as the rules evolve over time while at the same time giving the user full control over how the application is used.

Finally, I mentioned some other segments that Useful Networks is involved in. We first made our initial push with SNIFF, but certainly policies with respect to how location information will be used are critically important in a self-locate environment, an example of that would be a mobile search application allowing your location to be used in mobile advertising and for more fun applications like location aware games.

So, that is Useful Networks in a nutshell. Thanks for your time.

MR. QUARESIMA: Thank you, Tony. I will turn it to Tim.

MR. LORDAN: I could not help notice that Peder

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looked a little uncomfortable when the suggestion was that he get SNIFFed.

(Laughter.)

MR. MAGEE: Very uncomfortable.

MR. LORDAN: Yeah. Where do these terms come from, SNIFF and poke and all these different things? It is making me a little squeamish.

My name is Tim Lordan, and I am with the Internet Education Foundation. We had to do two projects, one of which is the Congressional Internet Caucus Advisory Committee. We do Congressional briefings on a variety of topics, on location information, location advertising, location safety.

We have done like six events over the past -- since 2001 on those issues in Congress. And, probably rightfully so, Congress kind of gave birth to this whole location thing with the E-911 legislation that Mike had mentioned. I think they will have a fair amount of responsibility for putting trackable devices in everybody's pocket in America. So, I think they kind of want to know what is happening there.

The other project we do is Get Net Wise. We do a lot of education on helping parents understand how to keep their kids safe when they are using the Internet and I guess now online services and wireless services and also adults on how to protect their privacy and things like that from

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a consumer education perspective. So, we come at it from two angles.

I really approach this thing mostly from the child safety angle. When we were talking about having children with devices that could be tracked at any given time, it just really freaked a lot of us out, and we started looking at this issue very, very closely, recognizing that this marketplace could literally explode, and who are going to be the first adopters? Kids. We saw earlier data that just the genie is out of the bottle. Kids, teens have mobile devices.

I feel like Alissa pretty much covered everything I was going say, so I have very little left in my notes to talk about. I wish I had gone earlier in the conversation because I think we really need to step back on what is location information. I am very glad we are not having this conversation at the FCC because, at the FCC, this conversation is about a section and some kind of title that some bureaucrat has jurisdiction over.

Why are we talking about these devices at the Federal Trade Commission? That is a really good question.

I am glad we are because location is not some kind of section.

It is not some kind of statute. It is not something we can define very clearly. There is a lot of ways to look at

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location. Is it CPNI information? Maybe. The European Union looks at it, as well, they throw it into a classification of what data gets retained under the European Data Retention Directive. It turns out that who you called, who called you, and where you were when you made the mobile call, for up to two years. It is stunning that they kind of just throw that into their regulatory classification without much thought.

Let me just tell you the visceral concerns that people have with location information as a data set. We did a poll in January of this year and we asked people the interesting question of how they feel about their privacy, questions related to social networking, what if somebody put a photo of you in your bathing suit up on their social networking page, what if somebody posted a photo of you visibly drunk on a social networking page? And then we also asked them, and we were not sure if they would understand what we were talking about in the poll, what if someone disclosed your geo location information? Drunk photo, like 9 percent, 10 percent. Bathing suit, and it depends on the demographic on the bathing suit, by the way, [laughter] people between like 35 and 55 are a little more concerned about the bathing suit posting thing. But 10 percent, 11 percent. Geo location information, 50 percent, blew away everything

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else, drunk photos, bathing suits, you name it. Geo location information tracked off the charts.

So, people have visceral concerns about people knowing where they are as they move on the face of the planet.

I am not sure I can say why that is, I am pretty sure that Axiom knows where I live and where I go to work and pretty much those are the only two places I ever really go. But, then again, I think that the Federal Trade Commission should look at this issue, look at it broadly, take a step back, do not look at it as some kind of regulatory classification or some kind of section in some kind of code, but look at what location means to people and what their expectations are. And it is not going to be easy, it is a mess.

We had a whole conference on this last year, I guess around this time, on location information. We did not even scratch the surface. And there is a lot of ways of looking at it. Alissa, again, covered a lot of these things, but there is the temporal aspect of it. Is it real-time, where am I right now, or is it where was I like ten minutes ago based on what I said on my Twitter page? Or legacy, where was I last week or over the past two years as the European Union would retain.

