

M2M Key Terms

<http://www.koretelematics.com/resources/m2m-glossary>

Access Fee:	A monthly charge for the ability to connect to a wireless network. This fee is assessed monthly whether the device is actually used or not.
Activation:	Configuration of a wireless device so that it is ready to be used to transmit and receive calls on the wireless network.
Activation Fee:	A one-time, up-front charge for the activation of a wireless device.
Airtime:	a period of time during which a broadcast of information takes place. In the case of wireless devices, it is the total time that a wireless device is connected and in use for voice and data transmission. This includes use for calls both received and placed.
AMPS (Advanced Mobile Device Service):	An analog cellular device service standard used in the U.S. and other countries.
Antenna:	A device that facilitates the transmission and reception of radio signals.
APN (Access Point Name):	The simple name used to connect, authenticate, and route a call from a mobile device to a service, usually embedded in a device configuration. In the GPRS backbone, an Access Point Name is a reference to a GGSN. To support inter-PLMN roaming, the internal GPRS DNS functionality is used to translate the APN to the IP address of the GGSN.
Authentication:	A feature used to reduce fraud by confirming the identity of a device to the wireless network.
Automatic Call Delivery:	A service feature that allows a user to receive calls when roaming outside of the device's home coverage area.

TOP

B

Bandwidth:	Describes the transmission capacity of a medium in terms of a range of frequencies. A greater bandwidth indicates the ability to transmit a greater amount of data within a given period of time.
Bluetooth:	A short-range wireless protocol meant to allow mobile devices to share information and applications without the worry of cables or interface incompatibilities. The name refers to a Viking King who unified Denmark. Operates at 2.4 GHz, see www.bluetooth.com for more information.
BREW (Binary Runtime Environment for Wireless):	A QUALCOMM programming platform designed to facilitate the development and use of data applications that can function on any CDMA-based wireless device. Common applications include games and software for corporate functions. See J2ME for a similar technology from Sun Microsystems.
Broadband:	A communications channel of high bandwidth, capable of transmitting a relatively large amount of data over a given period of time.
BTA (Basic Trading Area):	A geographic region defined by a group of counties that surround a city, which is the area's basic trading center. The boundaries of each BTA were formulated by Rand McNally & Co. and are used by the FCC to determine service areas for PCS wireless licenses. The entire US and some of its territories are divided into 493 non-overlapping BTAs.
TOP C	
Call Forwarding:	A feature that allows the transfer of incoming calls to another number of the user's choice.
Call Setup:	Activity that occurs in order to establish a call connection between a wireless handset and the wireless system.
Call Waiting:	A feature that allows a user to be notified of another incoming call while another call is already in progress and gives the user the ability to answer the second call while the first call is put on hold.
Caller ID:	A feature that displays a caller's telephone number and/or name before the call is answered.
Carrier:	A company that provides telecommunications services.

CDMA (Code Division Multiple Access):	A digital communication technology used by some carriers to provide PCS service. Also known as IS-95A or CDMAOne. Other technologies used are TDMA and GSM.
CDMA2000 1X (Also 1xRTT):	A 3G wireless communications standard evolved from CDMA technology. It has double the voice traffic capacity of CDMA and provides peak data rates of 153 kbps or a realistic rate of 70-110 kbps.
CDMA2000 1xEV-DO (and 1xEV-DV):	A 3G wireless communications standard further evolved from CDMA2000 technology. It is a standard optimized for data transmission only providing a peak data rate of 2.4 Mbps with a typical user experience of 300 - 500 kbps. 1xEV-DV is optimized for both data and voice transmissions.
CDPD (Cellular Digital Packet Data):	A technology for transmitting data over analog cellular networks. Completely phased out by mid-2007 in all markets.
Cell:	The area surrounding a cell site, in which calls are handled by a particular cell site.
Cell Site:	The transmission and reception equipment, including the base station antenna, that connects a cellular device to the network.
Cellular:	The type of wireless communication that is most familiar to mobile devices users. Called 'cellular' because the system uses many base stations to divide a service area into multiple 'cells'. Cellular calls are transferred from base station to base station as a user travels from cell to cell.
Coverage Area:	The geographic area served by a wireless system. Same as Service Area.
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D	
Digital:	A method of encoding information using a binary code of 0s and 1s. All current wireless devices and networks use digital technology.
DNS (Domain Name Server):	a system of machines responsible for maintaining lists that translate Internet names to numbers and vice versa. DNS allows you to reference domain names instead of their actual IP address for easier recollection.

