



# The Mobile Glossary

February 2002

## Cahners In-Stat/MDR Wireless Group

Wireless Carrier Services  
Wireless Component Services  
Wireless Data  
Wireless Handsets & Access Devices  
Wireless Technology & Infrastructure

Report No. IN020434WP

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# The Mobile Glossary

## Executive Summary

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The mobile industry is one of the most acronym laden of any, with new terms popping up on a daily basis, and old ones being used in new ways. At Cahners In-Stat/MDR most reports written include a section with definitions for the terms introduced in that report. Furthermore, nearly every analyst has their own private list of terms that can be quickly referred to – a “cheat sheet”, if you will. Many of us also refer to Internet-based dictionaries that contain terms, though most of these are not specific to the wireless industry.

Assuming that analysts are not alone in wanting an up-to-date reference to terms and acronyms used in the mobile industry, Cahners In-Stat/MDR’s wireless group has created the following mobile glossary. This glossary was created by compiling the terms used in various reports, along with the “cheat sheets” mentioned earlier. We hope that by bringing together these terms in one document, that this glossary will be a useful resource to our clients.

# Terms, Acronyms, & Definitions

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**1G:** First Generation cellular - analog cellular, including AMPS.

**2G:** Second Generation cellular - digital cellular including TDMA, CDMA, and GSM systems. Most 2G digital phones are voice only phones, but some offer limited data capability.

**2.5G:** Enhanced data rate Second Generation - digital cellular systems with data rates of 28kbps - 384kbps.

**3G:** Next generation wireless network technology. The term 3G refers to third generation wireless networks. These networks offer the promise of eventually being able to deliver voice, data, and multimedia content at rates as high as 2 Mbps.

**Access Point:** A stationary device that acts as a base station for wireless LAN users. Unlike a network interface card that connects to a mobile device, the access point connects directly to a wired network.

**Adaptive Frequency Hopping:** A method whereby a Bluetooth radio would first check that a band was clear before it attempted a transmission. This would allow Bluetooth radios to better peacefully exist with other radios such as 802.11b.

**Adds:** Additions. The number of subscribers a carrier adds in a given period (monthly, quarterly, and/or annually). They are typically measured in terms of net adds (number of additional subscribers, minus number that have churned) or gross adds (total additions for that period).

**AGC:** Automatic Gain Control.

**Aggregation:** Aggregation is the process of collecting charges for multiple transactions and combining them on a single bill. Charges are typically aggregated when the cost of processing the individual transaction exceeds the profit that would be realized from that transaction.

**AMPS:** Advanced Mobile Phone Service; commonly known as analog cellular. AMPS service is available in the US, Mexico, Canada, Australia, and several other countries. It is used in the 800 MHz frequency band.

**ANSI:** American National Standards Institute.

**Antenna Diversity:** The use of two or more antennas to improve signal quality. In most designs, the baseband processor automatically selects the antenna that is providing the best quality signal.

**ARPU:** Average Revenue Per Unit, or, Average Revenue Per User (Unit and User are both common usage). This refers to the amount of gross revenue a carrier can expect, on average, from its customers. Typically computed on monthly, quarterly, and annual basis.

**ASP:** Average Selling Price.

**ATM:** Asynchronous Transfer Mode.

**Bandwidth:** A measure of the capacity of a communications channel and the amount of frequency available to a system. The wider the bandwidth allocated to a channel, the greater the data rate for a given protocol.

**Base Station:** A transmission and reception station for handling cellular traffic. It usually consists of one or more receive/transmit antenna, microwave dish, and electronic circuitry. Also referred to as a cell site, since it holds one or more Tx/Rx cells.

**BBC:** Baseband Converter.

**BFWA:** Broadband Fixed Wireless Access.

**BiCMOS:** Bipolar Complementary Metal Oxide Semiconductor.

**Bit-rate:** The speed at which bits are transmitted over the physical layer, also called signaling rate. This is quite different than throughput, which is an end measure of a network's speed.

