

LOCATION TERMINOLOGY GUIDE

THE LANGUAGE OF LOCATION



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In a single day, there are twice as many Android devices registered (1.3M) than there are weddings, births, and deaths combined around the globe.* Mobile devices are virtually ubiquitous, having reached mass penetration with users integrating devices into their daily lives at a breathtaking pace. With Google reporting that nearly 50% of all of their mobile search activity now has some sort of local intent, there has never been greater demand or opportunity surrounding content localization and location technologies. In fact, the latest projections (BIA Kelsey, March 2013) estimate that location-based mobile ads will grow to \$9 billion - or 55% of total mobile ad spend - by 2017.

With so much growth over such a short period of time, a critical need for ongoing education and resources has emerged to help marketers navigate this growing but constantly changing and evolving marketplace. Location encompasses a tremendous diversity of technologies, measurements and metrics that are often identified through acronyms or phrases. For a marketer, publisher or media buyer, understanding the language of location is now an essential skill.

In response, the MMA Location Committee has developed this guide to serve as a quick, go-to resource to explain fundamental technologies, measurements and strategies in addition to the growing list of the terms and acronyms that have rapidly become commonplace in the industry. Our hope is that by developing and encouraging a common and consistent language we can all help in realizing the mobile location opportunity to the fullest while building confidence from marketers in the process.

In an effort to ensure this guide represents a fair and unbiased view and continues to keep up to date with the latest technological and business evolutions of mobile location, this document has been posted to a public wiki-style site that will enable readers to edit, change and/or make critical additions as necessary. You can access the document at the link below. Note: once in the document, you can request editing rights. Thank you for your feedback and participation.

www.mmaglobal.com/location-terminology-guide

A Word About Privacy & Self Regulation

Location is by far the most important aspect of context with mobile. It is also the most sensitive due to privacy concerns regarding the mobile marketing environment, specifically mobile data collection, sharing, and use practices.

The Digital Advertising Alliance's (DAA) ongoing efforts to define best practices in this area have been designed to ensure that principles of user privacy and collection transparency are honored throughout the mobile advertising and marketing industry. In the DAA's Application of Self-Regulatory Principles to the Mobile Environment (July 2013) mobile marketers are directed to: "give clear, meaningful and prominent notice of transfers of Precise Location Data to Third Parties, or Third Parties' collection" among other practices. The MMA and the Location Committee support these principles which are available for download at http://www.aboutads.info/DAA_Mobile_Guidance.pdf

PART ONE: OVERVIEW OF DATA RESTRICTING FACTORS



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Mobile technology today allows marketers to reach their mobile audiences in ways that were never before possible. Unlike more traditional mediums, mobile ad and engagement campaigns can leverage a user's current, past or future locations combined with data such as demographics, social behaviors, and visitation patterns to create a truly targeted and engaging advertising experience.

Although the promise of mobile is the most accurate targeting of any medium - the reality is that the technology behind the ad targeting and the accuracy of the location data being utilized are the main determinants for targeting precision.

Because mobile campaign performance is tightly linked to these factors, marketers must understand the different types of location data and technologies that are available for ad targeting today and the proper use for each type. Failure to understand this can result in lack-luster performance and missed mobile opportunity.

To help marketers understand these factors, we have outlined the eight most commonly used types of location-determining technology along with their unique advertising pros and cons.

1 INDOOR POSITIONING SYSTEMS (IPS)



IPS is a network of devices used to wirelessly locate objects or people inside a building. Instead of using satellites, an IPS relies on nearby anchors (nodes with a known position), which either actively locate tags or provide environmental context for devices to sense. Indoor Positioning Systems utilize geo-precise location information through the use of Wi-Fi, Bluetooth or other location-determining technologies.

Pros: It is considered to be more accurate than the outdoor-based systems (i.e. GPS)

Cons: There are privacy implications, as this is a geo-precise signal. Scale is limited due to the precise signal, typically reaching a smaller audience.

2 BLUETOOTH (BT)



A wireless Technology standard for exchanging content and data over short distances from fixed and mobile devices with high levels of security.

Pros: BT devices (access points) allow for extremely accurate location based marketing (zones can be set for 10 - 100FT)

Multiple BT devices set up indoors (a form of Indoor Positioning or IPS) can create intelligent networks capable of determining a device's precise location, time spent in certain locations and directional information along with reporting BT activity.

Cons: This method is considered geo-precise and therefore has privacy implications. It requires users to have BT turned on and **VISIBLE**, losing those potential customers who don't have the right settings turned on.

3 GLOBAL POSITIONING SYSTEM (GPS)



GPS is a satellite-based system that is considered the gold standard of location data as it is among the most accurate of methods; it provides the actual latitude and longitude (lat/long) of the device.

Pros: All modern smartphones have GPS capability. The signal is geo-precise, timely, and does not require sign-in like Wi-Fi; it is passively active if the consumer has opted in to allow access to this information.

Cons: This method is considered geo-precise and therefore has privacy implications. It requires users to have GPS turned on and to activate location sharing, losing those potential customers who don't. GPS also has limitations when used indoors due to interference with building structures. Due to the small targeting area (as determined by the lat/long coordinates), this method also reaches a limited audience.

4 WI-FI HOTSPOTS



A hotspot is a site that offers Internet access over a wireless local area network (WLAN) through the use of a router connected to a link to an Internet service provider. Hotspots may be found in coffee shops and various other public establishments in many developed urban areas throughout the world.

Pros: Hotspots deliver a high degree of specificity and geo-precision of a specific location, but not necessarily an X/Y coordinate within that location. Consumers who have agreed to use the Wi-Fi hotspots are actively engaged with their devices at the time. The system can provide location-discovery capabilities indoors and in dense urban areas.

