May 1, 2008

*Electronic Filing*

Mr. Donald S. Clark, Secretary
Federal Trade Commission/Office of the Secretary
600 Pennsylvania Avenue, N.W.
Room H-135 (Annex A)
Washington, DC 20580

> **Re:    Beyond Voice – Comment, Project No. P074403**
> **Comments of CTIA – The Wireless Association®**

Dear Mr. Clark:

CTIA – The Wireless Association®[1] ("CTIA") respectfully submits these

comments for consideration by the Federal Trade Commission ("FTC") and to

supplement CTIA's statements at the "Beyond Voice: Mapping the Mobile Marketplace"

Town Hall meeting hosted by the FTC on May 6 and 7, 2008 in Washington, DC.  CTIA

joins the other meeting participants in thanking the FTC for addressing consumer

protection issues in the rapidly expanding world of M-commerce.

In these comments, CTIA describes the current state of location-based services

("LBS") and gives an overview of wireless carrier and non-carrier LBS offerings.  CTIA

also discusses the wireless industry's voluntary adoption of the *Best Practices and*

*Guidelines for Location-Based Services*.

**LOCATION-BASED SERVICES**

Location-based services are information services that utilize the location of a

mobile device and are accessible through the mobile network.  LBS applications are

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[1] CTIA is the international organization of the wireless communications industry for both wireless carriers and manufacturers. Membership in the association covers Commercial Mobile Radio Service ("CMRS") providers and manufacturers, including cellular, broadband PCS, ESMR, and AWS, as well as providers and manufacturers of wireless data services and products.

available from wireless carrier and non-carrier providers and include the public safety-
oriented E911 services that wireless companies provide, as well as other commercial and
non-commercial location-based services.

Developers and solutions providers are a significant part of the location-based
services market.  Leading application publishers include Networks in Motion, MySpace
Mobile, XM Satellite Radio and other GPS navigational software providers, such as
Garmin Mobile, MapQuest Mobile, Pitney Bowes MapInfo, TeleNav, Telmap, uLocate,
WaveMarket, and Wayfinder.[2]  These companies provide significant elements to the
supply side of the market, including mapping solutions, friend finders, and other
applications used in the United States and around the world.[3]

An example of a commercial location-based service is Verizon Wireless' VZ
Navigator, which allows "consumers in 75 cities to wirelessly access traffic information
and find detours around traffic congestion and accidents."[4]  NAVTEQ provides the
traffic data available through the VZ Navigator application.  The data integrator
Networks In Motion ("NIM"), then "adds a 3-D perspective [windshield] view, a movie
and events finder, weather reports and forecasts, and gas prices at nearby gas stations,
turning GPS-enabled phones and smart phones into navigational and location devices." [5]
According to NIM's website, the company's reliable platforms "deliver location-centric

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[2] *See* Monica Alleven, LBS: Lots of Road Left, Wireless Week, at14-15 (Apr. 3, 2008).

[3] *See e.g.*, http://www.networksinmotion.com/; http://global.telmap.com/; http://www.ulocate.com/;
http://www.wavemarket.com/; and http://www.wayfinder.com/?id=5356.  See also "Telmap Partners with
Boost Mobile to Launch Branded Navigation Application," TeleNav Press Release, September 11, 2007, at
http://global.telmap.com/Content.aspx?Page=PressRelease&PressReleaseId=229; see also video at
http://global.telmap.com/Content.aspx?Page=News&NewsId=997&Year=2007 (noting  launch of service
in Mexico with Iusacell).

[4] Joseph Palenchar "Verizon Nav Service To Add Traffic Alerts," TWICE, *available at*
http://www.twice.com/article/CA6550555.html (Apr. 11, 2008).

[5] *Id.*

information to people on the go, offering continuous access to local directories, maps, driving directions, and more, helping mobile workers, families, and individuals find whatever they need, wherever they go." [6]

Another company in the LBS industry is TeleCommunications Systems ("TCS"). TCS offers wireless data communications technology solutions, including location-based wireless and VoIP E911 services, messaging and location service infrastructure for wireless operators and commercial location applications, like traffic and navigation.[7] TCS is introducing its Xypoint Location Platform, which has a "My Commute" tool that allows drivers to create and store multiple, frequently used routes to and from home, work and other important destinations. Personalization features include quick access to last-view metro areas or regions, panning and zooming to assess the speed flow of traffic and incident information and handset coverage.[8]

TCS Traffic service can support mobile advertising that allows carriers to offer the value-added service free of charge to the carriers' subscribers. TCS' SMS Center solution allows "carriers to deliver next-generation, location-based messaging services. New features include SMS banners, LBS support and enhanced anti-spam capability." As a proponent of privacy protection for wireless subscribers, TCS enables subscribers to block or opt out from receiving future ads by forwarding an unwanted ad or message to

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[6] NIM<sup>TM</sup> Networks In Motion website, *available at* http://www.networksinmotion.com/. Networks In Motion products support: "AAA Mobile® on Verizon Wireless, Alltel, and Sprint; Verizon Wireless' VZ Navigator; YellowPages.com Mobile, which is currently deployed on AT&T; Alltel's Axcess Mobile Guide navigator; U.S. Cellular's Your Navigator; TELUS Navigator and TELUS Kid Find.

[7] TeleCommunication Systems website, Connections that Matter®, *available at* http://www.telecomsys.com/about/index.cfm#.