Dual band:	A feature required in North America that allows wireless devices to operate using either the 850 MHz or the 1900 MHz GSM frequencies.
Dual mode:	A feature on some wireless devices that allows the handset to operate on both analog and digital networks.
Duplex:	As in ordinary telephone service, a characteristic of a communications system where simultaneous transmission and reception is possible.
TOP E	
Email (or e-mail):	Short for electronic mail, refers to messages or the sending of messages through a network from one user to one or more recipients.
EDGE (Enhanced Data for GSM Evolution):	A further development of the GSM protocol designed to handle data at speeds up to 384 Kbps or, more realistically, 90 – 120kbps. Considered to be 3G wireless technology.
ESMR (Enhanced Specialized Mobile Radio):	Using frequency bands originally allocated for two-way dispatch services, companies such as Nextel and Southern LINC have built digital mobile device services similar to cellular and PCS systems.
ESN (Electronic Serial Number):	The unique serial number of a cellular device that identifies it to the CDMA system for the purpose of placing and receiving calls.
TOP F	
FCC (Federal Communications Commission):	A U.S. government agency responsible for regulating communications industries.
TOP G	
GGSN (Gateway GPRS Support Node):	One of the two main GPRS nodes, which provides the interface between the radio network and the IP network.

GSM (Global Standard for Mobile):	A digital communication technology used by some carriers to provide PCS service. Other technologies used are CDMA and TDMA.
GPRS (General Packet Radio Service):	The technology standard for high-speed data transmission over GSM networks. Capable of throughputs up to 80 kbps but, more realistically, 30-45 kbps.
TOP H	
Handoff:	The transfer of a wireless call in progress from one transmission site to another site without disconnection.
Handset:	Any device used to transmit and receive calls from a wireless system. Also known as a wireless device, a cellular device, a mobile device, a PCS device, and many other terms.
Handshake(ing):	Signals between a wireless device and a wireless system to accomplish call setup.
Home Coverage Area:	A designated area within which cellular calls are local and do not incur roaming or long distance charges.
TOP I	
IoT (Internet of Things):	IoT (Internet of Things): the network that consists of electronics, software, sensors, and network connectivity embedded in vehicles, physical devices, buildings, and other machines or items and the network connectivity that enables these objects to collect and exchange data.
TOP J	
J2ME (Java 2 Micro Edition):	A Java environment optimized to run applications on devices with limited processing power and memory. See BREW for a similar technology from QUALCOMM.
TOP K	

TOP L	
TOP M	
M2M (Machine-to-Machine):	M2M is a broad-spectrum category of technologies that enable networked devices to exchange information and, in some cases, operate without manual assistance or instruction from humans.
MMS (Multimedia Messaging Service):	Similar to SMS, but in addition to plain text, MMS messages may include multimedia elements such as pictures, video, and audio. These multimedia elements are included in the message, not as attachments as with email.
MSA (Metropolitan Statistical Area):	An area defined by the U.S. government for use in grouping census data and other statistics. MSAs include a city of at least 50,000 people or an urbanized area of at least 100,000 people and the counties that include these areas. Not all areas of the U.S. are in an MSA. The FCC used these area definitions to license cellular telephone service carriers. The FCC often uses the term MSA to mean Metropolitan Service Areas; they are the same geographic areas. There are 306 regions of the U.S. designated as MSAs.
MTA (Major Trading Area):	An area consisting of two or more Basic Trading Areas as defined by Rand McNally & Co. These large areas are used by the FCC determine service areas for some PCS wireless licenses. The US is divided into 51 MTAs.
TOP N	
NAM (Number Assignment Module):	A component of a wireless device that holds in electronic memory the device number and ESN of the device.
No Answer Transfer:	A feature of a wireless service that if a call is not answered in a specified number of rings, it will be transferred to another device number of the user's choice.
No Service Indicator:	A feature of wireless devices that tells the user that wireless service is unavailable in a particular location. Usually an LED on the handset.

