GPRS - USEFUL ACRONYMS

1G
The first generation of analogue mobile phone technologies including AMPS, TACS and NMT

2G
The second generation of digital mobile phone technologies including GSM, CDMA IS-95 and D-AMPS IS-136

2.5G
The enhancement of GSM which includes technologies such as GPRS

3G
The third generation of mobile phone technologies covered by the ITU IMT-2000 family

3GPP
The 3rd Generation Partnership Project, a grouping of international standards bodies, operators and vendors with the responsibility of standardising the WCDMA based members of the IMT-2000 family

3GPP2
The counterpart of 3GPP with responsibility for standardising the CDMA2000-based members of the IMT-2000 family. 3GPP2 is spearheaded by ANSI

8PSK
Octantal Phase Shift Keying

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A5/1/2/3/8X
Encryption algorithms for GSM networks

AAL
ATM Adaptation Layer

ABR
Available Bit Rate

A-bis
Interface between the BSC and BTS in a GSM network

AB
Access Burst; used for random access and characterised by a longer guard period to allow for burst transmission from a MS that does not know the correct timing advance when first contacting a network

**ACTE**
Approvals Committee for Terminal Equipment

**ACTS**
Advanced Communications Technologies and Services, an European technology initiative

**ACU**
Antenna Combining Unit

**ADPCM**
Adaptive Differential Pulse Code Modulation; a form of voice compression that typically uses 32kbit/s

**AFC**
Automatic Frequency Control

**AGCH**
Access Grant Channel; downlink only, BTS allocates a TCH or SDCCH to the MS, allowing it access to the network

**Air interface**
In a mobile phone network, the radio transmission path between the base station and the mobile terminal

**A-interface**
Interface between the MSC and BSS in a GSM network

**AM**
Amplitude Modulation

**AMPS**
Advanced Mobile Phone System, the analogue mobile phone technology used in North and South America and in around 35 other countries. Operates in the 800MHz band using FDMA technology

**AMR**
Adaptive Multi-Rate codec. Developed in 1999 for use in GSM networks, the AMR has been adopted by 3GPP for 3G

**Analogue**
The representation of information by a continuously variable physical quantity such as voltage

**ANSI**
American National Standards Institute. An non-profit making US organisation, which does not carry out standardisation work but reviews the work of standards bodies and assigns them category codes and numbers
ANSI-136
See D-AMPS

API
Application Program Interface

AoC
Advice of Charge

ARIB
Association of Radio Industries and Businesses. An organisation established by Japan's Ministry of Posts and Communications to act as the standardisation authority for radio communication and broadcasting

ARPU
Average Revenue Per User

ASCII
American Standard Code for Information Interchange

ASIC
Application Specific Integrated Circuit

ASP
Application Service Provider

Asymmetric Transmission
Data transmissions where the traffic from the network to the subscriber is at a higher rate than the traffic from the subscriber to the network

A-TDMA
Advanced Time Division Multiple Access

ATM
Asynchronous Transfer Mode; a multiplexed information transfer and switching method in which the data is organised into fixed length 53-octet cells and transmitted according to each application's instantaneous need

AUC
Authentication Centre; the element within a GSM network which generates the parameters for subscriber authentication

Bandwidth
A term meaning both the width of a transmission channel in terms of Hertz and the maximum transmission speed in bits per second that it will support

BCH
Broadcast Channels; carry only downlink information and are mainly responsible for synchronisation and frequency correction BCCH, FCCHandSCH

**BCCH**

Broadcast Control Channel; the logical channel used in cellular networks to broadcast signalling and control information to all mobile phones within the network

**B-CDMA**

Broadband Code Division Multiple Access

**B-ISDN**

Broadband ISDN

**BER**

Bit Error Rate; the percentage of received bits in error compared to the total number of bits received

**BERT**

Bit Error Rate Test

**Bit**

A bit is the smallest unit of information technology. As bits are made up using the binary number system, all multiples of bits must be powers of two, i.e., a kilobit is actually 1024 bits and a megabit 1048576 bits. Transmission speeds are given in bits per second bit/s

**Bluetooth**

A low power, short range wireless technology designed to provide a replacement for the serial cable. Operating in the 2.4GHz ISM band, Bluetooth can connect a wide range of personal, professional and domestic devices such as laptop computers and mobile phones together wirelessly.