[8] *See* Monica Alleven, LBS: Lots of Road Left, Wireless Week, at14-15 (Apr. 3, 2008).

an SMS short code.  "The TCS SMS [short code] then blocks any future messages from that source to that specific handset."[9]

Other examples of LBS applications that are commonly called "friend finders" are the "Buddy Beacon" developed by uLocate Communications, available from the Mobile Virtual Network Operator ("MVNO") Helio, and the competing Loopt service available from Sprint and Boost Mobile.[10]  In addition to these Commercial Mobile Radio Service-based "friend finder" services, there are also Wi-Fi based LBS applications such as MIT iFind service (which uses MIT's densely-deployed Wi-Fi spots to provide location delivery).[11] The telematics company Roadcomm.com recently announced its LifeInPocket[TM] application platform, which provides consumers with a downloadable package of applications including "GPS, navigation, location messaging, friends/family locator, and . . . messaging, PDF/Word/picture email attachments, financial management, social networking, document viewing, bible, flight/hotel price search and location messaging."[12]

Other providers of family/friend location services plan to enter the U.S. market after their mobile location services are offered in other countries.  For example, Denver-based

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[9] *Id.*

[10] Carolyn Y. Johnson, "Keep your friends at your fingertips, with a cellphone," The Boston Globe, *available at* http://www.boston.com/business/technology/articles/2008/04/14/keep_your_friends_at_your_fingertips_with_a_cellphone/ (Apr. 14, 2008); *see also* http://www.ulocate.com/buddybeacon.php and https://loopt.com/loopt/sess/index.aspx. Verizon Wireless reportedly will also offer Loopt to customers in the near future.  *See* W. David Gardner, "Verizon Wireless' Phones To Feature Loopt's Location Service Utilizing GPS features on more than 20 Verizon mobile phones, Loopt will be offered at $3.99 a month and is aimed at the youth audience," InformationWeek, *available at* http://www.informationweek.com/news/mobility/business/showArticle.jhtml;jsessionid=UJROJHKNZM32KQSNDLPCKH0CJUNN2JVN?articleID=207000401&_requestid=803800 (Mar. 28, 2008).

[11] See "iFIND is MIT's new location-based application for friendspotting," available online at http://ifind.mit.edu/.

[12] "RoadComm.com, Inc. Rolls out LifeInPocket™," RoadComm.com Press Release, *available at* http://www.lbszone.com/content/view/3230/2/ (Apr. 15, 2008). *See also* http://mobile.roadcomm.com/.

Useful Networks revealed that wireless providers will offer its sniff™ (Social Network Integrated Friend Finder) application in the U.S. in the coming months. Popular in Scandinavia and currently launching in the United Kingdom, sniff is a permission-based Facebook application that allows consumers to locate close friends in real-time with their mobile phones or from Facebook.[13] Useful Networks reported that:

> Privacy is the most important aspect of sniff – the user is always in complete control of who can locate them, and when. The sniff privacy model is based on the fundamental principles of user notice and consent. sniff has varying levels of privacy so each user can determine if they want to be found and by whom. sniff also provides multiple confirmation notices to new users reminding them they have joined the sniff network so all users are aware of their status and permission levels.[14]

CEO Brian Levin of Useful Networks also stated that "With varying permission levels, sniff allows consumers to manage if, when and how their location information is shared with other parties. In addition, users have the ability to set-up notifications via SMS of key events such as being located or invited by another user to be part of the sniff network."[15]

These examples demonstrate the wide variety of companies that are engaged in the development and enabling of location-oriented products and services. Further, the Android Open Network Alliance website provides guidance to parties interested in the development of location-based services in the form of Software Development Kits ("SDKs") and Application Programming Interface ("API").[16] Companies like INRIX

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[13] *See* "New mobile and Facebook integrated friend finder from Useful Networks is extremely popular," Useful Networks Press Release, *available at* http://www.lbszone.com/content/view/3218/2/ (Apr. 11, 2008).

[14] *Id.*

[15] *Id.*

[16] *See* Location-based Service APIs, *available at* http://code.google.com/android/toolbox/apis/lbs.html.

aggregate and offer "real time, historical and predictive traffic information nationwide" to "over 50 industry partners and customers including Clear Channel Radio's Total Traffic Network, TomTom, deCarta, I-95 Corridor Coalition, MapQuest, Microsoft, Mio, TCS, Tele Atlas, TeleNav, Telmap and others with the highest quality data and broadest coverage available for personal navigation, mapping, and other location-based service applications in the car, online and on mobile devices." INRIX recently announced its introduction of Nationwide Traffic Alerts covering the entire U.S. Interstate Highway System, as well as major arteries, freeways and highways nationwide.[17] uLocate Communications publishes a variety of location-based or location-oriented applications, including its WHERE[TM] application, which offers consumers a variety of customizable location-based applications.[18] Both consumer and developer-oriented links are available on uLocate's website.[19] NAVTEQ provides digital mapping data for mobile devices, vehicle navigation systems and location-based services.[20]

Publications like Directions Mag offer materials focused on the location-based services sector.[21] Supplier/manufacturers, such as Nokia, also maintain developer pages focused on location-based services.[22] Qualcomm provides transportation tracking and

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[17] "NRIX Pioneers Another Traffic Industry First - Launching Real-Time Traffic Alerts Across the Entire U.S. Interstate Highway System," INRIX Press Release, *available at* http://www.directionsmag.com/press.releases/index.php?duty=Show&id=22053&trv=1 (Apr. 10, 2008).

[18] *See* About WHERE, *available at* http://www.where.com/words/about-where?to=about.

[19] *See e.g.,* WHERE[TM] Developer Program, *available at* http://developer.where.com/jin/devwelcome.jin.

[20] *See* NAVTEQ, *available at* http://www.navteq.com/; NAVTEQ Network for Developers, *available at* http://developer.navteq.com/site/global/home/p_home.jsp.

[21] *See* My Industry: Location-Based Services, *available at* http://www.directionsmag.com/industry/index.php?Industry=31.