**Bluetooth:** A short-range transmission technology for multiple device networking.

**BREW:** Binary Runtime Environment for Wireless - A technology developed by Qualcomm.

**BS:** Base Station.

**BTS:** Base Transceiver Station

**CAGR:** Compounded Annual Growth Rate.

**Carrier:** The base unmodulated frequency used by a system. The modulation process will generate a signal centered on the carrier, of width equal to the bandwidth.

**CDMA:** Code Division Multiple Access; also known as IS-95. This is one of the newer digital technologies in use in the US, Canada, Australia, and some southeastern Asian countries (e.g. Hong Kong and South Korea). CDMA differs from GSM and TDMA by its use of spread spectrum techniques for transmitting voice or data over the air. Rather than dividing the radio frequency spectrum into separate user channels by frequency slices or time slots, spread spectrum technology separates users by assigning them digital codes within the same broad spectrum. Advantages of CDMA include higher user capacity and immunity from interference by other signals. Used in either 800 MHz or 1900 MHz frequency bands.

**cdma2000:** Second-Generation Plus (2G+) CDMA including 1XRTT and 1X EV.

**CdmaOne:** Second-Generation (2G) CDMA, IS-95B.

**CDPD:** Cellular Digital Packet Data, a protocol designed and deployed over analog wide-area networks (typically AMPS cellular networks). CDPD transparently piggybacks on cellular analog conversations to enable simultaneous voice/data transmission.

**Cell:** The basic geographic unit of a cellular system and the basis for the generic industry term "cellular." A city is divided into small "cells", each of which is equipped with a low-powered radio transmitter/receiver or base station. The cells can vary in size depending on terrain and capacity demands.

**Channel:** On the radio, this is usually a synonym of a specific frequency, and by extension the communication medium. It can also mean a stream of data between two nodes (a point to point link in connection oriented systems).

**Chipset:** A group of IC chips that are designed to work together and generally used and priced as a set.

**CHTML:** Compact Hyper Text Markup Language (basis for iMode).

**Churn:** An industry term, which refers to customer turnover. A wireless subscriber is said to “churn” when they cancel their mobile service with their current wireless carrier. A subscriber may either “churn” to another carrier, or they may simply choose not to have any wireless service. Churn is measured on a monthly basis. To get the total churn for a given period (typically quarterly or yearly) the monthly churn percentage is multiplied by the number of months in the period being measured. For instance, a carrier with 2% churn per month would have a quarterly churn rate of 6%, and an annual churn rate of 24%.

**Codec:** Short for "compressor/decompressor"; refers to the hardware in a cell phone and in the cell network that compresses digitized voice prior to transmission and takes received compressed voice and decompresses it prior to passing it to either a cell phone speaker or into a wireline system.

**Control Channel:** A channel used for transmission of digital control information from a base station to a cellular phone (forward control channel) or from a cellular phone to a base station (reverse control channel).

**CSC:** Circuit Switched Cellular, good for large data transfers, offers wide coverage.

**CSMA (Carrier Sense Multiple Access):** A MAC method of listening before transmitting (collision avoidance) and listening while transmitting (collision detection). For a wired network, such as Ethernet, collision detection is employed and packets are retransmitted should a collision be detected while transmitting. For wireless networks, this type of collision detection is usually not possible since the strength of a radio's own transmissions would mask all other signals on the air. So for wireless networks, collision avoidance is employed.

**D/A:** Digital to Analog Converter.

**D-AMPS:** Digital AMPS.

**dB (decibel):** Logarithmic way to express a value. Usually the signal strength (transmitted and received power) is expressed in dBm (the reference is 1 mW = 0 dBm). A difference between two values in dBm is without unit, in dB.

**DCS-1800:** European 1800 MHz GSM band.

**DECT:** Digital European Cordless Telephone.

**DQPSK:** Digital Quadrature Phase-Shift.

**DSP:** Digital Signal Processor.

**Dual Band:** Dual band phones are capable of using two different frequencies of the same technologies. For example, a TDMA or CDMA phone that can use either the 800 or 1900 MHz band. There are also Triple Band phones in the GSM market that support 900, 1800, and 1900 MHz. Dual band phones allow callers to access different frequencies in the same or different geographic regions, essentially giving their phone a wider coverage area.