The other question is granularity. Is it zip code?

We do a lot of location-based advertising and location-based

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stuff based on zip code. That is pretty traditional in marketing.

Is it IP resolving, which is much broader, you know, the greater Washington, D.C. area? And does it go down to my block? Does it go down to 300 meters? Does it go down to two meters? Like how granular? So, we need to look at the granular aspect of it.

This is the big thing that I think Mike talked a lot about is who is holding the information, who is holding the location information as a data set? Again, it is not some kind of section in a title. Location information is like a bouncing ball. There are a lot of people that are going to be holding that information as it bounces around and the consumer is going to have to understand, at any given time, who is holding that bouncing ball.

So, is it third parties, is it LBS providers, is it carriers, is it aggregators like you? Is it your peers?

I can exchange my information with my peers, my location information with my peers. Dodge Ball, I do not know what is happening with Dodge Ball, but self-attestation, saying this is where I am at any given time, and databases can pull that up and log that and provide you services. That has nothing to do with this device and the network that it is on. It is just people communicating with one another.

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So, I am glad that the Federal Trade Commission is looking at this issue. I am certainly glad that the FCC is working on this issue. But I think we all need to step back and look at it holistically, not as some kind of title.

Just as a plug, I did not really talk about my organization that much, but we are holding, in conjunction with Berkeley Balt Law School and George Washington University Law School, we are hosting the Second Annual Privacy Location and Safety Summit, and I would say that the Federal Trade Commission, while they are concerned about the advertising aspects of this stuff, safety issues they really need to pay attention to.

MR. QUARESIMA: Great. Thank you, Tim. We will now turn it over to Fran.

MS. MAIER: So, great fun to be last because I think everything has already been said. But thank you very much. I appreciate being here.

My name is Fran Maier. I am Executive Director of TRUSTe. TRUSTe is the leading privacy trust mark on the internet. We are on about 2,500 different websites, and some of them have been mentioned here today. Loopt, Yahoo!, Microsoft, Metro PCS, Verizon, AT&T, Apple are some of our clients who play, in some way, in this whole mobile space.

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We got involved in this in 2004. We issued, I think a little bit ahead of our time, some mobile guidelines. In fact, you will find them on the information board. They were motivated because, at that point in time, it was starting.

We were starting to see the applications that Loopt is using, I think Useful is looking at in terms of friend find a friend.

AT&T Wireless was rightfully concerned that the friend find a friend feature really needed to have some level of guidance and permissions and consent that, at that point, were not readily available or even thought through in any sort of detail.

From the very beginning when the group that put together these mobile guidelines got together, the location-based issues came up to the top. Why is that? I think, Tim, you did a good job talking about it, but these are things that are essential to us as individuals and humans.

Where is our family, where is our friends, where is our lovers, where is our employers or can any of those groups find me or can I find them? As a mom, where are my kids?

Do I know I am I being tracked? And, clearly, for some people, there is issues of safety, law enforcement, marketing and so on. So, the location issues are very ripe for abuse as well as the benefit that I think we can all see and enjoy.

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Over the last few months, I certainly enjoy the GPS ability to find out where I am going, and where some of my friends might be or my kids.

So, what has changed since 2004? Obviously, I think the phone has become much more personalized, much more attached to us. Many more applications. I think, and this has been mentioned already, who is in charge of the consent and notice requirements is confusing. On an iPhone, for example, is it Apple, is it AT&T? Is it Google for the mapping? Is it the email provider or is it the third party application providers that are like Loopt or some of the other ones that might be on that phone in any point in time?

We could sit here and debate it, but from the consumer standpoint they just want to know, they just want to have control. They just want to be able to exercise control and choice over those devices.

So, I am going to stop in just a second, but some of the things that come to TRUSTe's point of view in terms of consumer experience here is they do need that control.

They need some way to turn things on and off or to give consent or to change their mind about that consent, and that has got to be easy and fairly transparent and probably not buried, which leads to the second thing, the form factor using these devices can be challenging.

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Now, I think it is getting better. Obviously, new phones with larger screens are giving consumers more ways of interacting, and I think there is probably some innovative ways. I would argue we would all be better off if we standardized some of those notice and consent approaches because that way the consumer does not have to re-learn every time they get a new phone or go to a new website or use a new application how to exercise their choice. So, there might be some real benefits to some overall standardization while still keeping the branding and other experience.