Cons: They require users to be on the local network with location sharing turned ON. Due to the small targeting area (as determined by the WLAN), this method also reaches a limited audience. In addition, this method is considered geo-precise and therefore has privacy implications

5 WI-FI TRIANGULATION



The Wi-Fi triangulation system looks for and examines the strength of all nearby Wi-Fi systems in relation to a specific device. The localization technique used for positioning with wireless access points is based on measuring the intensity of the received signal.

Pros: The system can provide location-discovery capabilities indoors and in dense urban areas.

Cons: Wi-Fi must be turned ON user phones and accuracy depends on the number of Wi-Fi hotspots that are available in the area. As a result, this method typically reaches a limited audience. In addition, the processing time involved in triangulation may cause latency in the communication of this location information.

6 CELL-TOWER TRIANGULATION



Cell tower triangulation determines location based on a mobile device's relative distance to the nearest cell phone towers. Accuracy increases with the number of cell towers nearby.

Pros: Cell tower triangulation doesn't require users to have smartphones nor GPS/Wi-Fi turned ON. It performs well in dense, urban areas.

Cons: Does not perform well in remote areas where towers are more spread out. Does not offer geo-precise targeting capabilities.

7 IP ADDRESS

192.168.1.1



The IP address (e.g., 10.226.29.91) assigned to the connection can provide an approximate location.

Pros: Using IP addresses requires nothing but an Internet connection: no cell signal, no GPS – even an Ethernet connection works.

Cons: With the lack of accuracy of tracking, it is not geo-precise. There are privacy concerns regarding unique addresses – the EU considers them privacy protected.

8 USER-REPORTED LOCATION DATA

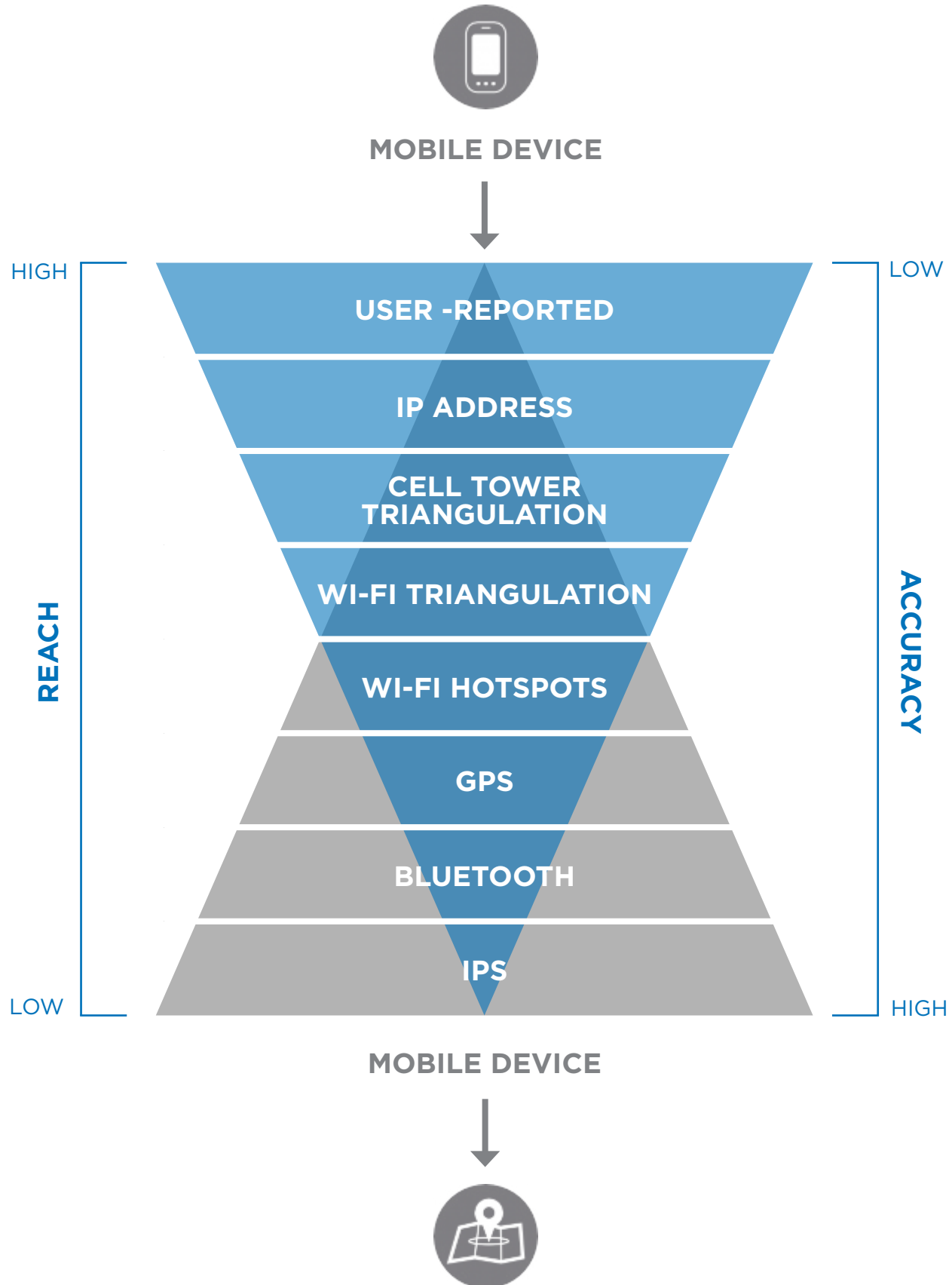


User-generated location data created by users providing an address or zip code when registering for a service.

Pros: Especially when applied to social targeting, user-reported location data can deliver high value through high engagement (refer to marketing tactics section for more on this).

Cons: Unless it is tied to social targeting, there is little or low likelihood that the user is actually at the registered address/zip code and very difficult to differentiate between what might be a user's home or work address.