**BHCA**

Busy Hour Call Attempts; the number of call attempts made during a network's busiest hour of the day

**BSC**

Base Station Controller; the network entity controlling a number of Base Transceiver Stations

**BSS**

Base Station System/Subsystem

**BTS**

Base Transceiver Station; the network entity, which communicates with the mobile station

**CAI**

Common Air Interface; a standard developed for the UK's public CT2 networks which enabled the same handset to be used on different networks

**CAMEL**
Customised Application for Mobile network Enhanced Logic; an IN feature in GSM networks that enables users to carry personal services with them when roaming into other networks that support CAMEL

CSE
CAMEL Service Environment

Capacity
A measure of a cellular network's ability to support simultaneous calls

CB
Cell Broadcast

CC
Call Control; manages call connections

CCB
Customer Care and Billing

CCCH
Common Control Channels; a group of uplink and downlink channels between the MS and the BTS
see PCH, AGCH and RACH

CCS7
Common Channel Signalling No. 7

CDMA
Code Division Multiple Access; also known as spread spectrum, CDMA cellular systems utilise a single frequency band for all traffic, differentiating the individual transmissions by assigning them unique codes before transmission. There are a number of variants of CDMA
see W-CDMA, B-CDMA, TD-SCDMAetal

CDMAone
The first commercial CDMA cellular system; deployed in North America and Korea; also known as IS-95

CDMA2000
A member of the IMT-2000 3G family; backwardly compatible with cdmaOne

CDMA 1X
The first generation of cdma2000; the standardisation process indicated that there would be CDMA 2X and CDMA 3X but this no longer appears likely

CDMA 1X EV-DO
A variant of CDMA 1X which delivers data only

CDPD
Cellular Digital Packet Data; a packet switched data service largely deployed in the USA. The service uses idle analogue channels to carry the packetised information.
CDPSK
Coherent Differential Phase Shift Keying

CDR
Call Detail Records; the record made within the cellular network of all details of both incoming and outgoing calls made by subscribers, the CDR is passed to the billing system for action.

Cell
The area covered by a cellular base station. A cell site may sectorise its antennas to service several cells from one location.

Cell site
The facility housing the transmitters/receivers, the antennas and associated equipment.

Cell splitting
The process of converting a single cell to multiple cells by sectorising the antennas in the cell site or constructing additional cells within a cell site.

CELP
Code Excited Linear Prediction; an analogue to digital voice coding scheme, there are a number of variants used in cellular systems.

CEPT
Conference of European Posts and Telecommunications. A organisation of national posts, telegraphs and telephone administrations. Until 1988, when this work was take over by ETSI, the main European body for telecommunications standardisation. CEPT established the original GSM standardisation group.

CF
Call Forwarding.

CI
Carrier to Interference ratio.

CIBER
Cellular Intercarrier Billing Exchange Roamer Record.

CID
Caller Identification.

Circuit switching
A method used in telecommunications where a temporary dedicated circuit of constant bandwidth is established between two distant endpoints in a network. Mainly used for voice traffic; the opposite of packet switching.

CLID
Calling Line Identification.

CLIP
Calling Line Identification Presentation.
CLIR
Calling Line Identification Restriction

CM
Connection Management; is used to set up, maintain and take down call connections

CMOS
Complementary Metal Oxide Substrate

Codec
A word formed by combining coder and decoder the codec is a device which encodes and decodes signals. The voice codec in a cellular network converts voice signals into and back from bit strings. In GSM networks, in addition to the standard voice codec, it is possible to implement Half Rate HR codecs and Enhanced Full Rate EFR codecs

Control signal
A signal sent to a cellular phone from a base station or vice versa which carries information essential to the call but not including the audio portion of a conversation

CPE
Customer Premises Equipment; all the equipment on the end user's side of the network interface

CPU
Central Processing Unit

CRC
Cyclic Redundancy Check

CRM
Customer Relationship Management

CSS
Customer Support System

CT
Cordless Telephony

CT0
Zero generation cordless telephony; the earliest domestic cordless phones, which used analogue technology and which had severe limitations in terms of range and security

CT1
First generation cordless telephony; Improved analogue phones with greater range and security; a number of European nations produced CT1 standards

CT2
Second generation cordless telephony; Using digital technology CT2 phones offered greater range, improved security and a wide range of new functionalities. Used in both domestic and cordless PABX deployments, CT2 was standardised as an interim ETS but was overwhelmed by
DECT

CT2-CAI
Second generation cordless telephony-common air interface

CTA
Cordless Terminal Adaptor; a DECT term

CTM
Cordless Terminal Mobility

CTR
Common Technical Regulation; part of the ETSI standardisation process

CUG
Closed User Group

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D/A
Digital to Analogue conversion

DAC
Digital to Analogue Convertor

DAMA
Demand Assigned Multiple Access

D-AMPS
Digital AMPS, a US wireless standard also known as IS-136

DAN
DECT Access Node

DCA
Dynamic Channel Assignment

DCCH
Dedicated Control Channels; responsible for roaming, handovers, encryption etc. See SDCCH, SACCH and FACCH