[22] *See e.g.,* Forum Nokia, *available at* http://www.forum.nokia.com/main/resources/technologies/location_based_services.html (main location-based services page) and http://wiki.forum.nokia.com/index.php/Category:Location_Based_Services (Developer Community Wiki).

management tools, including its GlobalTRACS® equipment management system, OmniTRACS® mobile communications system, and OmniExpress® services.[23]

**WIRELESS CARRIER LOCATION-BASED SERVICE OFFERINGS**

**Alltel**

Location-oriented services or applications include those offered directly by carriers or by third-parties that provide assurances that the applications are accessible by and compatible with the consumers' handsets and the carriers' networks. To keep consumers informed, carriers list location-related information on their websites, specifically the carriers' location-related offerings and the compatibility of their devices with such applications. For example, Alltel includes on its website details about the location-related capabilities of its Blackberry 8830, with the notation that "This all-in-one device gives you phone, e-mail, organizer, web browsing and instant messaging. Then it goes a step further providing GPS for easy access to location-based applications like TeleNav GPS."[24]

Alltel customers can find location-based services information, under the Axcess Services and "GPS Apps" section. Alltel offers GSP-enable applications such as its Axcess Family Finder, Alltel Navigation, AAA Mobile, Axcess Mobile Guide, and the

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[23] *See* GlobalTRACS® equipment management system, *available at* http://www.qualcomm.com/technology/assetmanagement/platforms/globaltracs.html (which collects, transmits and manages operational data); OmniTRACS® mobile communications system, *available at* http://www.qualcomm.com/technology/assetmanagement/platforms/omnitracs.html (using a nationwide two-way satellite link to locate and contact vehicles, to improve productivity, reduce costs, and enhance customer service and security); and OmniExpress® mobile communications system, *available at* http://www.qualcomm.com/technology/assetmanagement/platforms/omniexpress.html (providing communications and vehicle tracking using a nationwide terrestrial wireless network).

[24] BlackBerry® 8830 World Edition Cell Phone, Product Description, *available at* http://wsf1.shopalltel.com/product/product.htm?prId=33208&search=location (accessed April 21, 2008).

WHERE application.[25]  Axcess Family Finder service offers peace of mind by providing real-time location of loved ones, automatic notifications of a child's location at set times and on-demand location checks displayed on an interactive map.[26]  The WHERE application allows Alltel customers to:

> easily locate gas stations, shops, restaurants, hotels, parks, golf courses, ATMs, hospitals and schools. WHERE also provides up-to-date information on local events and allows customers to customize the application by providing local weather, news, traffic conditions, directions, ski reports and more.[27]

The Alltel website also offers detailed listings of the devices compatible with each of the applications.[28]

### AT&T Mobility

Last year, Research In Motion ("RIM") published a press release announcing the availability of the Blackberry 8820 from AT&T Mobility, observing that:

> "Earlier this year, AT&T was the first carrier in North America to introduce the BlackBerry 8800 with built-in GPS, followed by the BlackBerry 8820 with Wi-Fi and GPS. Both handsets have an enterprise focus. Now, through the BlackBerry Curve 8310, AT&T is bringing GPS

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[25] *See* GPS Apps - Family Finder, *available at*
http://www.alltel.com/wps/portal/AlltelPublic/c1/04_SB8K8xLLM9MSSzPy8xBz9CP0os3hnP2-DoCBDAwN_HxcnAyNLZ0PLIE9DIN9MPxykA0mFu3eokYFRgFOwWZi7i5GBgQFE3gAHcDTQ9_PIz03Vj9SPMsdpj7uJfmROanpicqV-QXZ2mnO6oiIAUfiTyw!!/dl2/d1/L0lJSklna21BL0lKakFBTXlBQkVSVSQ0pBISEvWUZQQTFOSTUwLTVGGd0EhIS83X0NOSzBSUjEwME9MREIwMjlDMTlSSTExMEc0L0xfX19fNA!!/?WCM_PORTLET=PC_7_CNK0RR100OLDB029C19RI110G4_WCM&WCM_GLOBAL_CONTEXT=/wps/wcm/connect/Personal/home/p/axcessservices/gpsapps/dgpsapps.

[26] *Id.*

[27] Cell phone digest, "Alltel to Offer WHERE Location-Based Service Application," *available at* http://www.cellphonedigest.net/news/2007/08/alltel_to_offer_where_location.php (Aug. 21, 2007).

[28] *See e.g.*, https://axcessfamilyfinder.com/finder-alltel-family/signUpWizardSignIn.htm, http://www.alltel.com/wps/portal/AlltelPublic/AxcessAppsDetail?appName=telenavgpsnavigator and http://www.alltel.com/wps/portal/AlltelPublic/AppsDetail?appName=axcessmobileguide.

capabilities to a much broader audience of not only business users but also mobile professionals and consumers."[29]

"GPS navigation and location-based services add a powerful new dimension to the mobile user experience," said Mark Guibert, vice president, Corporate Marketing at Research In Motion. "The addition of GPS functionality, together with industry-leading communications applications, advanced multimedia capabilities and AT&T's value-added navigation and media services, makes the BlackBerry Curve 8310 an exceptional phone for both business and personal use."[30]

AT&T Mobility lists the benefits of its location-based services such as TeleNav Maps, AT&T Navigator, and the TeleNav Track (Mobile Workforce Management) tools, saying:

AT&T Location-based Services applications provide our customers with powerful business tools such as vehicle tracking, geo-fencing, and location-based time cards for field employees. Wireless data forms and complete audible and visual turn-by-turn navigation complete a robust suite of location-based applications designed to serve our customers' businesses and personal productivity.[31]

The AT&T Navigator service offers voice guided turn-by-turn driving directions with automatic reroute and full-color moving maps. Avoid traffic jams with real-time alerts on devices compatible with TeleNav Traffic. Also find restaurants, cafés, hotels, the lowest priced gas and more searching millions of business listings and points of onterest (POIs) nationwide.[32] The TeleNav Track application offers "GPS tracking, wireless timesheets, job dispatching, job time tracking, detailed reporting, voice and onscreen turn-by-turn navigation with the ability to see the location of your entire work

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[29] "New GPS-Enabled BlackBerry Curve Helps Customers Navigate With Style, First U.S. Introduction of BlackBerry Curve 8310 Brings Built-In GPS and New Colors to Popular Handset," RIM Press Release, *available at* http://www.rim.com/news/press/2007/pr-17_10_2007-01.shtml (Oct. 17, 2007).

[30] *Id*.

[31] Location Based Services, *available at* http://www.wireless.att.com/businesscenter/business-programs/mid-large/vertical-industry/location-services.jsp.

[32] *Id*.