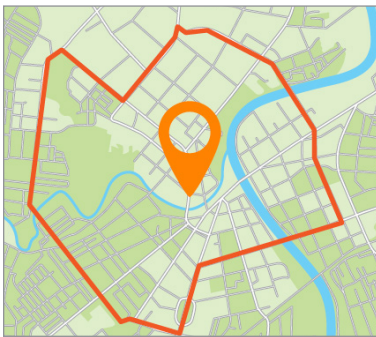
Before starting any mobile advertising program, make sure to validate with your ad provider that the location data they are utilizing matches up to the targeting technique you are looking to deploy (as indicated above)



Location awareness provides a unique opportunity for marketers to target consumers based on their physical proximity to specific locations or as an indicator of behavior. The convergence of mobile's "always on" technology with the personal nature of the mobile device gives brands new, engaging ways to interact with consumers with location providing additional context and relevance.

Determining the ideal degree of targeting precision requires marketers to further embrace strategic thinking, to understand their audience/user and to have the willingness to alter their approach as their campaigns evolve. For example: targeting customers just outside a store may deliver desired returns if looking to promote a limited time offer or immediate call to action. However, this method may not be the most effective if trying to drive awareness about a new store opening or a new product offering about to be unveiled due to its more limited reach.

STANDARD LOCATION TARGETING



Standard location targeting is easily available across mobile devices. Ex: Country, State, City, DMA, and Zip Code.

Pros: *Familiarity* – a common technique used in desktop, easily understood/adopted by advertisers. Not geo precise, so easily scaled.

Cons: Because it does not require geo-precise data, it is better used for awareness-driving rather than direct response campaigns.

LOCATION CONTENT TARGETING

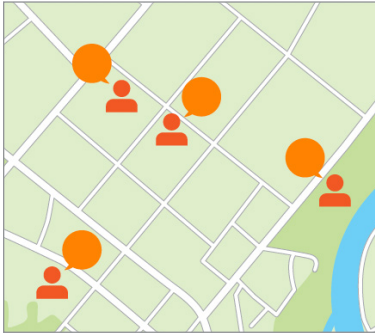


Utilizing regional mobile web and/or app inventory to achieve local coverage. Local content such as: LA Times, NBC Connecticut or Patch.com are all examples of how a brand can accomplish location targeting through regional mobile content.

Pros: *Simplicity* – Place an ad in the LA Times and the likelihood is that your message will primarily reach customers in and around Los Angeles.

Cons: Lack of specificity – users from NYC or Seattle also read the LA Times. Like standard location, this is best used for awareness raising campaigns only - due to lack of precision. for awareness-driving rather than direct response campaigns.

LOCATION SOCIAL TARGETING

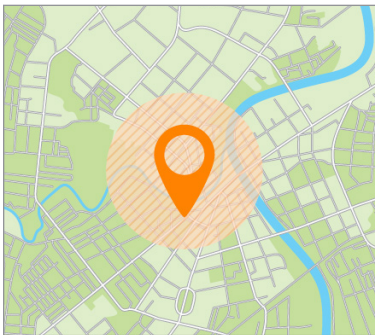


Check-in based applications like Yelp, Foursquare, etc.

Pros: Brick and mortar businesses are able to easily reach potential customers who are physically in or near their location.

Cons: Lack of scale, only reaching those users who are in the area and utilizing these apps.

GEO-FENCING

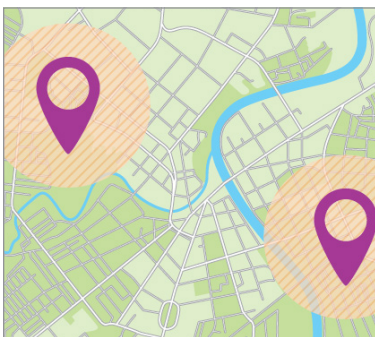


Identifies a point of interest on a map and establishes a radius around it for targeting purposes.

Pros: Allows advertisers to reach a very precise local audience when they are near a specific point of interest. Geo-fencing can be used for direct

Cons: Requires geo-precise inventory (GPS Lat/Long, Wi-Fi etc.). Small targeting area means high performance but low overall reach/scale.

GEO-CONQUESTING



Uses location data to identify a brand's competitors in an effort to promote a competing or competitive offering to their customers. This can be done in two ways. The most popular form of geoconquesting leverages the technique of geo-fencing to reach and engage consumers when they are in or around a target competitor location. Another form of conquering leverages a device's past location behavior – allowing marketers to reach consumers who have previously visited a competitive location.

Pros: Allows advertisers to reach specific audiences in/around competitive locations in real time; excellent for direct response. Also allows the ability to target devices based on past visitation behaviors; this targeting approach offers increased reach and is excellent for driving increased awareness.

Cons: The geo-fencing version of conquering requires geo-precise inventory (GPS Lat/Long, Wi-Fi etc.). Small targeting area means high performance but low overall reach/scale.

POLYGON TARGETING

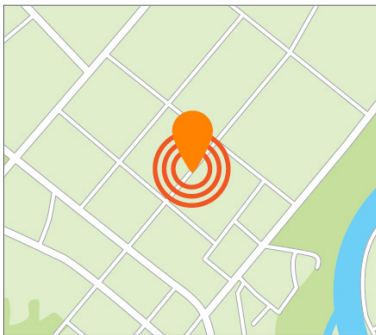


When the need for structured targeting is apparent, a marketer would choose multiple spots on a map to identify the appropriate radius for their offering. Ex: Telecom provider with select a radius based on regions that can accept their broadband services or, a Retailer wishing to closely

Pros: Allows a custom targeting area.

Cons: Depending on size of targeting area – this technique may require geo-precise inventory resulting in low overall mobile audience/target reach.