DCE
Data Communications Equipment

DCH
Data Clearing House

DCPSK
Differentially Coherent Phase Shift Keying

DCS1800
Digital Cellular System at 1800MHz, now known as GSM1800

DECT
Digitally Enhanced Cordless Telecommunications system, a second generation digital cordless technology standardised by ETSI

DEPSK
Differential Encoded Phase Shift Keying

DES
Digital Encryption Standard

DFSK
Double Frequency Shift Keying

Digital
a method of representing information as numbers with discrete values; usually expressed as a sequence of bits

DPCM
Differential Pulse Code Modulation

DPSK
Digital Phase Shift Keying

DQPSK
Digital Quadrature Phase Shift Keying

DS-CDMA
Direct Sequence CDMA

DSP
Digital Signal Processing

DSRR
Digital Short Range Radio; a UK standard for a low power, short range radio system designed for small voice and data networks

DTE
Data Terminal Equipment

DTMF
Dual Tone MultiFrequency; better known as Touch Tone. The tones generated by touching the keys on the phone are used for a variety of purposes including voice mail systems and voice messaging
**DTX**
Discontinuous Transmission

**Dual Band**
The capability of GSM infrastructure elements and handsets to work across both the 900MHz and 1800MHz bands. The capability to seamlessly handover between the two bands offers operators major capacity gains.

**DB**
Dummy Burst; transmitted as a filler in unused timeslots of the carrier.

**Duplex**
The wireless technique where one frequency band is used for traffic from the network to the subscriber *downlink* and another, widely separated, band is used for traffic from the subscriber to the network *uplink*.

**EDGE**
Enhanced Data rates for GSM Evolution; effectively the final stage in the evolution of the GSM standard, EDGE uses a new modulation schema to enable theoretical data speeds of up to 384kbit/s within the existing GSM spectrum. An alternative upgrade path towards 3G services for operators, such as those in the USA, without access to new spectrum. Also known as Enhanced GPRS (E-GPRS).

**EEPROM**
Electrically Erasable Programmable Read Only Memory

**EFR**
Enhanced Full Rate; a alternative voice codec that provides improved voice quality in a GSM network. See codec.

**EFT**
Electronic Funds Transfer

**EGSM**
Extended frequency range GSM

**EIR**
Equipment Identity Register; a database that contains a list of all valid mobile stations within a network based on their IMEI.

**EIRP**
Effective Isotropic Radiated Power

**EPOC**
The mobile phone operating system developed by Symbian. Derived from epoch—the beginning of an era—EPOC is a 32-bit operating environment, which comprises a suite of applications, customisable user interfaces, connectivity options and a range of development tools.

**EPROM**
Erasable Programmable Read Only Memory

Erlang
A dimensionless unit of average traffic density in a telecommunications network

ERMES
Enhanced Radio Messaging System; a paging technology developed by ETSI which was intended to allow users to roam throughout Europe. Adopted by a number of European and Middle Eastern countries, ERMES, like paging in general, was overtaken by the ubiquity of GSM

ERO
European Radiocommunications Office

ERP
Effective Radiated Power

ESMR
Enhanced Special Mobile Radio; a US PMR variant see SMR

ESN
Electronic Serial Number; a 32-bit number that uniquely identifies a mobile phone

ESPRIT
European Strategic Programme for Research and Development in Information Technology

ETACS
Extended TACS; the extension of TACS by the addition of new frequencies

ETSI
European Telecommunications Standards Institute: The European group responsible for defining telecommunications standards

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FACCH
Fast Associated Control Channel; similar to the SDCCH but used in parallel for operation of the TCH. If the data rate of the SACCH is insufficient borrowing mode is used

FB
Frequency Correction Burst; used for frequency synchronisation of the mobile

FCC
Federal Communications Commission; the US regulatory body for telecommunications

FCCH
Frequency Correction Channel; downlink only, correction of MS frequencies, transmission of frequency standard to MS, etc.