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force and to dispatch in real-time."[33]  Lists of 32 devices compatible with the AT&T

Navigator service and nine devices compatible with the TeleNav Track service appear on

AT&T Mobility's website along with the application descriptions.[34]

**Sprint Nextel**

Sprint Nextel offers the Sprint Family Locator by WaveMarket Inc., which

"enables a parent to use a phone or PC to pinpoint the location of a child on a map along

with the address, surrounding landmarks, and accuracy of the information within a

specified radius."[35]  The Sprint Family Locator offers the feature Safety Checks[SM] that

"send[s] you automatic notifications of your child's location on specific days and times.

Make sure the kids arrive on time to school or are home safely by curfew without having

to log-in to the web site.  Set up Safety Checks[SM] in advance and get automatic, regular

notifications of your child's location to your phone or email address or both."[36]

The Sprint website lists 144 handsets that are compatible with GPS, both

generally and in connection with the Family Locator Service option.[37]  Sprint also offers

the Sprint Navigation service, which includes such options as:

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[33] *Id.*

[34] *Id.*

[35] Sprint Family Locator, Press Kits, *available at*
http://search.sprint.com/inquiraapp/ui.jsp?ui_mode=answer&prior_transaction_id=2028845&iq_action=5&
answer_id=16777220&highlight_info=85983309,81,105&turl=http%3A%2F%2Fwww2%2Esprint%2Eco
m%2Fmr%2Fcda_pkDetail%2Edo%3Fid16%3Dlocation%2Dbased_service%26id%3D1220#__highlight.
*See also* Sprint Family Locator overview, *available at*
http://support.sprint.com/doc/sp1722.xml?selectedDeviceId=9039&docid=3910&referring%20topicid=&R
eferring%20TopicID/DocID%20List%20Index=y&navtypeid=2&pagetypeid=36&prevPageIndex=10;
About Sprint Family Locator, *available at* https://sfl.sprintpcs.com/finder-sprint-family/moreInfo.htm.

[36] About Sprint Family Locator, *available at* https://sfl.sprintpcs.com/finder-sprint-family/moreInfo.htm.

[37] *See* What is GPS and is my phone capable?, *available at*
http://support.sprint.com/doc/sp10550.xml?selectedDeviceId=9039&docid=8968&referring%20topicid=&
Referring%20TopicID/DocID%20List%20Index=y&navtypeid=2&pagetypeid=36&prevPageIndex=6;
Recommended Plans for Sprint Family Locator, *available at* https://sfl.sprintpcs.com/finder-sprint-
family/recommendPlans.htm.

- Voice-guided and on-screen turn-by-turn GPS-enabled driving directions, which speaks street names for each turn
- 3-D moving maps similar to an in-car navigation system or personal navigation device
- Real-time intelligent traffic alerts and one-click rerouting
- Local search including finding the lowest gas prices in your area
- Pedestrian mode
- Spanish-language option
- Pre-trip planning site at www.sprint.com/navigation[38]

Other GPS-related applications listed on Sprint's website include:

- AAA Mobile
- Garmin Mobile[TM]
- Live Search for Sprint
- WHERE by Ulocate
- Mapquest[R] Find Me
- The Weather Channel 4.0
- My-Cast 5 Weather
- WeatherBug Mobile Weather
- Slifter Local Shopping
- Smarter Agent Apartments for Rent
- BiM Active, and
- Geocache Navigator[39]

Sprint's website offers guidance on how to use location-based services via an Aircard-enabled device, as well as information on how to change the privacy settings for wireless devices.[40]  The privacy setting options include: 1) **By Permission:** "To be

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[38] Sprint Navigation, Never Ask for Directions Again, *available at* http://www.nextel.com/en/services/gps/sprint_navigation.shtml.

[39] *See* Sprint Digital Lounge[SM], Applications: GPS: Navigate, *available at* https://manage.sprintpcs.com/Manage/portal/!ut/p/c1/04_SB8K8xLLM9MSSzPy8xBz9CP0os3hPZ3fHQE 8TIwMLY29TAyMfLxcDJwNjI09PQ_1wkA6zeAMcwNFA388jPzdVvyA7rxwAdJ9AwA!!/dl2/d1/L0lD U0lKSWdrbUNTUS9JUFJBQUlppQ2dBek15cXpHWUEhIS9ZQkpKMU5BMU5JNTAtNUY4OXchIS83X 0lDR0FRSTQyMDgzSzUwMkxxKRDBCMDMySUE0L1FwX19fNzMvc2Euc3BmX0FjdGlvbkxpc3Rlbm Vy/?PC_7_ICGAQI42083K502LJD0B032IA4_spf_strutsAction=!2fselectFolder.do!3ffolderId%3dFLD10 4886#7_ICGAQI42083K502LJD0B032IA4.

[40] *See* How do I use Location-Based Services on my Sierra Wireless AirCard 597E?, *available at* http://search.sprint.com/inquiraapp/ui.jsp?ui_mode=answer&prior_transaction_id=2028845&iq_action=5& answer_id=16777218&highlight_info=6294609,18,33&turl=http%3A%2F%2Fsupport%2Esprint%2Ecom %2Fdoc%2Fsp10597%2Exml%3Fid16%3Dlocation%2Dbased_service#__highlight; How do I change my

prompted each time a location-based service program wants to use the GPS position of your device." 2) **Restricted:** "To prevent location-based service programs from using the GPS position of your device. 3) **Unrestricted:** "To allow location-based service programs to use the GPS position of your device."[41]

Kajeet, a Mobile Virtual Network Operator ("MVNO") focused on serving teens, tweens and their parents, offers a GPS Phone Locator service. Powered by WaveMarket, the service helps parents and kids locate their phones using the Web. This service is geared toward the kid who is likely to lose his phone and the parent who wants to know where the phone is located at any certain time of day. Kajeet is offering a free three-month trial of the GPS Phone Locator service. If the customer would like to continue using the service, the monthly service fee is $9.99.[42]

**T-Mobile USA**

T-Mobile USA offers a number of devices including GPS built-in, such as the Blackberry 8820, and the BlackBerry Pearl™ 8120™.[43] T-Mobile's website explains that:

> the applications that use GPS may require optional features to function properly. As an example, the BlackBerry® Maps application uses a GPRS/EDGE connection to stream mapping data while taking advantage of GPS to position the handset's location on that map. Because of this you will need a BlackBerry® plan or SOC that includes the BlackBerry® APN

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privacy settings for location based services on my BlackBerry® 7250?, *available at* http://search.sprint.com/inquiraapp/ui.jsp?ui_mode=answer&prior_transaction_id=2030661&iq_action=5&answer_id=16777219&highlight_info=6293100,78,101&turl=http%3A%2F%2Fsupport%2Esprint%2Ecom%2Fdoc%2Fsp8695%2Exml%3Fid16%3Dlocation%2Dbased_service#__highlight.