**Dual Mode:** Dual mode phones are phones that support more than one technology. Typically, this is either CDMA and AMPS or TDMA and AMPS, but other dual mode phones are starting to appear on the market, such as GSM and TDMA.

**Duplexer:** A signal-separating filter. Incorporates two filters, one for the reception frequency and one for the transmission frequency, and separates those signals. There are also duplexers that include a switch.

**E911:** A service mandated by the FCC for US mobile carriers. The service will allow location information for subscribers calling 911 to be transmitted automatically to a PSAP.

**EDGE:** Enhanced Data Rates for Global Evolution. A high data rate, (up to 384 Kbps) packet-based technology being developed for TDMA-based networks (IS-54, IS-136, and GSM).

**EIRP:** Effective Isotropic Radiated Power. A measure of the radiated power from a transmitter entering the atmosphere.

**E-mail:** store and forward messaging that allows for attachments - typically 1,000 characters long.

**EMS (Enhanced Messaging Service):** messaging comprising simple pictures, sounds, animations, and modified text.

**ERMES:** European Radio Messaging System.

**ESMR:** Enhanced Specialized Mobile Radio.

**ESN:** Electronic Serial Number. Each cellular phone is assigned a unique ESN, which is automatically transmitted to the cellular base station every time a call is placed. The MTSO validates the ESN with each call.

**Ethernet:** Standard wired LAN protocol. Includes physical and link layers.

**ETSI:** European Telecommunications Standards Institute.

**Fading:** Variation in channel performance due to the dynamicity of the environment, which changes the receive signal strength.

**FCC:** Federal Communications Commission, the governing body of radio in the United States.

**FDMA:** Frequency Division Multiple Access.

**FEC:** Forward Error Correction. A technique used to overcome some type of errors created by transmission on noisy channels, by adding redundancy bits to the main data transmission.

**Frequency band:** A portion of the radio spectrum delimited for a particular use. For example, most wireless LANs currently use the 2.4 to 2.48 GHz band, although 5 GHz band products are on the way. A frequency band is usually divided in two channels.

**Frequency reuse:** The ability to use the same frequencies repeatedly across a cellular system, made possible by the basic design approach for cellular. Since each cell is designed to use radio frequencies only within its boundaries, the same frequencies can be reused in other cells not far away with little potential for interference. The reuse of frequencies is what enables a cellular system to handle a huge number of calls with a limited number of channels.

**GGSN:** Gateway GPRS Service Nodes.

**GHz:** Gigahertz (1,000,000,000Hz).

**GPRS:** General Packet Radio Service. A packet-switched data technology that is being primarily deployed for GSM networks.

**GSM:** Global System for Mobile communications. GSM is used all over Europe, plus many countries in the Middle East, Asia, Africa, South America, Australia, and North America. GSM's air interface is based on narrowband TDMA technology, where available frequency bands are divided into time slots, with each user having access to one time slot at regular intervals.

**Handoff:** The process by which the MTSO passes a cellular phone conversation from one radio frequency in one cell to another radio frequency in another. The handoff is performed so quickly that users usually never notice.

**HCS:** Hierarchical Cell Structures

**HDML:** Handheld Device Markup Language.

**Header:** Information added by the protocol in front of the payload in the packet for its own use (addresses, packet type, sequence number, CRC...). Each protocol adds a different header, so in a typical TCP/IP packet as transmitted, we have a MAC header, an IP header and a TCP header, followed by the payload.

**HSCSD:** High Speed Circuit Switched Data (HSCSD) increases the GSM channel data rate up to 14.4 Kbps, through improved compression technologies. By using multiple time slots, the channels can be multiplexed together to offer data rates up to 57.6 Kbps.

**HTML:** Hypertext Markup Language.

**IC:** Integrated Circuit.

**iDEN:** A modified TDMA technology used by Motorola and run by Nextel Communications, Southern LINC, and a handful of other carriers around the world. iDEN phones run on a different frequency than other cellular services and are therefore incompatible with them.