FDD
Frequency Division Duplex; a radio technique, which uses paired spectrum; UMTS has an FDD element

**FDMA**

Frequency Division Multiple Access-a transmission technique where the assigned frequency band for a network is divided into sub-bands, which are allocated to a subscriber for the duration of their calls

**FEC**

Forward Error Correction

**FH**

Frequency Hopping

**FH-CDMA**

Frequency Hopping CDMA

**FMC**

Fixed Mobile Convergence

**FMI**

Fixed Mobile Integration

**FPLMTS**

Future Public Land Mobile Telecommunications System, the original title of the ITU's third generation concept now known as IMT-2000

**FRA**

Fixed Radio Access; see WLL

**FSDPSK**

Filtered Symmetric Differential Phase Shift Keying

**FSK**

Frequency Shift Keying; a method of using frequency modulation to send digital information

**FSOQ**

Frequency Shift Offset Quadrature Modulation

**FSS**

Fixed Satellite ServiceGb

The interface between the PCU and the SGSN in a GSM/GPRS network

**Gc**

The interface between the GGSN and the HLR in a GSM/GPRS network
**Gd**
The interface between the SGSN and the SMSC in a GSM/GPRS network

**Gf**
The interface between the SGSN and the EIR in a GSM/GPRS network

**Gi**
The interface between the GGSN and the Internet in a GPRS network

**Gn**
The interface between the GGSN and the SGSN in a GPRS network

**Gp**
The interfaces between the GGSN/SGSN and the Border Gateway in a GPRS network

**Gr**
The interface between the SGSN and the HLR in a GPRS network

**Gs**
The interface between the SGSN and the MSC in a GSM/GPRS network

**GAIT**
GSM/ANSI 136 Interoperability Committee

**GAP**
Generic Access Profile; a DECT term

**Gbit/s**
A unit of data transmission rate equal to one billion bits per second

**GMSC**
Gateway Mobile Services Switching Centre; the gateway between two networks

**GCF**
Global Certification Forum

**Geostationary**
Refers to a satellite in equatorial orbit above the earth which appears from the surface to be stationary

**GERAN**
GSM-EDGE Radio Access Network; the name for the evolution of GSM towards 3G based on EDGE

**GGRF**
GSM Global Roaming Forum

**GGSN**
Gateway GPRS Support Node; the gateway between a cellular network and a IP network.

**GHz**

A unit of frequency equal to one billion Hertz per second

**GMPCS**

Global Mobile Personal Communications by Satellite

**GMSK**

Gaussian filtered Minimum Shift Keying; a refinement of FSK which minimises adjacent channel interference

**GPRS**

General Packet Radio Service; standardised as part of GSM Phase 2+, GPRS represents the first implementation of packet switching within GSM, which is a circuit switched technology. GPRS offers theoretical data speeds of up to 115kbit/s using multislot techniques. GPRS is an essential precursor for 3G as it introduces the packet switched core required for UMTS

**GPS**

Global Positioning System; a location system based on a constellation of US Department of Defence satellites. Depending on the number of satellites visible to the user can provide accuracies down to tens of metres. Now being incorporated as a key feature in an increasing number of handsets

**GRX**

GPRS Roaming Exchange

**GSM**

Global System for Mobile communications, the second generation digital technology originally developed for Europe but which now has in excess of 71 per cent of the world market. Initially developed for operation in the 900MHz band and subsequently modified for the 850, 1800 and 1900MHz bands. GSM originally stood for Groupe Speciale Mobile, the CEPT committee which began the GSM standardisation process

**GSM MoU**

The GSM Memorandum of Understanding, an agreement signed between all the major European operators to work together to promote GSM. The precursor of the GSM Association

**GSM-R**

GSM-Railway, A variant of GSM designed to meet the special communications needs of international train operators

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**Handoff**

The transfer of control of a cellular phone call in progress from one cell to another, without any discontinuity

**Hands-free**

The operation of a cellular phone without using the handset; usually installed in vehicles.
Hierarchical Cell Structure; the architecture of a multi-layered cellular network where subscribers are handed over from the macro to the micro to the pico layer depending on the current network capacity and the needs of the subscriber.

High level Data Link Control

High Performance Radio Local Access Network; a wireless local area network being standardised by ETSI. Also HIPERLAN2

Home Location Register; the database within a GSM network which stores all the subscriber data. An important element in the roaming process.

High Speed Circuit Switched Data; a special mode in GSM networks which provides higher data throughput by concatenating a number of timeslots, each delivering 14.4kbit/s, much higher data speeds can be achieved.

High Speed Packet Switched Data

The interface between the Node B and the RNC in a UMTS network

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The interface between RNCs in a UMTS network

The connection between the RNC and the packet switched network in a GSM/GPRS/UMTS network

The connection between the RNC and the circuit switched network in a GSM/GPRS/UMTS network

Interim European Telecommunications Standard

A service developed by Japanese operator NTT DoCoMo, I-mode delivers a huge range of services to subscribers and has proved enormously popular with some 30 million regular users. The revenue sharing model used for I-mode is being adopted by other operators as the basis for the new services enabled by GPRS and 3G

International Mobile Equipment Identity

International Mobile Equipment Identity
International Mobile Subscriber Identity; an internal subscriber identity used only by the network