[41] *Id.*

[42] *See* Monica Alleven, LBS: Lots of Road Left, Wireless Week, at14-15 (Apr. 3, 2008).

[43] *See* http://www.t-mobile.com/shop/phones/detail.aspx?tp=tb2&device=2c1f9587-a48c-4a27-bd8e-67d500731cc6 (features list noting "Get your real-time location on maps, driving directions, and more"); http://support.t-mobile.com/knowbase/root/public/tm51903.htm#top (providing details on GSP).

in order to take advantage of all GPS has to offer. In addition, other 3rd party GPS applications such as <u>Telenav</u> may require a subscription with an additional one-time or recurring charge.[44]

The site also provides guidance for customers using the BlackBerry® Curve™ 8320™, which does not contain an embedded GPS radio. Customers using the device who are interested in GPS-enabled applications may use Bluetooth® to sync a GPS element with the Blackberry device.[45]

**U.S. Cellular**

U.S. Cellular's easyedge[SM] data applications offer a number of location-based services, including Vindigo® City Guide, Rand McNally StreetFinder® Wireless, and Your Navigator.[46] Vindigo® City Guide provides listings and maps of where to eat, shop as well as the nearest movie houses and public bathrooms in more than 50 cities.[47] Rand McNally StreetFinder® Wireless application also offers location-enabled maps, directions and POIs that allows users to look up a location by category or business name and provides contact information, maps and directions.[48] With "Your Navigator," a customer has access to the features of an advanced car navigation system through the customer's mobile phone, including turn-by-turn navigation, destination search capabilities and automatic re-routing in case the customer misses a turn.[49] U.S. Cellular

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[44] GPS (BlackBerry Pearl™ 8120™), *available at* http://support.t-mobile.com/knowbase/root/public/tm51903.htm#top.

**[45]** *See* GPS (BlackBerry® Curve™ 8320™), *available at* http://support.t-mobile.com/knowbase/root/public/tm51518.htm#top.

[46] *See* Communications & Tools, Find People, Places and Things, *available at* http://easyedge.uscc.com/easyedge/CommsList.do?cat=dat.

[47] *See* Vindigo® city guide, *available at* http://easyedge.uscc.com/easyedge/GameDetail.do?312.

[48] *See* Rand McNally StreetFinder® Wireless, *available at* http://easyedge.uscc.com/easyedge/GameDetail.do?1796.

[49] *See* Your Navigator, *available at* http://easyedge.uscc.com/easyedge/GameDetail.do?1966.

provides an extensive list of available applications and compatible handsets on its website.[50]

**Verizon Wireless**

Verizon Wireless offers Maps & Location Services, including Chaperone and VZ Navigator.[51]  The Chaperone service gives parents the ability to easily locate a family member's Chaperone Child phone from their own handsets or PCs.  Parents can set up "Child Zone" locations around specific areas, such as school and home, as well as receive text messages whenever the family member enters or leaves the "Child Zone" with his or her handset."[52]  The VZ Navigator service allows customers to "get visual and audible directions to a destination, [ ] locate businesses and other places in an area, get a map of a location, bookmark favorites and recent searches, and even share locations with others."[53]

The available Maps & Location Services offered by Verizon Wireless include the following:[54]

| | | |
|---|---|---|
| AAA Mobile | Super Pages | Weather Bug |
| Rand McNally Street Finder | Super Pages 2.0 | Weather Channel |
| Location Management | MapQuest Mobile | Weather Scout |
| Rand McNally Traffic | MyCast Weather | AccuWeather.com Premium |

[50] *See* Application List, *available at* http://easyedge.uscc.com/easyedge/Allapps.do.

[51] *See* Maps & Location Services, *available at* http://products.vzw.com/index.aspx?id=fnd_location_services&lid=//global//features+and+downloads//maps+and+location+services.

[52] Chaperone[SM] Family Locator Service, *available at* http://products.vzw.com/index.aspx?id=fnd_toolsApps_childFinder&lid=//global//features+and+downloads//tools+and+apps//family+locator.

[53] About VZ Navigator, *available at* https://vznavigator.vzw.com/index.html?lid=//global//features+and+downloads//tools+and+apps//navigation+gps

[54] Maps & Location Services - Browse Applications, *available at* http://products.vzw.com/index.aspx?id=fnd_location_services&lid=//global//features+and+downloads//maps+and+location+services.

MyCast 5 Weather       Weather News

Verizon's website provides additional information on their location-based

services and includes a link for developers of such services to register.[55]

## BEST PRACTICES AND GUIDELINES FOR LOCATION-BASED SERVICES

CTIA members developed and have adopted a set of *Best Practices and*

*Guidelines for Location-Based Services* ("Guidelines") to promote and protect consumer

privacy through user notice and consent.[56]  With input from LBS providers and industry

stakeholders, this voluntary initiative has received strong support from the nation's

wireless carriers.  In announcing the adoption of these Guidelines, CTIA President and

CEO Steve Largent said,

> Guarding the privacy of user location information is a top priority, and
> that's why the wireless industry came together on a voluntary basis to
> establish these guidelines for location-based services.  As more and more
> Americans are tapping into all that cutting-edge, location-based
> technology has to offer, the industry is working hard to stay ahead of the
> game by identifying and actively addressing concerns earlier rather than
> later.[57]

In line with FTC policy, the Guidelines rely on two fundamental principals: ***user***

***notice*** and ***consent***.[58]  First, LBS Providers must inform users about how their location

information will be used, disclosed and protected so that a user can make an informed

decision whether or not to use the LBS or authorize disclosure.  Second, once a user has

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[55] *See* Location-Based Services, *available at*
http://www.vzwdevelopers.com/aims/public/menu/lbs/LBSLanding.jsp.