**IEEE:** Institute of Electronic and Electrical Engineers. The IEEE is a non-profit, technical professional association that promotes electronic ideas and standards both in the US and Worldwide.



**IF:** Intermediate Frequency. To increase sensitivity and selectivity, super heterodyne radio receivers first convert the input frequency to a fixed frequency and then apply the internal processing to that fixed frequency. The intermediate frequency is the frequency used for this internal signal processing.

**iMODE:** Wireless Internet service from NTT DoCoMo, based on Compact HTML.

**IMT:** International Mobile Telephone (see UMTS).

**IM (Instant Messaging):** messaging with presence (ability to view who is present). IM is capable via all network types.

**IP:** Internet Protocol.

**IPX:** Network protocol used in Novell Netware, usually with SPX.

**IS-136:** TDMA Interim Standard 136. (See TDMA).

**IS-95:** CDMA Interim Standard 95. (See CDMA).

**ISM:** Industrial Scientific and Medical Unlicensed Frequency Bands - Operates at 900 MHz and 2.4 GHz.

**ITU:** International Telecommunication Union.

**ITU-T:** The telecommunication standardization sector of the International Telecommunication Union.

**IVR (Interactive Voice Response):** A software application, typically used in conjunction with corporate telephony hardware, which recognizes spoken commands. Typically used for helping callers navigate corporate directories and phonebooks or for other types of menu-driven services. Usually limited in the number of commands that can be recognized.

**J2ME:** Java 2 Microedition, a technology developed by Sun Microsystems.

**KHz:** Kilohertz (1000 Hz).

**LAN:** Local Area Network. A network covering short distances, such as within a building.

**Layer:** Usually refers to the OSI specification dividing any communicating system into 7 layers, each having a different functionality. Layer 1 is the physical layer (radio), layer 2 is the link layer, and IP could be assimilated as layer 3 (network layer). TCP is considered layer 4, the transport layer.

**LBS (Location-Based Services):** Services or applications that center around a user's location in a mobile environment. Location-based services utilize location-sensitive technology, such as Global Positioning Satellite (GPS) or network-based solutions, to deliver services or applications to a wireless device such as a mobile phone. These services can include finder applications that let mobile phone users locate friends or family, businesses or landmarks. They can also deliver maps, directions, or traffic reports.

**Link layer:** This is the part of the protocol managing the direct delivery between two devices on a specific physical layer (coaxial bus, point to point link, radio). This includes packetization and addressing. Most of this is implemented in the MAC in a WLAN.

**LMDS:** Local Multi-point Distribution Services - LMDS broadband services operate over the 28-31 GHz bands in the US and provide high data rates, but only over a relatively short distance of three miles.

**LNA:** Low Noise Amplifier.

**Location-Based Commerce:** Location commerce (l-commerce) refers to commercial transactions, which take place in a mobile environment but are dependent, in some way, on the physical location of the customer or the physical location of a business.

**MAC:** Medium Access Control. This is the part of the radio device managing the protocol and the usage of the link. The MAC decides when to transmit and when to receive, creates the packets headers and filters the received packet.

**MBS:** Mobile Broadband System.

**M-Commerce:** Mobile Commerce, or Mobile Electronic Commerce refers to commercial transactions and payments conducted in an untethered, non-PC-based environment. Transactions are made using wireless devices that can access data networks and send and receive information, including personal financial information.

**MCD:** 1. Mobile Computing Device 2. Multi-Communication Device.

**Micropayments:** Small payments that are typically aggregated by an m-wallet provider or other payment processor. Cahners In-Stat/MDR considers payments from \$.01 to \$2.00 to be micropayments.

**Micropayment Aggregation:** Micropayments are aggregated because the cost to process each micropayment individually may exceed the total cost of the transaction. Typically, processing charges on amounts below \$9.99 is not cost effective. Therefore, In-Stat believes that carriers and merchants will aggregate all micropayments and charges below \$9.99, or turn to third-party aggregators.