The children issue is a big one. Totally agree.

As well as the stalker issue. So, there are use cases that we all can think of right now, there is probably some that we cannot think of right now that can be equally scary.

Let's not forget the importance of just general fair information practices to guide our way here. Make sure that we do have regimes for notice, consent, redress, security and storage, and move forward from there.

In terms of TRUSTe's interest, at this point, we are exploring whether or not there needs to be a special mobile seal. Consumers do recognize TRUSTe, they might recognize and feel some comfort and feel also that they can make a complaint if they see the TRUSTe seal. We absolutely recognize that a mobile environment is different in terms

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of the consent standard and the form factor standards and things like that. We are interested in talking to anybody about their interest in that. I will leave it there. Thank you

MR. QUARESIMA: Thank you, Fran. I think we are now ready to open it up for discussion, so if anybody has questions, please pass them forward or go to the mic.

I am going to begin it first by getting to, I think, sort of the core issue. We have talked a lot in the various presentations about notice, consent, but sort of getting to the crux of it, as Tim pointed out, this is a big deal to a lot of people. So, the question is who is the appropriate party to get consent and how do you do it?

Let me just sort of start throwing that out to the panel. Let me begin with Brian on that because the issue of how you get consent, whether it is in real-time or whether you can do it in a form notice at the beginning of a contract, I think, is a very big issue.

MR. KNAPP: I think the form factor issue needs to be worked through, but from the consumer perspective, they are going to be in privity with, they are going to be interacting with a certain brand. In our mind, that is who it makes sense for them to get the consent with, whether that is an express "informed consent," whether that is an implied

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consent because they opened a navigation application.

Obviously, it is going to be based on some kind of geo fix.

So, I think from the user's perspective, is it going to be the brands that they are interacting with.

Now, it has been shown on the web that that is a complicated proposition when you have third parties, such as ad networks delivering ads, et cetera, and passively collecting information. I do not think we have completely answered that question either. Those same kind of challenges are going to come on the mobile web and, again, the form factor, at least right now, is also a little bit challenging.

I would caution folks, opt-in seems to be being thrown around as a silver bullet. I think as the gentleman from the Florida State Attorney General showed today, you can opt in or most users will opt in to some pretty scary stuff. We all know they do not read privacy notices, they do not page through terms and conditions. So, I think that in addition to opt-in, while I would encourage folks not to see that as a silver bullet here or anywhere else for that matter, but also think about what type of industry best practices in addition to or instead of that should be driven and a lot of that gets back to the debate in the behavioral space.

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So, what are the retention policies, are you keeping a location history, are you combining that location history with other PII? Are you combining it with other usage information? Then is it being resold to secondary providers?

So, those to me, frankly, are some of the more interesting areas that the industry needs to focus on as we provide these services.

MR. QUARESIMA: Mike, do you want to add to that?

MR. ALTSCHUL: Well, I wanted to say that when we gave this some thought, we thought that the consent most appropriately belongs with the person whose privacy is most at risk if it is used or misused with the exceptions I mentioned. Users who are under 18, their parents, guardians, whatever are the ones that have a responsibility for their consent and for those employers who provide employees with wireless devices on some kind of employer account, we recognize that the employer also has an interest in providing the content.

MR. MAGEE: Let me just jump in, Mike. That is a good segue for a question we got from the audience. The question is, even in cases where an employer pays for a mobile phone, shouldn't personal privacy issues require that the end user consent to location information being revealed?

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For example, should an employer be able to see employees' movements after hours such as to clinics or voting places?

MR. ALTSCHUL: I think it is correct that we need flexibility in the rules. Certainly, those employers who subscribe to one of these services for dispatch purposes to be able to find the employee who is closest to a particular pick-up or a point have a legitimate need to subscribe and give consent, but that consent is for the business purposes.

It may be that with sufficient information and disclosure, those employees who want to maintain privacy will turn their devices off or have a personal device as many government employees have where the government provides a wireless device for official uses and employees have their own phones for personal uses.