[56] CTIA-The Wireless Association® Announces Best Practices for Location-Based Services, Press Release,
*available at* http://www.ctia.org/media/press/body.cfm/prid/1750.

[57] *Id.*

[58] Best Practices and Guidelines for Location-Based Services at 1, *available at*
http://files.ctia.org/pdf/CTIA_LBS_BestPracticesandGuidelines_04_08.pdf (effective Apr. 2, 2008)
("*Guidelines*," attached hereto as "Attachment A").

chosen to use an LBS, or authorized the disclosure of location information, he or she should have choices as to when or whether location information will be disclosed to third parties and should have the ability to revoke any such authorization.[59]

The Guidelines focus on the LBS user because it is the LBS user whose privacy is at risk if the location information is misused or disclosed without authorization. The Guidelines also recognize that in some circumstances the account holder rather than an authorized user on that wireless account may initiate or subscribe to an LBS and provide the required consent.[60] For example, a parent/account holder may want to subscribe to an LBS to know when a child/authorized user arrives at school or may want to block disclosure of a child/authorized user's location information for safety reasons. In another example, an employer may need to subscribe to an LBS for its business needs where disclosure of continuous location information would be required for fleet management or service delivery.[61]

In addition, the Guidelines prescribe a number of safeguards for LBS providers to employ to further protect a user's location information. The safeguards include the following six safety precautions:

1. **Security of Location Information** – LBS Providers should employ reasonable administrative, physical and/or technical safeguards to protect a user's location information from unauthorized access, alteration, destruction, use or disclosure. LBS Providers should use contractual measures when appropriate to protect the security, integrity and privacy of user location information.

2. **Retention and Storage of Location Information** – LBS Providers should retain user location information only as long as business needs require, and then must destroy or render unreadable such information on disposal. If it is necessary to

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[59] *Id.*

[60] *See Guidelines* at 1, 5.

[61] *Id.*

retain location information for long-term use, where feasible, LBS Providers should convert location information to aggregate data.

3. **Reporting Abuse** − LBS Providers should provide a resource for users to report abuse and provide a process that can address that abuse in a timely manner.

4. **Compliance with Laws** − LBS Providers must comply with applicable laws regarding the use and disclosure of location information, and in particular, laws regarding the protection of minors. In addition, it is recommended that LBS Providers comply with applicable industry best practices and model codes.

5. **Education** − In addition to any notices required under these Guidelines, LBS Providers certifying under these Guidelines will work with CTIA in an education campaign to inform LBS users regarding the responsible use of LBS and the privacy and other risks associated with the disclosure of location information to unauthorized or unknown third parties.

6. **Compliance with Guidelines** − LBS Providers that comply with these Guidelines may self-certify such compliance by placing the following statement in their marketing or promotional materials: *LBS Provider follows CTIA's Best Practices and Guidelines for Location-Based Services.*[62]

Importantly, the Guidelines allow the flexibility needed to anticipate future LBS developments and are applicable to all LBS providers regardless of the technology or mobile device used or the business model employed to provide services. The Guidelines give LBS users the confidence that the privacy of their location information will be protected and used or disclosed only as described in LBS notices.

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[62] *Guidelines* at 6-7.

**CONCLUSION**

Today, U.S. consumers have a number of location-based services available through their wireless provider and others. LBS technology can help users navigate through traffic, provide driving directions, find friends and loved ones, locate a misplaced mobile phone, pinpoint the nearest restroom as well as recommend a place to eat, among others. As more Americans are subscribing to LBS applications, the wireless industry is striving to stay ahead to protect the privacy of user location information. With input from LBS providers and industry stakeholders, the wireless industry has voluntarily adopted the *Best Practices and Guidelines for Location-Based Services* to promote and protect consumer privacy through user notice and consent.

CTIA hopes the information provided in these comments assists the Federal Trade Commission in its exploration of the consumer protection issues in the rapidly expanding world of M-Commerce.

Respectfully submitted,

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# ATTACHMENT A

# Best Practices and Guidelines
# for
# Location-Based Services

Version 3.18.08

Effective Date:  *April 2, 2008*

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## Section 1 - Purpose

CTIA has developed these Best Practices and Guidelines ("Guidelines") to promote and protect user privacy as new and exciting Location-Based Services ("LBS") are developed and deployed. To achieve this goal, the Guidelines rely on two fundamental principles: user notice and consent.

- First, LBS Providers must inform users about how their location information will be used, disclosed and protected so that a user can make an informed decision whether or not to use the LBS or authorize disclosure.

- Second, once a user has chosen to use an LBS, or authorized the disclosure of location information, he or she should have choices as to when or whether location information will be disclosed to third parties and should have the ability to revoke any such authorization.

These Guidelines are focused on the LBS user whose location information is used or disclosed. It is the LBS user whose privacy is most at risk if the location information is misused or disclosed without authorization. Thus, the Guidelines place a premium on user notice and control.

However, the Guidelines also recognize that in some circumstances such as child safety or business needs, a wireless carrier's account holder rather than an authorized user on that account, may decide whether an LBS may be used at all or location disclosed to a third party. For example, a parent/account holder may want to subscribe to an LBS to know when a child/authorized user arrives at school or may want to block disclosure of a child/authorized user's location information for safety reasons; or, an employer may need to subscribe to an LBS for its workforce where disclosure of continuous location information would be required for fleet management or service delivery.

The Guidelines are flexible enough to anticipate future LBS developments. The Guidelines apply regardless of the technology or mobile device used or the business model employed to provide services.