**MMDS:** Multi-channel Multi-point Distribution Service, a fixed wireless service for data, voice and video which operates in the 2.5 GHz band in North America and in the 3.5 GHz bandwidth internationally.

**MMS:** Multimedia Messaging Service. A type of messaging comprising a combination of text, sounds, images and video.

**MNO:** Mobile Network Operator. An operator of a wireless network for mobile phones.

**Modem:** Modulator/demodulator. A radio device, this is the part converting the bits to transmit into a modulation of the radio waves and the reverse at the reception. It does the analog to digital conversion, the generation of the frequency, the modulation and the amplification.

**Mw:** Milliwatt (.001 watt).

**MTSO:** Mobile Telephone Switching Office. The central switch that controls the entire operation of a cellular system.

**M-Wallet:** M-Wallets, or mobile wallets, are software applications that hold a user's sensitive personal and financial information, such as credit card numbers, expiration dates, bank account information, passwords and Personal Identification Numbers (PIN). Most m-wallets are server-based, which theoretically is more secure and avoids placing data onto mobile devices, which are often processor- and memory-constrained.

**MVNO:** Mobile Virtual Network Operator. A company that, to end-users, appears to be a wireless network operator. Unlike a standard wireless carrier, however, an MVNO does not own the Base Station Subsystem (BSS) that Mobile Network Operators (MNO) do. MVNOs also may not necessarily own other infrastructure one normally associates with an MNO, such as MSCs, and Home Location Registers (HLRs). More importantly, MVNOs do not hold licenses to radio spectrum; instead they purchase network capacity from wireless carriers that do hold licenses and which do operate the network infrastructure necessary for wireless phone communication.

**NAM :** Number Assignment Module. The electronic memory in the cellular phone that stores the telephone number. Phones with dual- or multi-NAM features offer users the option of registering the phone with a local number in more than one market.

**NIC:** Network Interface Card, otherwise known as a wireless LAN card. In most cases, this board or PCMCIA device is added to a computer or portable device to give it wireless LAN capabilities, but increasingly, manufacturers are incorporating network interface circuitry into portable devices, thereby eliminating the need for a separate network interface card.

**NMT:** Nordic Mobile Telephone.

**Noise:** Any unwanted signal. May include background noise, interference, or transmissions from nodes not belonging to the network. See also SNR (Signal to Noise Ratio).

**Number Portability:** The ability for a wireless subscriber to retain their mobile phone number when they switch mobile carriers.

**PA:** Power Amplifier.

**Packet:** A unit of transmission over a network. The data to be transmitted is split into packets, which are sent individually over the network.

**Paging:** The act of seeking a cellular phone when an incoming call is trying to reach the phone.

**PBCC:** Packet Binary Convolutional Coding. An optional modulation scheme that is part of the 802.11g standard.

**PCMCIA:** Personal Computer Memory Card International Association. A PC interface card standard used in mobile devices.

**PCN:** Personal Communication Network. This standard corresponds to a high-frequency version of the GSM standard.

**PCS:** Personal Communication Services. PCS and cellular are sometimes interchanged. Officially, PCS is a digital cellular service in the 1900 MHz band only. In practice, some providers have used part of their AMPS 800 MHz allocation to offer PCS or digital cellular services.

**PDA:** Personal Digital Assistant: A handheld computer that can be used for simple Personal Information Management (PIM) functions. As PDAs have become increasingly sophisticated, some are poised to usurp the place of subcompact notebook computers, and can be used for more complex functions such as viewing and editing documents, spreadsheets, and presentations. PDAs run on a variety of Operating Systems (OS), the most common of which are the Palm, Microsoft Pocket PC, Symbian, and Linux.

**PDC:** Personal Digital Cellular (Japan).

**PHS:** Personal Handy Telephone System (Japan).

**Physical layer:** The part of the device interacting with the medium. For a wireless LAN, the physical layer is the radio.