MS. COOPER: I just want to second something that Brian said and sort of add a little bit of a different twist to it. I think as far as mobile marketing goes, the industry is in a really good position and, as he said, we have heard about opt-in all day, and I think that comes largely a lot from the SMS context and issues where you are being billed for whatever it is that you are receiving.

It is a good starting point, but as he said there is such a thing as a bad opt-in and there is also such a thing

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as a good opt-out. I think the situations when you are dealing -- it is true. The situations when you are dealing with location information and you are thinking about doing an opt-out are extremely limited. I think if you are storing the information, if you are sharing it with any other party, if there is no visible indicator that the user is being tracked, if there is no way for them to turn it off, and maybe in a few other situations, it absolutely requires informed consent.

But especially with such a small device, you have to caution against having a really bad opt-in, which in some cases could be worse than having a really robust opt-out where the user is completely informed and can get out of it at any time.

MR. QUARESIMA: Fran, I think you had something you wanted to say.

MS. MAIER: Yes, thank you. So, that whole approach of opt-in, opt-out I think is a good way to start to think that we need to look at some of these issues and scale what is required either in terms of notice or consent to the potential harm that could happen. So, on one end of the scale, you can look at location advertising on a browser on a phone that might be pinged you to or tied to your location as being fairly harmless. Now, there probably ought to be

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some notice. There might be an opt-out if people feel that that gets too creepy or too close to comfort.

On the other hand, when you are talking about the friend thing, you are really talking about two opt-ins, one for the person initiating and one for the person who is connecting.

So, I think what we have to think about is as we go and look at the different use cases, what is the right level of consent and notice that is appropriate? We have used this kind of approach in developing the TRUSTe download guidelines where we developed guideline for downloadable software. It seemed to make sense and be more palatable to both industry as well as reasonable from the consumer's standpoint.

MR. MAGEE: Fran, just to follow up a little bit on that, you mentioned earlier that TRUSTe is working on a possible mobile seal. What do you see is the most effective way to educate consumers about the potential risks that are associated with location-based services?

MS. MAIER: Well, unfortunately, it is the bad press story that always does tell consumers that they better be paying attention to it. Then, I think as responsible industry, we have to come back and give them some tools. So, that could be a seal, it could be some standard ways of

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delivering the notice and consent. So, again, I like the AG from Florida's presentation because there was some level of transparency and discipline in terms of how to deliver some of that pricing information and that opt-in information.

So, I think if we could move to some consistency.

I think there are things like reminders to tell consumers of what their status is, maybe for a given application service or for a given phone so that they are not out there for too long thinking they have something on when it was off or off when it was on, and I think the idea of just-in-time notice. So, when they do start to use a feature that perhaps they have not used in a while, they are given some notice or an opportunity to make a choice at that period of time. Just some of the ideas. I think there is a lot of work we all need to do.

MR. QUARESIMA: Let me follow up on that idea of sort of recurring notices or just-in-time notices just to circle back to the original point about whether sort of a form, terms of use at the beginning, is ever going to be really enough. Given also the small screen limitations of the mobile phone, is this recurring notice or just in time something that is essential to have?

MS. MAIER: I think it depends on how invasive the service is or how potentially harmful it is. It probably

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is not necessary for location-based advertising in my view.

MR. QUARESIMA: Tony?

MR. BERNARD: To build on that, for our SNIFF application, there are different notices we provide after there has been consent provided. So, there is a text notification sent immediately upon consent being provided.

There is a reminder message sent within one week of the registration, and then there are monthly reminders that they have consented for their information to be used by a peer to make sure that user is informed on an ongoing basis. Because you are right, people can forget.

MR. QUARESIMA: Do the consumers usually opt in to this type of recurring message or -- opt in is probably the wrong word. Are they presented with a choice at the beginning of adopting the service to get these recurring things or is this just built into the system?

MR. BERNARD: So, the example I just mentioned is built into the system and it tends to be geography specific.

So, what I just mentioned are requirements we comply with in Scandinavia and the U.K., and we would expect to enforce the same thing here, if for no other reason to start responsibly. Then if the users are annoyed by those recurrent notifications, we can work with operators to cease them.

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Then the user also has the ability to select specifically if they want to be notified every time a friend locates them. So, that is a user-controlled option.