WI-FI TARGETING

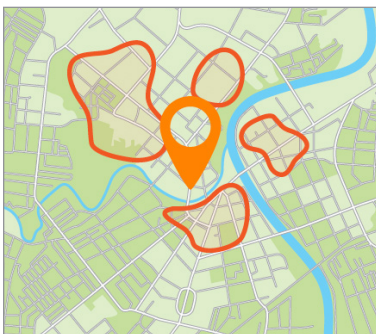


Wi-Fi connections can be targeted individually (ex: College Campus Wi-Fi) or grouped to define like-minded audiences (ex: In-Flight, Airport & Hotel Wi-Fi = Travelers).

Pros: Allows advertisers to reach a very precise local audience when they are near a specific point of interest. Wi-Fi targeting can be used for direct response, driving specific actions based on user location.

Cons: Requires geo-precise inventory (GPS Lat/Long, Wi-Fi etc.). Small targeting area means high performance but low overall reach/scale. Small targeting area means high performance but low overall reach/scale.

GEO-AWARE TARGETING I.E. LOCATION BASED PROFILES

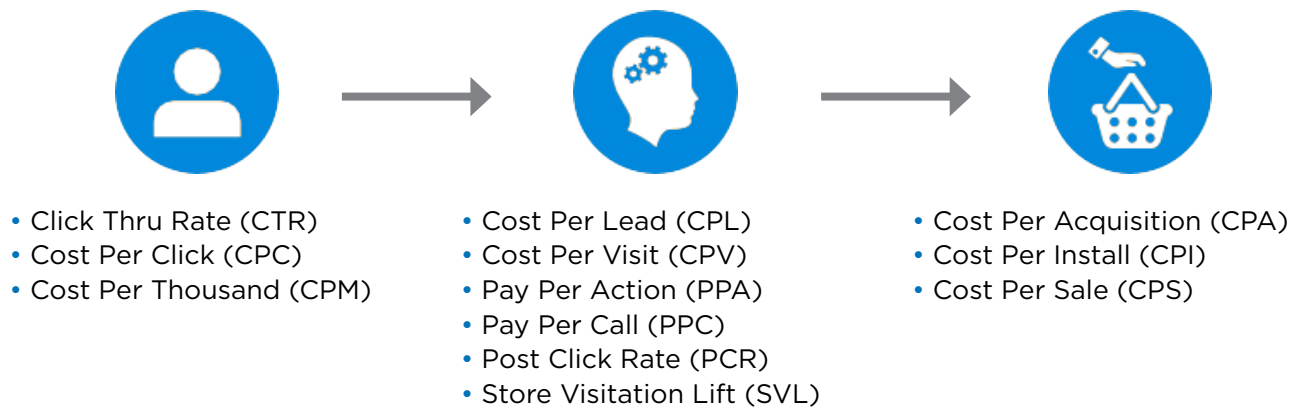


Uses location data to identify a brand's competitors in an effort to promote a competing or competitive offering to their customers. This can be done in two ways. The most popular form of geoconquesting leverages the technique of geo-fencing to reach and engage consumers when they are in or around a target competitor location. Another form of conquesting leverages a device's past location behavior – allowing marketers to reach consumers who have previously visited a competitive location.

Pros: Allows ability to reach users based on past behavior, allows high reach as these profiles can be found nationally and are typically tied to geo-standard areas such as zip codes, cities and Designated Marketing Area's (DMA's).

Cons: Lack of accuracy in targeting, since most profiles are based on static or past mobile behaviors

Understanding the language of mobile measurement techniques and metrics available has never mattered more than today. Case in point: from 2011 to 2012, mobile ad spend grew 111%, the second year of triple-digit growth.[†] The goal of this section is to define the marketing opportunities available and to clarify the various techniques and methods used for measuring the success of mobile campaigns. From awareness-based measurement all the way through to actual conversion metrics, mobile helps marketers connect the dots and fully realize the full potential of their initiatives.



<http://www.adexchanger.com/data-nugget/iab-mobile-ads-captured-9-of-online-ad-spend-in-2012>

	PRIMARY TERM	PRICING MODEL	CAMPAIGN PERFORMANCE MEASURE	ROI/SPEND EFFECTIVENESS MODEL	DETAILS
AWARENESS	CPM Cost Per Thousand Alternative/related terms: Cost per Impression Cost per View	X			Pricing based on the number of impressions served. CPM is currently the most common pricing model. (Calculated as \$X per 1,000 impressions)
	CPM Cost Per Thousand	X		X	Pricing based on the number of ads actually clicked; versus total impressions served. (Calculated as \$X per 1,000 clicks or $CPC = CPM / (1000 \times CTR)$ or Cost of program / # of Clicks)
	CTR Click Thru Rte		X		A performance measure based on the percentage of ads clicked on divided by the total number of impressions served (Ad Clicks/Ads Served)
INTENT	CPL Cost Per Led	X	X	X	An effectiveness measure to determine the “cost” for acquiring leads, calculated by taking the total (campaign) costs, divided by then number of new leads. E.g., the goal of the campaign could be insurance quote inquiries, using a click-to-call campaign, targeted to mobile users within a two mile radus of a local agent. The CPL would be the cost of the campaign, divided by the total number of calls received. Note: CPL is sometimes used as pricing model.
	CPV Cost Per Visit Alternative/related terms: SVL		X	X	An effectiveness measure to determine the “cost” for increasing store or site visits, calculated by taking the total (campaign) costs, divided by the number of total, incremental, or directly tied visits. Note: The ways in which visit are captured and calculated vary across advertisers and vendors.
	PCR Post Click Rate Alternative/related terms: Secondary Action Rate (SAR)	X	X		A performance measure based on the percentage of ads that resulted in a down stream “action” or desired behavior, beyond the initial ad click, divided by the total number of impressions served (Post 1st Click Action/Ads Served or Post 1st Click Action/Ads Clicked or $PCR = \# \text{ of 1st Clicks} / \# \text{ of downstream or secondary actions}$)