**IMT-2000**

The family of third generation technologies approved by the ITU. There are five members of the family: IMT-DS, a direct sequence WCDMA FDD solution IMT-TC, a WCDMA TDD solution IMT-MC, a multicarrier solution developed from cdma2000 IMT-SC, a single carrier solution developed from IS-136/UWC-136 IMT-FT, a TDMA/TDD solution derived from DECT

**IN**

Intelligent Network

**INAP**

Intelligent Network Application Part

**Internet**

A loose confederation of autonomous databases and networks. Originally developed for academic use the Internet is now a global structure of millions of sites accessible by anyone

**Intranet**

A private network which utilises the same techniques as the Internet but is accessible only by authorised users

**IP**

Internet Protocol

**IPR**

Intellectual Property Rights

**IPv6**

The next generation of IP addressing designed to replace the current system IPv4 which uses a 32 bit address code which limits the number of possible addresses. IPv6 uses a 128 bit code ensuring that the possible number of IP addresses will be virtually limitless

**IrDA**

Infra red Data Association

**Iridium**

A low earth orbit satellite communications system developed initially by Motorola.

**IS-54**

The first evolution in the USA from analogue to digital technology. Used a hybrid of analogue and digital technology, superseded by IS-136

**IS-95**

Cellular standard know also as cdmaOne

**IS-136**

Cellular standard also known as TDMA or D-AMPS

**ISDN**
Java

A programming language developed by Sun Microsystems. Java is characterised by the fact that programs written in Java do not rely on an operating system.

JPEG

Joint Photographic Experts Group.
**LOS**
Line of Sight

**MAC**
Media Access Control; the lower sublayer of the OSI system

**MAN**
Metropolitan Area Network

**MAP**
Mobile Application Part

**Mbit/s**
Megabit: a unit of data transmission speed equal to one million bits per second

**MHz**
Megahertz; a unit of frequency equal to one million Hertz

**MCPA**
Multi Carrier Power Amplifier

**MeXe**
Mobile Execution Environment; likely to be based on Java, MeXe enables WAP-enabled devices to offer a wider range of features with greater security and flexibility, as well as greater control of telephony features

**MFSK**
Multiple Frequency Shift Keying

**MMI**
Man Machine Interface

**MMS**
Multimedia Messaging Service; an evolution of SMS, MMS goes beyond text messaging offering various kinds of multimedia content including images, audio and video clips

**MMSK**
Modified Minimum Shift Keying

**MNO**
Mobile Network Operator
Modulation

The process of imposing an information signal on a carrier. This can be done by changing the amplitude $AM$, the frequency $FM$ or the phase, or any combination of these.

MoU

Memorandum of Understanding-

see GSM MoU

MPEG

Motion Picture Experts Group; MPEG4 is a technology for compressing voice and video so that the information can be transmitted over normally difficult links such as mobile radio

MS

Mobile Station

MSC

Mobile Switching Centre; the switching centre of a mobile phone network, the MSC has interfaces to the BSCs, HLR, VLR and other MSCs

MSISDN

Mobile Station International ISDN Number

MSK

Minimum Shift Keying; Another term for FFSK

Multiplexing

A telecommunications technique where several channels can be combined to share the same transmission medium. The most common forms are Time Division Multiplexing $TDM$ and Frequency Division Multiplexing $FDM$

MVPN

Mobile Virtual Private Network

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N-AMPS

Narrowband AMPS

NB

Normal Burst; used to carry traffic and control channels except RACH

NET

Norme Europeenne de Telecommunications

NMT

Nordic Mobile Telephone system; an analogue cellular technology deployed in the Nordic countries in the late 1970's; variations were also deployed in the Benelux countries and in Russia.
NMT operated in the 450 and 900MHz bands and was the first technology to offer international roaming, albeit only in the Nordic countries.

**Node B**

The element in a UMTS network which interfaces with the mobile station, analogous to a BTS in a GSM network.

**OTA**

Over the air activation of services and tariff changes.

**O&M**

Operations and Maintenance.

**OMC**

Operations and Maintenance Centre.

**OMC-R**

The radio OMC.

**OMC-S**

The switching OMC.

**OSI**

Open Systems Interconnection; a seven layer model for protocols defined by ISO.

**PACS**

Personal Access Communication System; a digital cordless technology developed initially by Bell Labs in the US, PACS was designed to compete with DECT.

**Packet switching**

A communication system wherein the information is transmitted in packets of a set size. These packets have address headers and find their way to their destination by the most efficient route through the network. Compared to circuit switching where a connection is occupied until the traffic exchange is completed, packet switching offers considerable efficiencies as connections can be used by a number of users simultaneously.