**PIM:** Personal Information Manager.

**PIN:** Personal Identification Number.

**PLL:** Phase Locked Loop circuit technology (or a circuit using that technology) in which the circuit is operated at an arbitrary frequency by forming a loop circuit that synchronizes the frequency phase.

**PM:** Phase modulation.

**PMR:** Private Land Mobile Radio.

**POS (Point-of-Sale) Terminal:** a device that accepts credit/debit card payments.

**Presence:** classifying one as available for correspondence (must be available).

**Protocol:** A specification of the interactions between systems and the data manipulated. This describes what to do and when (the rules), and the format of the data exchanged on the lower communication layer.

**PSAP:** Public Safety Answering Point. The state-funded call center that receives all 911 calls and routes the calls to the appropriate emergency agency.

**QoS:** Quality of Service. A measure of how reliable a carrier's service is. Usually expressed in terms of availability and measured, as how often available, by .99999 or five nines, which is the top level of reliability.

**RACE:** Research and Development in Advanced Communications Technologies in Europe.

**RAM:** Random Access Memory.

**Registration:** The procedure that a cellular phone initiates to a base station to indicate that it is now active.

**RF:** Radio Frequency.

**RLL:** Radio in the Local Loop.

**Roaming:** 1. The ability to move between cells of the same network. 2. The ability to use a cellular phone outside one's providers' home service area. Providers often set up Roaming Agreements with other providers in different geographic locations. A roaming agreement lets a caller seamlessly make calls in the other provider's geographic service area without operator intervention.

**ROM:** Read Only Memory.

**SAW filter:** Surface Acoustic Wave filter. A filter that uses surface elastic waves that are transmitted across the surface of a piezoelectric material. This implements a filter that has the resonant frequency and its vicinity as the pass band.

**SGS:** Server GPRS Support Nodes.

**SID:** System Identification. A five-digit number that indicates which service area the phone is in. Most carriers have one SID assigned to their service area.

**SIM:** Subscriber Identity Module.

**SIM card:** A small memory card not much bigger than half the length of a person's thumb. Used in GSM phones to hold phone numbers and other information. Can be removed and inserted into other GSM phones, allowing callers to keep their numbers and to place and receive phone calls.

**SIM Toolkit:** A standard for value added wireless services that allows the end-user to establish an interactive exchange with network applications.

**SMS:** Short Messaging Service or Short Message Service. A method of delivering a short (120-160 character) message to a digital cellular phone. GSM phones can also send SMS messages. Network provider-dependent.

**SNR:** Signal to Noise Ratio. The difference in strength between the signal we want to receive and the background noise (or any unwanted signal).

**SP-lock:** A lock placed on a cellular phone by some service providers to ensure that subscribers can only use the phone with the carrier's service.

**SSL:** Secure Socket Layer.

**Standby time:** The amount of time a caller can leave their fully charged cellular phone turned on before the phone will completely discharge the batteries.

**Speech Recognition:** A software application that can recognize spoken speech – a human voice. Voice recognition applications do not understand what the content of the speech means – however, they can recognize specific commands, such as “*Call Jane Smith*”, and perform specific actions based on those commands. Over the last few years, speech recognition technology has improved dramatically – early efforts were marked by poor accuracy and a need to speak slowly –

current products recognize many different commands, as well as different speaking styles and accents.

**TACS:** Total Access Communications System.

**Talk time:** The length of time a caller can talk on their cellular phone without recharging the battery. The battery capacity of a cellular phone is usually expressed in terms of so many minutes of talk time OR so many hours of standby time.

**TCP:** Transmission Control Protocol.

**TCP/IP:** Network protocol used by Unix and Internet. Better in some respects than NetBeui and IPX (allows routing, for example).

**TDMA:** Time Division Multiple Access. A technique used to share the same bandwidth between different channels using periodic time slots. TDMA divides frequency bands available to the network into time slots, with each user having access to one time slot at regular intervals. TDMA thereby makes more efficient use of available bandwidth than the previous generation AMPS technology. Used on either 800 or 1900 MHz frequency bands.