	PRIMARY TERM	PRICING MODEL	CAMPAIGN PERFORMANCE MEASURE	ROI/SPEND EFFECTIVENESS MODEL	DETAILS
INTENT	PPA Pay Per Action Alternative/related terms: Cost per Action	X		X	Pricing based on the number of times a user engages in the predetermined goal or “action” E.g., the goal of the campaign could be to get a user to watch a video, in which case the buyer only pays for completed video views (Calculated as \$X per action, or \$X per 1,000 actions or PPA = Cost of program / # of desired actions)
	PPC Pay Per Call	X	X	X	Cost/performance calculation based on the number of calls received from a campaign/program (Calculated as \$X per call or Cost of program / Total # of calls)
	SVL Store Visitation Lift Alternative/related terms: Place Visitation Rate (PVR) In-store Traffic Lift (ITL) Mobile Attribution		X		A metric with various formulas (and names), depending on the advertiser or vendor, but all built around a notion of measuring increased foot traffic as a result of a mobile campaign
PURCHASE	CPA Cost per Acquisition Alternative/related terms: Cost per Conversion (CPC)	X	X	X	Pricing based on the number of newly acquired consumers E.g., the goal of the campaign could be customer sign-ups for a weekly newsletter, where the CPA is based on the total number of email addresses collected. (Calculated as \$X per new or converted customer) An effectiveness measure to determine the “cost” for acquiring or converting new customers, calculated by taking the total(campaign) costs, divided by the number of newly acquired consumers
	CPI Cost Per Install Alternative/related terms: Cost per Download (CPD)	X		X	Pricing based on number of app downloads. (Calculated as \$X per install, or app download or CPI = Cost of program / # of Installs / app downloads)
	CPS Cost Per Sale Alternative/related terms: Cash Register (Cost to “ring the cash register”)			X	An effectiveness measure to determine the “cost” for generating a POS transaction, calculated by taking the total (campaign) costs, divided by the number of total, incremental, or direct transactions. E.g., the goal of the campaign could be to redeem a digital coupon, in which case the CPS is the cost of the campaign, plus the coupon value, divided by the number of users that walk into a store and redeem the coupon, and make a purchase

Mobile represents an ongoing evolution, growing and changing at unprecedented speed. With so many facets and players, achieving widespread standardization on a myriad of topics like data terminology, targeting methods and strategies, measurement and metrics is a uniquely worthwhile challenge. With greater understanding of the language of location, marketers will be empowered to make the best decisions that fully realize the potential of their brand both within and beyond the mobile medium.

Assisted Global Positioning System (A-GPS) (see GPS)

A-GPS enhances the performance of standard GPS in devices connected to the cellular network.

A-GPS improves the location performance of cell phones (and other connected devices) in two ways:

- 1 By helping obtain a faster location coordinate by acquiring and storing information about the location of satellites via the cellular network so the information does not need to be downloaded via satellite
- 2 By helping position a phone or mobile device when GPS signals are weak or not available. GPS satellite signals may be impeded by tall buildings, and do not penetrate building interiors well. A-GPS uses proximity to cellular towers to calculate position when GPS signals are not available.

Android ID (see Device ID)

Android's device identification number (ID), which is determined during the device's first boot.

These device identification numbers remain constant for the lifetime of the device unless a factory reset is performed.

Areas of Activity (aka Mobile Areas of Activity or AOA)

Locations that users frequent on more than one occasion. By analyzing AOA collectively, patterns of mobile behaviors and preferences emerge. The AOA's often help form geographic, demographic, and behavioral profiles.

Bluetooth Technology

Using technology to search for consumers with their device's Bluetooth on and visible and reaching out to them via a push notification to offer them content. Bluetooth is a delivery protocol that is extremely flexible and can deliver a wide variety of content ranging from trailers for studios and networks, simple text message and links to scan-able coupons. Another benefit is that it is free to the consumer.

Census Tract

A census tract, census area, or census district is a geographic region defined for the purpose of taking a census. Usually these coincide with the limits of cities, towns or other administrative areas within a county.

Centroid Targeting (see Geo-Fencing)

Cell-tower Triangulation (see Location Signal)

- This method determines location based on a mobile device's relative distance to the nearest cell phone towers. Although it has the term "triangulation" it can mean more or less than three towers. Accuracy increases with the number of cell towers nearby. Cell tower triangulation often does not work well in rural areas, but can work well in urban areas.
- When GPS signals can't reach the device's GPS chip, which often happens indoors, the device will often report its location by communicating with the cell tower it's connected to and estimating its distance.

City centroids (see Lat/Long)

Refers to the center of the city or center of the city mass often stated in Latitude and Longitude coordinates. Centroids are often used when inexact location data is present.

Click Through Rate (CTR)

A performance measure based on the percentage of ads clicked on divided by the total number of impressions served (Ad Clicks/Ads Served).

Click to Call Rate (CTC)

A performance measure based on the percentage of ads that resulted in a “click to call” action, divided by the total number of impressions served (Post 1st Click Action/Ads Served).

Cost per Action (see Pay-per-Action)

Cost per Acquisition (CPA)

- Cost/performance calculation based on the number of newly acquired users. For example, the goal of the campaign could be to collect email addresses, so the CPA is based on the number of email addresses submitted as a result of the ad – also called PPA (Pay per Action) or CPC (Cost per Conversion)
- (\$X per acquisitions, or Total Program Cost / # of acquisitions).

Cost per Call (see Pay-per-Call)

Cost per Click (CPC)

- Cost/performance calculation based on the number of ads actually clicked
- (\$X per click, or $CPC = CPM / (1000 \times CTR)$).