**PAMR**

Public Access Mobile Radio; Commercial service using trunking techniques in which multiple groups of users can set up their own closed systems within a shared public network.

**PAP**

Public Access Profile; a DECT term.

**PCH**

Paging Channel; downlink only, the MS is informed of incoming calls by the BTS via the PCH.

**PCM**
Pulse Code Modulation; the standard digital voice format at 64kbit/s

**PCMCIA**

Personal Computer Memory Card Interface Association the body responsible for defining the standards and formats for memory expansion cards for laptop computers and PDAs. Now extended to cover cards for mobile phones

**PCN**

Personal Communications Network; a designation initially used in the UK to refer to networks operating in the 1800MHz band. No longer in use

**PCS 1900**

Personal Communications Systems 1900MHz; the terminology used in the US to describe the new digital networks being deployed in the 1900MHz band; rarely used today

**PCU**

Packet Control Unit; an element in a GPRS/UMTS network

**PDA**

Personal Digital Assistant

**PDC**

Personal Digital Communications; a digital cellular technology developed and deployed uniquely in Japan. A TDMA technology, PDC is incompatible with any other digital cellular standard

**PEDC**

Pan European Digital Communications; A designation occasionally used in the early 1990's to describe GSM. No longer in use

**Penetration**

The percentage of the total population which owns a mobile phone

**PHS / PHP**

Personal HandyPhone System/Phone; a digital cordless technology developed in Japan which achieved great success. Deployed by NTT DoCoMo and other Japanese operators PHS offered two-way communications, data services and Internet access and eventually won some 28 million customers. Now in decline as cellular's wide area capabilities offer better service

**PIN**

Personal Identifier Number

**PKI**

Public Key Infrastructure

**PLMN**

Public Land Mobile Network; any cellular operators network

**PMR**
Private Mobile Radiocommunications; two-way radio technology widely used for dispatch and delivery services, taxi companies and the like. See TETRA

**POCSAG**

Post Office Code Standardisation Group; a now defunct industry grouping which standardised pager addressing systems

**PoP**

Points of Presence; a method of measuring the value of a cellular license; the approximate number of potential customers within a geographical area

**POTS**

Plain Old Telephone Service

**PROM**

Programmable Read Only Memory

**PSK**

Phase Shift Keying

**PSRCP**

Public Safety Radio Communications Project; an initiative by the UK Government to standardise all emergency services communications on to a single digital technology see TETRA

**PSDN**

Public Switched Data Network

**PSPDN**

Public Switched Packet Data Network

**PSTN**

Public Switched Telephone Network

**PSU**

Power Supply Unit

**PTO**

Public Telecommunication Operator

**PTT**

Posts, Telephone and Telegraph Administration

**PTT**

Push-to-Talk; a feature of PMR systems

**PWT**

Personal Wireless Telecommunications; a variant of DECT developed for use in the USA
QAM
Quadrature Amplitude Modulation

QAPSK
Quadrature Amplitude Phase Shift Keying

QCELP
Quadrature Code Excited Linear Prediction

QoS
Quality of Service; a broad term to describe the performance attributes of an end-to-end connection

QPSK
Quadrature Phase Shift Keying

RACE
Research in Advanced Communications in Europe

RACH
Random Access Channel; uplink only, allows the MS to request an SDCCH in response to a page or for a call

RAM
Random Access Memory

RFP
Radio Fixed Part; equivalent to a base station in a DECT system

RCC
Radio Common Carrier

RELP
Regular pulse Excitation Linear Prediction coding

Reuse
The assignment of frequencies or channels to cells so that adjoining cells do not use the same frequencies and cause interference whereas more distant cells can use the same frequencies. Reuse expands the capacity of a cellular network by enabling the use of the same channels throughout the network

RP
Radio Part

RNC
Radio Network Controller; the element, which controls the Node Bs within a UMTS network. It is roughly analogous to a BSC in a GSM network.

**Roaming**

A service unique to GSM which enables a subscriber to make and receive calls when outside the service area of his home network e.g. when travelling abroad.

**Router**

A device which forwards information in a network on a connectionless basis.

**RRM**

Radio Resource Management, part of the UMTS infrastructure.

**RT**

Remote Terminal.

**SACCH**

Slow Associated Control Channel; transmits continuous measurements in parallel with operation of TCH or SDCCH; needed for handover decisions.

**SAR**

Specific Absorption Rate.

**SB**

Synchronisation Burst; used for time synchronisation of the mobile.

**S-CDMA**

Synchronous CDMA see CDMA.

**SCH**

Synchronisation Channel; downlink only frame synchronisation and identification of base station.

**SCP**

Switching/Service Control Point.