MR. KNAPP: Rick, I would just mention that we have seen a little bit of the tension ourselves between sending out enough reminders and annoying a fair amount of the user base. We also send out reminders for safety purposes as well, again to address this unwitting use case. So, all that to say whether it is an icon or SMSs cannot be dictated, needs to be approached from a product development, user experience perspective. You try to sort of thread that needle between a positive user experience and also responsible usage and trying to catch the appropriate safety cases. But we have definitely found a set of users who get annoyed and a set who appreciate it. So, that is not an easy thing to figure out.

MR. MAGEE: Okay. Just an open question to anyone. I will throw it out there, and please weigh in. Do you all have a sense about what consumers know or expect in this area, for instance, do they know -- or rather, I was somewhat surprised when on the last flight I took my phone, updated the time when I landed in a different time zone. I may not be typical of most savvy consumers. But is there a sense of the fact that having a phone can lead to tracking

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your location and other types of products?

MR. LORDAN: Well, I would be interested to hear any polling data that really gets at the heart of what people know about what types of information they are communicating with regard to their location as they move through their daily lives, whether it be their phone transmitting GPS or a cell phone triangulation, whether it be their metro pass telling what metro stops they are entering and exiting. I would be stunned if people were able to kind of keep it all together about what types of information they are sharing and not sharing.

I think the experience that we are seeing on social networking sites where people are making privacy controls to keep my photos away from Fran, share my wall with Tony, and things like that, I think there is -- people are going to reach a capacity in their ability to understand at any given moment as they are walking on the face of the earth what information they are giving out.

MS. MAIER: I would imagine it is also generational, with the younger group maybe expecting or not being surprised when they get tracked and found out and marketed to on a location basis, but other people being completely stunned and feeling all that is creepy.

MR. BERNARD: I would just add an anecdotal example

from which I drew an inference. We dropped our press release with respect to our SNIFF U.K. launch on March 31st, the day before CTIA. The two articles written in the London papers were both written on April 1st. Half the commenters that responded thought it was an April Fool's joke. So, there is a segment out there who cannot believe this technology exists. The other segment were the people that responded and said, well, yes, don't you know the government can track you even when your phone is off and it is still sending your location information regardless of what control you have.

So, to me, the reactions were polar opposites. But I do suspect there is a middle section, to Fran's point, that is a different age group that may be more cognizant of this kind of technology.

MR. ALTSCHUL: I was just going to point out I think that there is growing and quite widespread recognition at one level that location information is available from wireless devices, primarily because of the mandated 911 location capability and then some of these applications particularly with different demographics, younger people who use friend finders and so on.

I think part of the surprise is when somebody comes up with an application that no one had considered marrying a location capability with an existing application. It is

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the combination that creates sort of the shock that no one had consciously been aware and recalls consenting to the new use.

MR. QUARESIMA: Mike, I just have a follow-up question for you generally coming from the audience. Does CTIA or any self-reg program that you are aware of do any independent audits or publish the results of essentially the compliance with your guidelines?

MR. ALTSCHUL: Well, these are brand new and we are still getting the word out and finding out sort of the actual best practices that go with the best practices. So, we have not been doing it with respect to these guidelines.

With respect to some guidelines that are going to be talked about tomorrow afternoon, we do monitor, through a third party auditing firm, compliance with the Mobile Marketing Association's consumer best practices for opt-in, double opt-in, opting out of premium message campaigns. So, if you subscribe to a joke of the day text message service and that is a monthly subscription, there are certain industry best practices the Mobile Marketing Association has adopted, and the CTIA does audit each and every one of those short code based premium messages regularly and reports to carriers, and we are about to enhance it by reporting to the

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aggregators as well how each of the marketing programs complies with each of the elements of the MMA best practices.

MR. MAGEE: This is another question from the audience or I will incorporate it. We have heard a little bit about how the regulatory landscape in this area is somewhat fragmented. And I am wondering if maybe the industry representatives could talk about how they navigate this fragmented set-up, and also to incorporate the audience's question, do any of the panelists advocate additional legal requirements governing the use and delivery of location-based services?

MR. QUARESIMA: Brian.

MR. KNAPP: So, we spent quite a bit of time both with our carrier partners and independently analyzing the regulatory landscape. I am not sure that Alissa was suggesting this, but there is certainly a patchwork of regulation, and I would not suggest more regulation to fix the patchwork of regulation that tried to regulate this a while ago. I am not sure that is where we need to go, and I am also not sure that a lot of this does not already fall in within, for example, the FTC's purview.