TOP O	
TOP P	
PRL (Preferred Roaming List):	A database in a CDMA-based wireless device that tells it how to find and connect to locally available wireless network(s). The function of the PRL is most important when a device is outside its home network and must seek out an alternate network. The PRL in a device can be periodically updated to account for changes in wireless networks that the device may encounter.
TOP Q	
Quad Band:	A feature required when roaming internationally that allows wireless devices to operate using the 850, 900, 1800, or 1900 MHz GSM frequencies.
TOP R	
Radio-frequency fingerprinting:	An electronic process that identifies each individual wireless handset by examining its unique radio transmission characteristics. Fingerprinting is used to reduce fraud since the illegal device can not duplicate the legal device's radio frequency fingerprint.
RF (Radio Frequency):	a frequency or band of frequencies in the range 104 to 1011 or 1012 Hz, suitable for use in telecommunication.
Roaming:	Using your wireless device in an area outside its home coverage area. There is usually an additional charge for roaming.
Roaming Agreement:	An agreement among wireless carriers allowing users to use their device on systems other their own home systems.
RSA (Rural Service Area):	Areas not included in MSA s are divided into RSAs. Generally, these are the rural areas of the US. The FCC used RSAs to license cellular carriers in areas not included in MSAs. There are 428 RSAs in the U.S.

TOP S	
Service Area:	The geographic area served by a wireless system. Same as Coverage Area.
SGSN (Serving GPRS Support Node):	The SGSN is the local point of connection by a device to the network and is responsible for the delivery of data packets from and to the mobile stations within its geographical service area
Short Code:	A special 5-8 digit number which is used for any "machine" to person and person to "machine" text messaging in USA and Canada. The use of these numbers is mandated by the Federal Communications Commission (FCC) in the U.S. and Canadian Wireless Telecom Association (CWTA) in Canada as a way to enable fair use of mobile messaging to the benefit of consumers and companies offering products and services to wireless subscribers through mobile messages.
Signal-to-noise ratio:	The ratio of the strength of an electrical or other signal carrying information to that of interference, as expressed in decibels.
SMS (Short Message Service):	A service for sending short messages, typically up to 160-224 (depending on the service) characters between mobile devices, including smartphones and cellular phones.
SMSC (Short Message Service Center):	A machine that provides routing for all messages through an SMS system, handling large volumes of messages sent between mobile devices and software applications.
SMPP (Simple Mail Peer-to-Peer Protocol):	A telecommunications industry protocol for exchanging SMS messages between SMS peer entities such as SMSCs. It is often used to allow third parties to submit messages, often in bulk.
Subscriber:	A cellular device user.
TOP T	
Tri-Band:	A feature required when roaming internationally that allows wireless devices to operate using the 900, 1800, or the 1900 MHz GSM frequencies.
TOP	

U	
UMTS (Universal Mobile Telecommunications System):	An evolution of GSM technology to 3G. The underlying transmission standard is WCDMA.
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V	
Virtual Number:	Used in SMS transmissions, a Virtual Number is similar to a Short Code, as it provides a routing connection between mobile devices and applications servers. Unlike Short Codes, however, it allows connection between different carrier networks using different technologies.
VPN (Virtual Private Network):	A VPN utilizes the public telecommunications networks to conduct private data communications. Most VPN implementations use the Internet as the public infrastructure and a variety of specialized protocols to support private communications through the Internet.
TOP	
W	
WAP (Wireless Application Protocol):	A global protocol used in many newer wireless devices that allows the user to view and interact with data services. Generally used as a means to view Internet web pages using the limited transmission capacity and small display screens of portable wireless devices.
WCDMA (Wideband CDMA):	A 3G wireless communications standard evolved from CDMA. The standard, often called UMTS, uses wider 5 MHz channels (vs. 1.25 MHz for CDMA) for increased voice traffic capacity and peak data rates of 384 kbps.