**SDCCH**

Stand-alone Dedicated Control Channel; communications channel between the MS and the BTS. Used for signalling during call set-up before a TCH is allocated.

**SDLC**

Synchronous Data Link Control.

**SDMA**

Spatial Division Multiple Access.
SGSN
Serving GPRS Support Node; the gateway between the RNC and the core network in a GPRS/UMTS network

SIM
Subscriber Identity Module; A smart card containing the telephone number of the subscriber, encoded network identification details, the PIN and other user data such as the phone book. A user.s SIM card can be moved from phone to phone as it contains all the key information required to activate the phone

SoHo
Small Office/Home Office

Streaming
An Internet derived expression for the one-way transmission of video and audio content

STK
SIM ToolKit: specified within the GSM standard, this allows operators to add additional functions to the phone menu in order to provide new services such as mobile banking or e-mail

SMR
Specialised Mobile Radio; the US term for private mobile radio See PMR

SMS
Short Message Service; a text message service which enables users to send short messages 160 characters to other users. A very popular service, particularly amongst young people, with 400 billion SMS messages sent worldwide in 2002

SMSC
SMS Centre—the network entity which switches SMS traffic

SMSCB
SMS Cell Broadcast

SMS-MO
SMS Mobile Originated

SMS-MT
SMS Mobile Terminated

SMS-PP
SMS Point to Point

SP
Service Provider

SQAM
Staggered Quadrature Amplitude Modulation
SQPSK
Staggered Quadrature Phase Shift Keying

SS
Supplementary Service Support; handles special services

SS7
Signalling System Number 7 See CCS7

SSP
Service Switching Point

STM
Synchronous Transfer Mode

Symbian
A company created by Psion, Nokia, Ericsson and Motorola in 1998 with the aim of developing and standardising an operating system which enable mobile phones from different manufacturers to exchange information
The operating system is known as EPOC. Matsushita has subsequently joined Symbian

TACS
Total Access Communications System an AMPS variant deployed in a number of countries principally the UK

TAP
Transferred Account Procedure; the essential charging methodology for international GSM roaming. There have been four TAP standards, TAP1, TAP2, TAP2+ and TAP3. The latter offers variable record length and is sufficiently flexible to support all future requirements arising from the move to 3G

TBR
Technical Basis for Regulation part of the ETSI standardisation process

TCH
Traffic Channel

TD-CDMA
Time Division CDMA

TD-SCDMA
Time Division-Synchronous CDMA; a CDMA variant developed by Chinese vendors which is claimed to offer high data rates and greater coverage

TDD
Time Division Duplex; a radio technology for use in unpaired spectrum. WCDMA/UMTS includes a band for TDD mode usage and both PHS and DECT use this technology
**TDMA**

Time Division Multiple Access; a technique for multiplexing multiple users onto a single channel on a single carrier by splitting the carrier into time slots and allocating these on a as-needed basis.

**Telematics**

A wireless communications system designed for the collection and dissemination of information, particularly refers to vehicle-based electronic systems, vehicle tracking and positioning, on-line vehicle navigation and information systems and emergency assistance.

**TETRA**

Terrestrial Trunked Radio; an European developed digital private mobile radio technology, which is now being extensively deployed worldwide.

**Tetrapol**

A competitive digital PMR technology to TETRA developed by French vendors.

**TFTS**

Terrestrial Flight Telephone System.

**Timeslot**

A frame within a TDMA schema; has a time interval of 576 microseconds. Physical content of a timeslot is known as a burst. Five different burst types exist, they are distinguished by different TDMA frame divisions seeNB, FB, SB, ABandDB.

**TIPHON**

Telecommunications and Internet Protocol Harmonisation over Networks; an ETSI project designed to support the market for voice communications and voice band communications. In particular TIPHON will ensure that users on IP-based networks can communicate with those on circuit switched networks.

**TMN**

Telecommunications Management Network.

**TMSI**

Temporary Mobile Subscriber Identity; covers the IMSI to prevent over-the-air interception and tracing.

**TRAU**

Transcoder Rate Adapter Unit; the transport unit for a 16kbit/s traffic channel on the A-bis interface.

**Tri-band**

Refers to a mobile phone able to operate on the three internationally designated GSM frequencies- 900, 1800 and 1900MHz.

**TrueSync**

A technology which enables the optimal synchronisation of calendars, address books, action lists and memoranda. It enables multi-point, one-step synchronisation of wireless and wireline devices, desktop computers and server-based applications and services.

**TRX**
Transmitter/receiver *transceiver*

**UI**

User Interface

**Um**

The air interface between the BTS and the MS in a GSM network

**Uu**

The air interface between the Node B and the MS in a UMTS network.