I also think that we should encourage providers that are out there, if I do say so myself, that are taking positive and proactive approaches to privacy because I think

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that industry, in a lot of ways, can drive the way and, frankly, we are going to be ahead in terms of seeing what is next, and what is out there, and sort of what is coming from a consumer perspective.

I think Tim had a very good point in terms of how to look at location. We have to get out of the mind set that it is with a certain infrastructure provider or with a wireless carrier or a device provider, for example, and start thinking about it from the user's perspective and all the different ways that a location determination could be corrected.

Alissa touched on information request policies as well and whether that is unclear. We actually do not think it is unclear, and we have created information request policy, beyond referring calls to our carrier partners, that says that location, as used by Loopt, is content of a communication under ECPA. Therefore, a warrant is required to retrieve that, if someone wants to get our last location fix and we believe that any kind of prospective tracking requested by the government would, of course, require a Title 3 level warrant.

So, we have done this analysis, we have done it in conjunction with partners, such as CDT and EFF, and we are pretty confident in that overall position because we do

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know that one of the major concerns is government access to location information.

MS. COOPER: I certainly would not suggest worsening the patchwork that we have, but I would suggest that if we had in the U.S. a baseline comprehensive consumer privacy law that it could certainly address many of the issues that we have been talking about. It would be focused on data of all kinds. It would not specifically call out or except location information for any particular reason and, so, not just patchwork in this area but the overall patchwork that we have in the U.S. as far as privacy regulation goes, where we have a different law for every different sector and for your video rental records and your cable records and everything else. So, I think a baseline law would certainly help and not exacerbate the problem.

And as far as government access goes, I wish that the carriers could also say that all the call information was content and thus was covered under ECPA, but that is just not the case, and the government is routinely --

MR. QUARESIMA: We are going to probably... The conversation is going, so we are going to give this a little more time, but I also do want to give everybody a chance to talk, but I would like to ask them to keep their remarks brief because we still have another question from the audience.

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MS. COOPER: Well, can I just say the government is routinely requesting location information from carriers not using a warrant. So, I am glad that is the Loopt policy, but it is not the policy for everyone.

MR. ALTSCHUL: Well, I was just going to endorse the consensus at our end of the table that another patch on the patchwork is not a good approach. The industry, both carriers and non-carriers, I think has been moving carefully and responsibly. The guidelines, the fair information policies from the Federal Trade Commission are a good road map. The concern always in a rapidly developing area is the even with the best of intentions, things change and you get it wrong.

In 1999, as I mentioned, Congress thought they were getting it right and, yet, they talk about account holders rather than users. They talk about carriers and carriers only when more and more of these applications are not being provided by carriers. So, that is a risk that comes from legislating or coming up with rules before you really have a need to actually fix something that is broken.

MR. BERNARD: Briefly, to the original question, yes, as a provider, we absolutely experience fragmentation.

That is specifically how our rules engine has been designed, so that we can do that on a geography specific basis, and

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then change those over time because as soon as rules are made they evolve. I concur that there is not a need for additional regulation so long as we do this responsibly, and I think there are some emerging themes here around which the rules are ultimately going to be based.

MR. QUARESIMA: Fran?

MS. MAIER: Yeah, I concur with this side of the table that I think we do not want to see more regulation on top of the patchwork. But I would like to say self-regulation, obviously, industry cooperation could go a long way. In terms of a generalized privacy policy, what we keep on seeing with new technologies and new applications is new, distinct and different challenges that might not lend themselves readily to some baseline privacy law.

MR. LORDAN: And, from my perspective, with regard to the events that we have held on location privacy and location safety, I look at my RSVP list. I will have folks from the Federal Trade Commission, I will have a half a dozen folks from the Federal Trade Commission, I will have half a dozen folks from the Federal Communications Commission, I will have folks from the White House, folks from the Department of Justice and FBI. The reality is that there is going to be a lot of people needing to work together on this issue. I think with regard to rushing to create some

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blanket rule, I do not take positions on that.