Cost per Download (CPD)

- Cost/performance calculation based on the number of times a user downloads an app or other digital content such as movie trailers, ring tones etc.
- (\$X per install, or Total Program Cost / # of downloads or app installs).

Cost per Drive (see Cost per Navigation)

Cost per Install (CPI) (see Cost per Download)

Cost per Navigation (CPN)

Cost/performance calculation based on the number of resulting map downloads or access to driving directions / navigations.

Cost per Sale (CPS)

- Cost/performance calculation based on the number of resulting POS transactions.
- E.g., the goal of the campaign could be to redeem a digital coupon, the cost to ring the cash register is the cost of the campaign, plus the coupon value, divided by the number of users that walk into a store (or e/mCommerce site) and redeem a coupon, as a result of the ad served.

Cost per Lead (CPL)

- Cost calculation based on the number of leads generated through a campaign.
- E.g., the goal of the campaign could be to collect email addresses, so the CPL is based on the number of email addresses collected as a result of the ad ($\text{\$X per lead}$, or $\text{Total program cost} / \text{\# of Total leads}$).

Cost per Thousand (CPM)

- Cost calculation based on the number of impressions served.
- ($\text{\$X per 1,000 impressions}$) – also called CPI, CPV.

Cost per View / Impression (CPI) (see Cost per Thousand)**Cost per Visit (CPV)**

Cost/performance calculation based on the number of times a user visits a store or site. The way a visit is captured and calculated varies across advertisers and vendors.

Cross-Application Data

Data collected from or through an application on a device regarding application use over time and across non-affiliate applications.

De-identification

The process of de-identification, by which personal identifiers (i.e. phone numbers, names etc.) are removed from information in an effort to mitigate privacy risks to individuals.

De-identifiable Information (DII)

Data that has gone through the De-identification process and cannot reasonably be connected or associated to a consumer or a specific computer or mobile device.

Device ID

A device ID (device identification) is a distinctive number associated with a smartphone or similar handheld device. Device IDs are separate from hardware serial numbers.

Types of device ID's:

- Android ID
- Identifier for Advertising or IDFA or IFA (iOS)
- Universal Device ID or UDID (iOS)
- MAC Address: Media Access Control address

Device Fingerprinting

A device, machine, or browser fingerprint is information collected about a remote computing device for the purpose of identification. Fingerprints can fully or partially identify individual users or devices even when cookies are turned off.

Device Location (see Mobile Location)**Dynamic Location**

Location that is represented by a user or devices real-time location. As a result, the location the user or device is in does not remain static, but instead is in constant motion.

Dynamic Targeting

Mobile ad targeting that is based on some form of real-time data / behaviors. As a result, the targeting area does not remain static, but instead is in constant motion.

Fingerprinting (see Device Fingerprinting)

GPS (Global Positioning System aka Outdoor Positioning System or OPS)

A global system of U.S. navigational satellites developed to provide precise positional and velocity data and global time synchronization for air, sea, and land travel.

General Location (see Standard Location)

Geo-Aware (aka Location Aware)

Refers to devices that can passively or actively determine their location.

Geo-Aware Ad Targeting

Geo-Aware advertising uses the context of a given location to serve relevant ads to mobile users. This type of targeting strategy relies on the layering of multiple data sources to the area --- to help drive out additional consumer context such as typical type of demo that frequents the area, types of businesses within the area, purchase behavior etc. This technique typically relies on past location behaviors vs. more geo-precise targeting techniques that rely on a user's current or future location behaviors.

Geo-Behavioral (see Location Based Profiling)

- Refers to consumer behaviors that occur in a specific location
- Refers to a consumer's historical pattern of movements across locations.

Geo-Conquesting

- The capability of being able to target messages in and around competitive locations using geo-fencing technology.
- The ability to target messages to users who have previously visited a competitive location.

Geo-Fencing

A technology that allows an advertiser to select a geographic point using latitude and longitude information and then to create a virtual "fence" around that point of a given radius (e.g., an advertiser can pinpoint a bank branch, then deliver a specific ad to anyone who comes within a 200 meter radius). Ads delivered through geo-fencing typically yield higher conversions and better ROI for advertisers.

Geo-Location

The identification of the real-world geographic location of an object, such as radar, a mobile phone or an Internet-connected computer terminal. Geo-location may refer to the practice of assessing the location, or to the actual assessed location.

Geo-Precise Location (see Precise Location)

Geo-Profile or Geographic Profile (See Location Profile)

Historical Location

Based on activities or events that happened in the past in a distinct area

Hotspot (aka Wi-Fi Hotspot)

A hotspot is a site that offers Internet access over a wireless local area network (WLAN) through the use of a router connected to a link to an Internet service provider. Hotspots typically use Wi-Fi technology. Hotspots may be found in coffee shops and various other public establishments in many developed urban areas throughout the world.

Hyper-local

Hyper-local connotes information oriented around a well-defined community with its primary focus directed toward the concerns of its residents. The term can be used as a noun in isolation or as a modifier of some other term (e.g. news). When used in isolation it refers to the emergent ecology of data (including textual content), aggregators, publication mechanism and user interactions and behaviors which center on a resident of a location and the business of being a resident. More recently the term hyper-local has become synonymous with the combined use of mobile applications and GPS technology.

IDFA / IFA or Identifier for Advertising (see Device ID)

The IDFA is an Apple Device ID released with iOS 6 and is a cross application / publisher identifier. Unlike its predecessor, the IDFA is not permanently tied to a mobile device, as users can reset their IDFA at any time for added security or opt out of ad tracking altogether with a setting aptly named, "Limit Ad Tracking." As a result, the IDFA can no longer be easily linked to specific devices/users.