When using services from LBS Providers that have adopted these Guidelines, LBS users can have confidence that the privacy of their location information will be protected and used or disclosed only as described in LBS notices.

## Section 2 - Applicability

These Guidelines apply to all LBS Providers. Not all parties in the LBS value chain are LBS Providers. A wireless carrier is not an LBS Provider when its account holder or authorized users on that account subscribe to or use a third party's LBS without the direct involvement of the wireless carrier in providing the LBS.

*Examples of LBS Providers:*

*1) A wireless carrier is an LBS Provider when it provides account holders or authorized users an enhanced 411 LBS to locate nearby businesses.*

*2) A wireless carrier that makes user location information available to third parties to support concierge-like services is an LBS Provider for purposes of the disclosure of location information, and the third party that makes the service available to end users likewise is an LBS Provider.*

*3) An entity that enables third party application providers to access location information from multiple wireless carriers (i.e., an aggregator) is not an LBS Provider, but the wireless carriers and the third parties that make the services available to end users are LBS Providers.*

*4) A wireless carrier that provides its users "on-deck" access to a mapping service enabled by third party software and service is an LBS Provider if it provides the location information used by the third party; and the third party is an LBS Provider.*

*5) A third party that provides an LBS exclusively to its own customers—for example, through a downloaded application that relies solely on the device's GPS capabilities—is an LBS Provider. The wireless carrier is not an LBS Provider, unless it makes available the location information—for example, through its network—to the third party to facilitate the service.*

*Caveat: The examples are illustrative only and do not imply that compliance with the Guidelines alone permits such uses or services. The terms on which access to location information is made available from wireless carriers to third parties are beyond the scope of these Guidelines.*

## *Section 3 – Scope of Coverage*

The Guidelines cover location information where the LBS user is identified or his or her location information is linked to other personally identifiable information by the LBS Provider. The Guidelines do not apply to location information used or disclosed:

- as authorized or required by applicable law (*e.g.*, to respond to emergencies, E911, or legal process);
- to protect the rights and property of LBS Providers, users or other providers of location information; and

- for operation, testing or maintenance of any network or LBS.

## Section 4 - Specific Guidelines

### A. Notice

The hallmark of these Guidelines is *notice*.  LBS Providers must inform LBS users about how their location information will be used, disclosed and protected so that a potential LBS user can make an informed decision whether or not to use the service or authorize the disclosure.

These Guidelines do not dictate the form, placement, manner of delivery or content of notices. LBS Providers may use written, electronic or oral notice so long as LBS users have an opportunity to be fully informed of the LBS Provider's information practices.  Any notice must be provided in plain language and be understandable.  It must not be misleading, and if combined with other terms or conditions, the LBS portion must be conspicuous.

> *Example:  Wireless carriers that collect location information when they provide information services might choose to provide notice as part of a privacy notice on their Web page.  The following sample is illustrative only:*
>
> *"When you use your mobile browser or enable other data services, we collect your location information. We use that information to provide you with any Location-Based Services that you have requested. We may also use your location information to create aggregate data from which your personally identifiable information has been removed or obscured. We do not retain location information longer than necessary to provide the service. We will not disclose your location information to third parties without your consent. You should carefully review the privacy policies of third parties with whom you have authorized the sharing of your location information, and you should understand the risks involved in disclosing your location information to friends or other people you may not know."*

If the LBS Provider intends to use location information for any purpose other than providing the LBS itself, the notice should explain the other uses (*e.g.,* the use of location information to create aggregate data for location-sensitive advertising).  If the LBS Provider later wants to use location information for another purpose not disclosed in the original notice, the LBS Provider must provide the LBS user with further notice and an opportunity to consent to the use.

LBS Providers should inform LBS users how long any location information will be retained, if at all.

An LBS Provider that uses location information to create aggregate data by removing or permanently obscuring the user's identity should provide notice of the use.

> *Example: A wireless carrier could create a dataset of mobile Internet users registered in a particular geographic or coverage area by removing or "hashing" the personal identities of the users from the dataset so that third parties could provide location-sensitive advertisements or content to the anonymous group. While notice of this use is appropriate, the wireless carrier would not need to obtain the LBS user's consent to create the aggregate dataset.*

LBS Providers that share location information with third parties must explain what information will be provided and to what types of third parties so that the LBS user can understand what risks may be associated with such disclosures.

LBS Providers should inform users whether they may terminate the LBS, and what consequences arise from doing so. LBS Providers should explain any privacy options or controls available to LBS users to restrict use or disclosure of location information by or to others.

> *Example: An LBS Provider that offers a social networking service might provide a mechanism for the LBS user to establish permissions for when, where and to whom his or her location information will be disclosed. The notice to the LBS user should include a statement to the effect:*
>
> *"You control when your location is shared with others. In "settings" on the menu, you can select contacts you wish to block or enable all the time, or you can select a manual option to review a list of contacts each time you disclose your location."*

Depending on the nature and sensitivity of the LBS being provided, LBS Providers should periodically remind LBS users of their location privacy options. The timing and frequency of such notices depends on the nature of the LBS. For example, one would expect more reminders when the service involves frequent sharing of location information with third parties and fewer reminders, if any, when the service involves one-time, user-initiated concierge service calls (*e.g.*, locating a nearby service).

When two or more LBS Providers have a role in providing the LBS, the form of notice each provides to the LBS user will vary according to the type of LBS and who offers what service to the LBS end user. For example, a wireless carrier that makes location information available to third parties at the request of an authorized user would not be expected to include in its notice information about the third party LBS Provider's use, disclosure or protection of the LBS user's location information. Instead, the third party LBS Provider would be expected to provide such information in its notice to the LBS user.

When a wireless carrier provides an LBS to a wireless carrier's account holder as described in Section 4.B.2 below, the wireless carrier does not need to provide notice to the account holder's users, but it is recommend that account holders inform their users that location information is being provided to or used by the account holder.

## B. Consent

### 1. Form of Consent

LBS Providers must obtain user consent before initiating an LBS or disclosing location information. The form of consent may vary with the type of service or other circumstances, but the LBS Provider bears the burden of establishing that informed consent has been obtained before initiating an LBS or disclosing location information.