All I do know is, again, it is kind of like a bouncing ball and we need to empower the user whose location is being shared. I am a little concerned when we say, well, let's just give an up-front notice and then everything is going to be okay. So, I think if we follow the bouncing ball and make sure at every step of the way the user is empowered with regard to their location information, looking at it holistically with everybody at the table.

MS. MAIER: Just to add, I also think we need to look at it globally. I know right now we are in the FTC and we are talking about what goes on in the United States. But more and more, all these issues are global issues. Mobile is really the device outside these borders and we are going to have to build systems that work everywhere.

MR. QUARESIMA: We have a question from the audience, too.

UNIDENTIFIED FEMALE: My question was about parental consent. You guys have mentioned that that would be a good idea. But how can you be sure that it is parents giving consent? Because kids are pretty savvy. I have a child who knows how to change her age to make sure she can get access to things, although we have talked about it.

(Laughter.)

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UNIDENTIFIED FEMALE: So, with all of this, and especially if kids are getting opt-ins all the time saying, do you want to opt in. A parent is not going to be there with the cell phone all the time saying, you can do this, you cannot do this. Is there a technology that can ensure that it is the parents who are actually saying, yes, my kid can do this?

MR. ALTSCHUL: The wireless carriers, when it is a carrier-supported service, I can only speak to those, actually do know who their account relationship is with. So, there is an account holder. So, if it is a family plan with four different phones, husband, wife and two kids, the carrier will know who the account holder is and will go through a validation process in taking calls or speaking to that person. That is part of the whole CPNI process and some of the more recent FCC rules. It is a bit of a blunt force instrument you can toggle on and toggle off these capabilities. But for parents who are concerned, they certainly can with the carriers deny users access to location-based services.

MR. LORDAN: With regard to your question, and it is a very good one, I mean, kids are technologically very savvy, sometimes parents may not feel like they are up to speed with their kids. What we do at Get Net Wise is we have

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the largest database of kind of video tutorials, kind of how to do things. I was hoping to get one up. I would point you to Verizon Wireless' parental controls, and I am not plugging Verizon Wireless, I am not being paid to do that.

But they actually have put in a really good system with regard to this. You can actually check, based on your kid's age, what services and what content they can access, and there is also a button on checking location-enabled services.

And that is very important. Parents have to start internalizing the fact that their devices may be trackable because kids, on different services, can consent to being tracked by one another. But, then again, outside of the carrier networking, outside of carrier controls, there is nothing stopping kids from texting to other people, I am at 14th and I.

MS. MAIER: Or taking a picture.

MR. LORDAN: Or taking a photo, right. So, this is a genie and it is way out of the bottle.

MR. QUARESIMA: I want to spend just a few minutes talking about location, specifically about location data in use for advertising purposes. So, let me throw this out and, Brian, maybe you could just sort of describe a little bit how location data is being used in advertising currently and where you foresee it going in the very near future.

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MR. KNAPP: So, I am not aware of any automatically geo targeted advertisements on mobile right now. As I mentioned, Sky Hook came out with an announcement today, and this has been talked about a lot, as sort of the concept, you are browsing the mobile web on your phone, and I actually think the more interesting case is information, content, weather, news, local search, those kinds of things being location-enhanced as well.

But, basically, what you would do is just pair one of the technologies we discussed before with an advertisement to create a very contextually relevant user experience. This kind of targeting is not new. So, that is another thing I would mention when we are analyzing location is let's keep it in the broader context of, for example, what is happening on the web today where your IP address has been collected for years and years and years and used to give an approximate geo location of yourself. So, I think the idea is if you picture a passive browser is surfing the mobile web, is there an opportunity whether it is a carrier, whether it is a platform provider, perhaps a publisher themselves, to add location to that mix. You are not sharing it with any other third parties, but you are delivering to the user contextually relevant advertisements.

Actually, I think Tim's idea to do a poll to get

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user understanding on this is good, but I think whether it is now or whether it is five years from now, people are going to expect their device to be able to locate itself. That is a different way to ask the question than do you want the government or other third parties to track you. But I think people are getting so used to smartphones and iPhones and BlackBerrys being intelligent on how they provide services, that I will think very quickly, again if it is not already there, that there is going to be an expectation that your device can locate itself, it knows where it is. It is smart, it is a smartphone. And then I think you layer on top of that that people expect some of the applications and content they use on that smartphone to be location- enhanced.