IP address (see Location Signal)

- Location can be approximated by using the IP address (e.g. 10.226.29.91) assigned to the connection. This is often not an accurate method of tracking location.
- Location can be gauged by the IP address associated with the data connection. The accuracy of this approach varies between carriers, and is far less reliable than the above methods. (BI-How Location)

Indoor positioning systems (aka IPS or ILS [Indoor Location System] or WPS [Wi-Fi Positioning system])

Any system that attempts to provide an accurate position inside of a covered structure, such as an Airport, a Subway, or a Mall. It is generally implied that modern indoor positioning systems do not use GPS Satellites due to GPS's inability to penetrate structures or define a specific location point in an area more granular than 20 meters. An IPS relies on nearby anchors (nodes with a known position), which either actively locate tags or provide environmental context for devices to sense.

Indoor Location System (see Indoor Positioning System)**In-Store Traffic Lift (ITL)** (see In-Store Visitation Rate)**In-Store Visitation Rate (IVR)**

A metric with vary formulas (and names), depending on the advertiser or vendor, but all built around a notion of measuring increased foot traffic as a result of a campaign.

In-Store Visitation Lift (see In-Store Visitation Rate)

Lat/Long (Latitude/Longitude)

- Lat/Long is an abbreviation of latitude and longitude. Latitude represents a point on the earth's surface parallel to the equator, and longitude represents a point on the earth's surface between the two poles. Together, these two components specify the position of any location on the planet. These coordinates are measured in decimal degrees. A lat/long to 5 decimal degrees represents an accuracy of 1.1 meters, i.e. the exact location is within 1.1 meters of the represented point.
- In mobile, Lat/Long can be represented in many forms such as Precise, Point-in-time or Historical –which is dependent on the device or applications frequency at sending and receiving this information.
- Types of Lat/Long Coordinates Common in Mobile Targeting:
 - Precise location
 - Point-in-Time location
 - Historical location
 - City centroid location
 - Zip centroid location
 - Location Aware (see Geo-Aware)

Location Based Mobile Marketing

- Location based marketing (LBM) refer to more than just location based advertising – as marketing can include things such as locally targeted content, messaging etc. and may or may not be advertising related.
- Localized distribution of advertising content.

Location Based Advertising (LBA)

Location-based advertising (LBA) is a form of location-based marketing that integrates mobile advertising with Location Based Services. The technology is used to pinpoint consumer's location and provide location-specific advertisements on their mobile devices.

Location Based Ad Network

A company that connects advertisers to mobile web sites and or applications that have the capability to host location-specific advertisements. The key function of an ad network is aggregation of location specific ad space supply from publishers and matching it with advertiser demand.

Location Based Profiling (aka Geographic Profile or Location Profile)

- Profiles based on the context of a given location based on past location data / behaviors (see geo-aware ad targeting)
- Profiles based on visitation patterns across multiple locations. Often used to determine distinct areas of target activity or AoA.

Location Based Services (LBS)

A location-based service, or LBS, is any information, entertainment, or social media service that is available on a mobile device, and makes use of geographical position. Position is determined by GPS, A-GPS, or Wi-Fi/cell tower triangulation.

Location enabled (see Location Aware)

Location as a Service (LaaS)

A location data delivery model where privacy protected physical location data acquired through multiple sources including carriers, Wi-Fi, IP addresses and landlines is made available through a centralized point.

Location profiling (see Location Based Profiling)

Location Signal

Refers to the different ways location data can be accessed and passed via mobile.

Types of location signals:	Outdoor:	Indoor:
	GPS	A-GPS
	Wi-Fi Indoor	Positioning System (IPS)
	IP address	Wi-Fi triangulation
	Cell-tower triangulation	
	User-Reported Location	

MAC Address or Media Access Control address (see also Device ID)

A unique identifier assigned to devices for communications on the physical network segment. A MAC address usually encodes the manufacturer's registered identification number and may be referred to as the burned-in address.

Micro-Fencing

Similar to geo-fencing in that it allows an advertiser to select a geographic point using latitude and longitude information and to create a virtual "fence" around that point of a given radius. Unlike Geo-fencing, which primarily relies on GPS for positioning, Micro-fencing typically relies on Indoor Positioning Systems or IPS that allows fencing at a more granular level (less than 20 meters).

Mobile Location (aka Device Location)

Typically represented in Lat/Long coordinates as obtained by GPS or IPS. These coordinates can be precise, historical or predictive location points.

Mobile Unique Identifier or MUID (see Device ID)

A unique combination of numbers or characters associated with a specific device. These identifiers come in various forms and under various names depending on the method of assigning the ID, the manufacturer of the device, and/or the operating system on the device (e.g., Apple uses UDID for its Unique Device Identifier).

Multi-Site Data

Data collected from a particular computer or device regarding Web viewing over time and across non-Affiliate Web sites.

Near Field Communications (NFC)

Near Field Communications is a technology for smartphones with chips that deliver a similar experience to the QR codes, i.e. no need to scan.

Outdoor Positioning System (OPS) (see GPS [Global Positioning System])

Pay-per-Action (PPA)

- Cost/performance calculation based on the number of times a user engages in the predetermined goal or action. For example, the goal of the campaign could be to engage with a store locator, so the PPA is based on the number of times a user utilizes the store locator as a result of the ad. Other actions include but are not limited to calls, video plays, etc. Also called CPA (Cost per Action)
- (\$X per action, or \$X per 1,000 actions).

Pay-per-Call (PPC)

Cost/performance calculation based on the number of calls received from a campaign/program (\$X per call or Cost of program / Total # of calls).

Personal Directory Data

Personal Directory Data is calendar, address book, phone/text log, or photo/video data created by a consumer that is stored on or accessed through a particular device.