**Telemetry:** See Wireless Telemetry.

**Throughput:** A measure of the performance of a network for large data transfer (such as FTP, NFS, HTTP 1.1). This speed is expressed in bits per seconds or a multiple.

**TM-UWB:** Time Modulated Ultra Wideband. A method of wirelessly sending data that indicates 1's or 0's by varying the time between ultra fast pulses.

**Transceiver:** See Wireless Transceiver.

**TRI-BAND:** A phone which can operate on three bands, typically a GSM phone operating on 900 MHz, 1800 MHz, and 1900 MHz.

**TTS:** Text-to-Speech. The flip side of speech recognition, TTS takes written words and converts them to speech. Thus, when a caller requests specific information from a voice portal, such as driving directions, TTS reads the directions to the caller. Early TTS efforts were slow and were usually read by a computerized voice that was often referred to as "Igor" because of its similarity to the voice of the character of the same name in old horror movies. Current TTS technology is much more natural sounding, and in some situations the caller would be challenged to differentiate TTS from an actual human speaker.

**UMTS:** Universal Mobile Telephone System.

**U-NII:** Unlicensed National Information Infrastructure Band - Operates from 5725 MHz to 5825 MHz.

**UWB:** Ultra Wideband. A method of transmitting information that encompasses a large portion of the radio spectrum.

**UWC:** Universal Wireless Consortium.

**VCO:** Voltage Controlled Oscillator. An oscillator in which the output frequency varies according to an input control voltage.

**Voice channel:** The channel a caller is assigned by the switch to commence the call on after the exchange of subscriber data.

**Voice Portal:** A voice portal is a software application that uses speech recognition technology to provide information to callers. Using a combination of speech recognition and text-to-speech technology, the application lets callers request specific information, such as news, weather, traffic reports, or email, which is read by the application, to the caller. Voice portals can also allow callers to conduct transactions, such as trade stocks or manage bank accounts. Callers can also use voice portals to purchase products or services. Voice portals essentially allow callers to perform functions that they might otherwise do using the Internet or other methods. Additionally, the application can be used to authenticate callers by matching their “voiceprint” to one on file, for security purposes.

**VoIP:** Voice over IP.

**VXML:** Voice eXtensible Markup Language. The standard Internet markup language for use in speech applications. It allows voice portal applications to access Internet content and read it to callers.

**WAP:** Wireless Application Protocol. A standard or protocol for wireless devices and the accompanying infrastructure equipment. WAP provides a standard way of linking the Internet to mobile phones, PDAs, and pagers/messaging units.

**WAPNG:** WAP Next Generation.

**W-CDMA:** Wideband CDMA, a 3G evolutionary path for GSM and TDMA technology.

**WEP:** Wired Equivalent Privacy. An algorithm whereby a pseudo-random number generator is initialized by a shared secret key. When this encryption is incorporated into a wireless LAN, eavesdropping is made much more difficult.

**Wireless Telemetry:** Wireless Machine-to-Machine (M2M) communication, not including traditional data or voice-centric devices. Examples of wireless telemetry applications include: asset tracking, point-of-sale, vending, arcade games, supervisory control and data acquisition (SCADA - energy/utility), and traffic monitoring applications.

**Wireless Transceiver:** A wireless device, typically a modem, which transmits M2M data from the unit being monitored to a control room where it can become useful information.

**WPOS:** Wireless Point-Of-Sale. Wireless machine-to-machine communication, not including traditional data or voice-centric devices, that allows for credit/debit card transactions. Typically, receipt capabilities exist. This does not include credit/debit card purchasing capabilities through a traditional voice-centric handset.

**WML:** Wireless Markup Language.

**WTLS:** Wireless Transport Layer Security.

**X-HTML:** eXtended Hyper Markup Language.

**XML:** Extensible Markup Language.

# Additional, Internet-Based Resources

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The UMTS Forum's Glossary:

<http://www.umts-forum.org/glossary.html>

Agilent Technologies' Wireless Dictionary:

<http://www.agilent.com/cm/wireless/dictionary/a.html>