MS. COOPER: Can I follow on to that? There was someone on an earlier panel who talked about what happens when you browse the web on your phone. And I believe it was the gentleman from Yahoo! said, well, there is an identifier from your phone that gets passed along with the click stream data, and I think that using the web as sort of analogy or the big brother of mobile web browsing is useful and here you can see that on the traditional web, the way that advertisers identify people, in general, has been with cookies. And if you do not want to be tracked by the particular cookie ID that you have at the moment, you delete

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your cookie.

So, actually maybe this is a question for the technology companies on the panel, that identifier that gets passed when you browse the web on your phone, how much is it like a cookie, can you change it, can you delete it or are you stuck with the same identifier that you have all the time? Because if that is the case, then that obviously facilitates mobile advertising, but it also dramatically reduces the main tool that we have, at least today on the web, for consumers to be able to take control of their own privacy, vis-a-vis, advertisers and not be tracked based on that number.

MR. QUARESIMA: Can you identify yourself?

MARCIA TROUTMAN: It is like an IP address, and when you have your laptop or your desktop and your IP address gets tracked, it is not like a cookie. So, it cannot be deleted. It is because it goes with your computer and your IP address is linked to that specifically.

MS. COOPER: Is it dynamically assigned?

MARCIA TROUTMAN: So, you would have to change your phone in order to get a new cookie.

MS. COOPER: So, it is not like dynamically assigned IP addresses that change?

MARCIA TROUTMAN: It is not, no.

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MR. MAGEE: I think this may be the last question. This follows up on what we were talking about here, I think. Looking ahead, do you foresee a confluence at some point between location-based services and marketing based on that and marketing based on consumers' online activities?

MR. KNAPP: Mike, are you going to help me out here? So, I think that is why the FTC has some great foresight in looking into this. Is there really much difference between your web experience on your BlackBerry Pearl and your laptop? I think no. There is going to be less and less difference. So, basically, we are here. Not everyone has a BlackBerry Pearl yet.

And, so, I do think that is the question and I also think that is why it is important in some ways to keep location when we are analyzing it in the broader context of contextual and behavioral advertising, et cetera. I think it is very timely to look at the behavioral advertising guidelines, in particular CDT's comments on those, distinguishing between behavior of advertising by creating profiles and keeping information over time and using it on more of a one-time basis contextually.

So, I think you can add location to that mix and help us analyze it, again, in the broader context of what is already happening on the web and now the mobile web today.

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MR. QUARESIMA: Fran, and then we are going to wrap it up.

MS. MAIER: Great, thank you. So, I think there is no question that there are some similarities, but the location-based thing is a very important distinctive difference. Our guidelines from 2004, I think what many of us are talking about, there is the potential for consumers to get scared and even for browser-based advertising on the cell phone for them to react very negatively to too much pinpointed location-based advertising, be it SMS or on the browser.

To that effect, I think giving them at least some way of opting out or turning that off in some way is going to be an important principle and I think an opportunity to build trust.

MR. ALTSCHUL: If I could.

MR. QUARESIMA: Mike, all right. Fifteen seconds.

MR. ALTSCHUL: I wanted to suggest that over time I think expectations will change. Caller ID has only been with us 20 years. And, of course, one's area code and the three digits of the local exchange provide pretty good location-based information. There is a wonderful story that one of the beta testers for Caller ID technology was American Express in Florida, they had a call center. They were able

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to link the caller ID number to a reverse directory, so if I was to call them from my home phone number, they could answer the phone, yes, Mr. Altschul, what can we do for you tonight?

That freaked out so many people before anyone had actually experienced Caller ID, they stopped doing it. It did allow them to call up the account record of the caller and be able to respond faster. And, of course, the FCC and others have developed a long list of how you can turn on, turn off Caller ID functions. But, now, 20 years later, it is a common expectation that when you place a phone call, Caller ID is going to be available to the called party.

I think similarly as what is very new and novel now becomes accepted in commonplace we will be talking about these issues, but in a totally different way a few years from now.

MR. QUARESIMA: All right. Thank you all very much. I really appreciate it, a good discussion.

(Applause.)

MR. QUARESIMA: Everyone, we are going to take a short break and then we are going to come back at 3:30. Thank you.

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