Personally Identifiable Information (PII)

Information that can be used on its own or with other information to identify, contact, or locate a single person, or to identify an individual in context (source: Wikipedia).

Place-based Targeting (see Point of Interest Targeting or POI)**Place Visitation Rate** (see In-Store Visitation Rate)**Precise Location** (aka Geo-Precise Location)

Data about the physical location of a device that is sufficiently precise to locate a specific individual or device. Examples of location signals that provide geo-precise information include In-store Positioning Systems (IPS), Global Positioning Systems (GPS) and Wi-Fi.

Predictive Location (see Mobile Location)

The process of analyzing activities or events that happened in the past in a distinct area to predict future user or device behaviors.

Point-in-Time Location (see Lat/Long)

Refers to a user or devices location that was collected at a specific point in time. Often times location based applications and/or sites ask for a user to share their location. Most applications do not continually collect this information to help preserve a device's battery life. As a result, user or device location data that may be accessible by one of these applications and/or sites may represent a user or devices location at the point in time when this data was last accessed/collected.

Point of Interest (POI) Targeting

Mobile targeting based around a particular location or locations, e.g., the Eiffel Tower, a gas station, and/or a sports stadium. The POI may or may not have a defined US Postal Address.

Polygons (Location Polygons) (see Geo-Fencing)

A targeting technology that allows user or device targeting down to a specified area of a map. Instead of a defined point (such as a Lat/Long) or a circular radius around a defined point, the targeting area is represented in the shape of a polygon.

Post Click Rate or Post Click Action (see Secondary Action Rate)**Proximity Marketing**

Proximity marketing is the localized wireless distribution of advertising content associated with a particular location. Transmissions can be received by individuals in that location who wish to receive them and have the necessary equipment to do so.

RSS or Received Signal Strength

RSS can be used internally in a wireless network or Wi-Fi Positioning Systems (WPS) to determine the amount of radio energy being transmitted to an antenna / wireless receiving device. The devices received signal strength can then be used to determine the devices location as it moves around structure or building.

Radius

A straight line from the center of a point (can be represented in a Lat/Long or zip code or city Centroid) to the circumference of a circle or sphere. A radius is typically used in Geo-Fencing technology.

RFID (aka Radio Frequency Identification)

The wireless non-contact use of radio-frequency electromagnetic fields to transfer data, for the purposes of automatically identifying and tracking tags attached to objects. The tags contain electronically stored information. RFID tags are used in many industries. An RFID tag attached to an automobile during production can be used to track its progress through the assembly line.

Real-time location (see Precise Location)**SMS or Short Message Service**

Short Message Service and be done proactively to people in areas via a push or reactively by asking people anywhere to type in a short code to receive info/offers/content.

Secondary Action Rate (SAR)

A performance measure based on the percentage of ads that resulted in a down stream “action” or desired behavior, beyond the initial ad click, divided by the total number of impressions served.

Standard Location (aka General Location or Standard Geo)

The use of zip codes, cities, DMAs or other standard geographic boundaries to define an area.

Static Location

Location that is represented in a fixed state. For instance, typical geo-fencing or zip code targeting in mobile is a form of static location as the fence or zip code typically does not move - but stays as static targeting areas during the life of the campaign.

Statistical ID (see Device Fingerprinting)**Tiles (location tiles)**

A targeting technique that allows user or device targeting down to a specified area of a map. Instead of a defined point (such as a Lat/Long) or a circular radius around a defined point, the targeting area is represented in the shape of a square or a tile.

Unique Device ID Number (UDID) (see also Device ID)

Apple’s original unique device ID number which consisted of a 40-digit sequence of letters and numbers. These numbers were deprecated around August 2012 due to privacy concerns around the ability to tie UDID information to a consumer’s Personally Identifiable Information (PII). On May 1, 2013 Apple started to reject any application that leveraged this unique device identifier.

User reported location data (see also Location Signal)

A user who registers for a service often gives an address and/or a zip code. These can be used to place a location, but the chances that the user is at that location at any given moment tend to be low. Note: When users sign up for emails or register for mobile apps and services, they often enter their addresses and zip codes. This data can be translated into GPS coordinates to build a geolocation profile of a single user or user base. (BI-How Location)

Wi-Fi Hotspot (see Hotspot)

Wi-Fi Positioning System (WPS) (see Indoor Positioning System)

Wi-Fi triangulation (see Location Signal)

The Wi-Fi triangulation system determines a device's location by looking for nearby Wi-Fi systems, and examining the strength of their signal and all the spots in the area. Accuracy is generally to 20 meters and is based on the number of Wi-Fi spots that are documented in the database. This data can be collected in multiple ways, including by mobile phones and by automobile-based collection systems. The system can provide location-discovery capabilities indoors and in dense urban areas.

Zip centroid

Refers to the center of a zip code or center of the zip code mass. Centroids are often used when inexact location data is present.

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MMA North American Members – Location Committee:

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Beintoo	Motorola Mobility, Inc	Time Inc.
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If you'd like to get involved with the committee, please contact committees@mmaglobal.com

If you have comments on this guide, please visit www.mmaglobal.com/location-terminology-guide

ABOUT THE MOBILE MARKETING ASSOCIATION (MMA)

Mobile Marketing Association (MMA) is the premier global non-profit trade association representing all players in the mobile marketing value chain. With more than 750 member companies, the MMA is an action-oriented organization with global focus, regional actions, and local relevance.

The MMA's primary focus is to establish mobile as an indispensable part of the marketing mix. The MMA works to promote, educate, measure, guide, and protect the mobile marketing industry world-wide. The MMA's global headquarters are located in the United States and has regional chapters, including North America (NA), Europe, Middle East and Africa (EMEA), Latin America (LATAM), and Asia Pacific (APAC) branches. For more information, please visit Mobile Marketing Association (MMA) www.mmaglobal.com