These Guidelines do not dictate the form, placement, manner of collecting or content of consent as long as the consent is informed. LBS user consent may be implicit, such as when an LBS user requests a service based on his or her location. Or, an LBS user's consent may be contained in the terms and conditions of service for an LBS to which an LBS user subscribes. An LBS user may manifest consent electronically by clicking "I accept"; verbally by authorizing the disclosure to a customer service representative; through an IVR system or any other system reasonably calculated to confirm the LBS user's consent.

### 2. Account Holder Consent

In some cases, a wireless carrier's account holder, instead of an LBS user, may initiate or subscribe to an LBS and provide the required consent.

> *The following examples are illustrative:*
>
> *Example 1. Fleet Tracking/Employee Monitoring: The LBS Provider is a wireless carrier and its customer is a business entity purchasing x lines to permit tracking employee locations to provide for rapid response repair service, just-in-time delivery, or fleet management.*
>
> *Example 2. Public Safety: The LBS Provider enters into an agreement to provide monitoring compliance with terms of supervised release and house arrest, terms of bail for bondsmen, protecting public officials on duty, or military force movements.*
>
> *Example 3. Parental Controls: The LBS Provider offers a service to notify parents when a child arrives at or leaves a designated place.*
>
> *Example 4. Family Safety: The LBS Provider offers a family safety feature to locate family members in an emergency or other specified circumstances.*

### 3. Revocation of Consent

LBS Providers must allow LBS users to revoke their prior consent to disclose location information to all or specified third parties. Where technically feasible, LBS Providers may provide for selective termination or restriction of individual LBS applications upon LBS user or wireless carrier account holder request.

Constructive revocation or termination of an LBS user's consent occurs when a wireless carrier's account holder with authority over the LBS user's service subsequently prohibits the use of an LBS or disclosure of location information.

> *Example: User signs up with an LBS Provider for a service that requires User's wireless carrier to periodically disclose User's location information to LBS Provider. User is a minor and the mobile device is one of several on the account of the wireless carrier's Account Holder who, through controls provided by the wireless carrier, has decided to block disclosure of User's location information to third parties. The Account Holder's election with the wireless carrier trumps User's consent to the LBS Provider, and the consent constructively is deemed revoked.*

These Guidelines do not dictate terms of service that LBS Providers must offer to LBS users with regard to an LBS. Nor do the Guidelines dictate any technical implementation for terminating or restricting an LBS or authorization to disclose location information.

## C. Safeguards

### 1. Security of Location Information

LBS Providers should employ reasonable administrative, physical and/or technical safeguards to protect a user's location information from unauthorized access, alteration, destruction, use or disclosure. LBS Providers should use contractual measures when appropriate to protect the security, integrity and privacy of user location information.

### 2. Retention and Storage of Location Information

LBS Providers should retain user location information only as long as business needs require, and then must destroy or render unreadable such information on disposal. If it is necessary to retain location information for long-term use, where feasible, LBS Providers should convert location information to aggregate data.

### 3. Reporting Abuse

LBS Providers should provide a resource for users to report abuse and provide a process that can address that abuse in a timely manner.

## 4. Compliance with Laws

LBS Providers must comply with applicable laws regarding the use and disclosure of location information, and in particular, laws regarding the protection of minors. In addition, it is recommended that LBS Providers comply with applicable industry best practices and model codes.

## 5. Education

In addition to any notices required under these Guidelines, LBS Providers certifying under these Guidelines will work with CTIA in an education campaign to inform LBS users regarding the responsible use of LBS and the privacy and other risks associated with the disclosure of location information to unauthorized or unknown third parties.

## 6. Compliance with Guidelines

LBS Providers that comply with these Guidelines may self-certify such compliance by placing the following statement in their marketing or promotional materials:

> *LBS Provider follows CTIA's Best Practices and Guidelines*
> *for Location-Based Services.*

**ILLUSTRATIVE ANNEX**

The purpose of this illustrative annex is to illustrate what an LBS user might expect under these Guidelines when two or more LBS Providers are involved in providing a location-based service. The Guidelines are flexible enough to permit an LBS Provider to meet them in a myriad of ways, so this Annex is merely illustrative, not a mandatory implementation. Under these Guidelines, an LBS Provider always bears the burden of demonstrating that an LBS user received sufficient notice to make an informed decision about whether to subscribe to an LBS or authorize disclosure of location information.

| *Illustration:* A wireless carrier provides its users with a wireless device having "on-deck" access to a mapping service enabled by third party software. The wireless carrier provides the user's location information to the third party who in turn informs the user of services in the area. ||
|---|---|
| **Wireless Carrier** | **Application Provider** |
| Wireless Carrier is an LBS Provider because it provides the location to the third party. | Application Provider is an LBS Provider because it receives location from a wireless carrier to provide an LBS to a mobile user. |
| The Wireless Carrier should provide a notice to its account holder that:<br>• the device is location-enabled<br>• an authorized user may use a location application available "on deck" or the main menu<br>• by initiating the service, the account holder authorizes the disclosure of the user's location to the third party whenever the LBS is used<br>• it may retain information regarding the user's location and use of the LBS for as long as it has a business need<br>• the user should review the application provider's privacy policy to understand how it uses and protects location information<br>• user should not initiate the service if he or she does not want to share location information with the third party application provider<br>• *See* Section 4.A as an example | The Application Provider should provide notice to the LBS user that:<br>• user location is being collected in order to provide the service<br>• the location information (will/will not) be disclosed to others<br>• location information is retained only so long as necessary to provide the service (e.g., to provide the location of the nearest ATM to the LBS user's location on the map)<br>• aggregate location information may be created by removing or obscuring personally identifiable information<br>• aggregate location information may be used to provide location-sensitive advertising<br>• no further notices or reminders will be provided |
| By purchasing the wireless service with location-enabled services, account holder agrees that wireless carrier may disclose a user's location information to the third party application provider | User agrees to the terms and conditions governing the service |