**UMTS**

Universal Mobile Telecommunications System; the European entrant for 3G; now subsumed into the IMT-2000 family as the WCDMA technology.

**UPN**

Universal Personal Number

**UPT**

Universal Personal Telecommunications

**URL**

Uniform Resource Locator; the addressing system of the Internet

**USO**

Universal Service Obligation

**UTRA**

Universal Terrestrial Radio Access; the air interface component of WCDMA.

**UTRAN**

Universal Terrestrial Radio Access Network; the UMTS radio access network comprising the RNC, Node B and the air interface

**USIM**

Universal Subscriber Identity Module; the 3G equivalent of the GSM SIM

**UWB**

Ultra Wide Band

**VAS**

Value Added Services

**VBR**
Variable Bit Rate

**VHE**
Virtual Home Environment

**VLR**
Visitor Location Register

**Vocoder**
Voice coder

**VoIP**
Voice over Internet Protocol

**VPN**
Virtual Private Network

**VSAT**
Very Small Aperture Terminal

**VSELP**
Vector Sum Excited Linear Prediction

**WAP**
Wireless Application Protocol; a de facto standard for enabling mobile phones to access the Internet and advanced services. Users can access websites and pages which have been converted by the use of WML into stripped-down versions of the original more suitable for the limited display capabilities of mobile phones

**WARC**
World Administration Radio Conference; an ITU conference held at regular intervals to determine the allocation of spectrum for various services

**WCDMA**
Wideband CDMA; the technology created from a fusion of proposals to act as the European entrant for the ITU IMT-2000 family

**WLL**
Wireless Local Loop; a technique for providing telephony and low speed data services to fixed customers using wireless. Regarded as having considerably potential for rapidly addressing the telecommunications gap in developing countries. A number of different WLL solutions have been marketed based on cellular and cordless technologies

**WLAN**
Wireless Local Area Network; a short range radio network normally deployed in traffic hotspots such as airport lounges, hotels and restaurants. WLAN enables suitably equipped users to access the fixed network wirelessly, providing high speed access up to 11 Mbit/s download to distant servers.
The key WLAN technologies are the IEEE802.11 family and ETSI HIPERLAN/2

**WML**

Wireless Markup Language; a markup language developed specifically for wireless applications. WML is based on XML

**WQAM**

Weighted Quadrature Amplitude Modulation

**WWW**

World Wide Web

**XML**

eXtended Markup Language

**The Consumer Mobile Glossary**

**Advice of charge**

A service which provides the user with information on the cost of calls from a mobile phone

**Airtime**

The amount of time a subscriber spends using his/her mobile phone

**Battery status/Battery charge display**

An indication of the amount of battery life remaining

**Battery**

A chargeable device, which provides the mobile phone with power. A variety of battery technologies have been used for mobile phones including nickel cadmium $\text{NiCad}$, nickel metal hydride $\text{NiMH}$ and lithium ion $\text{Li} - \text{ion}$

**Call barring**

A service, which enables users to bar certain incoming or outgoing calls on their mobile phones

**Call timer**

A service, which keeps track of the amount of airtime being used by the subscriber on a cumulative basis

**Call divert**

The capability to divert incoming calls to another phone $\text{fixed/mobile}$ or to an answering service

**Call hold**

The ability to put an ongoing call on hold whilst answering or making a second call

**Caller ID**

Caller Identification; displays the name/number of the person calling a mobile phone. Also known
CLI
See Caller ID

CLR
Clear; the key on a cellular phone which is pressed to remove information from the display

Data capable
Mobile phones, which have the capability to enable transmission of data from a laptop computer or PDA via the phone

Dual band
Mobile phones, which support transmission and reception of calls on the 900MHz and 1800MHz bands with seamless handover between the two frequency bands

EFR
Enhanced Full Rate codec; an improved version of the standard voice codec used in GSM phones; offers improved speech quality without impacting on network capacity

END
The key on a cellular phone, which is pressed to terminate a call

Infrared data port
A facility on a mobile phone to allow information to be exchanged with other devices, e.g., a PC using infra red technology

Lock
A function on a cellular phone which, when activated, prevents use of the phone until the user enters a security code

No Service
An indication on the display of a cellular phone that indicates that the user is in an area where cellular service is unavailable

One-touch dialling
The ability to dial frequently called numbers using a single key stroke; see Speed Dialling

PCN
Personal Communications Networks; an outdated term for GSM services in the 1800MHz band

PDA
Personal Digital Assistant; a sophisticated handheld device with advanced display facilities and a range of business-oriented software programs

Phone book
A list of personal names and numbers stored in a mobile phone's internal memory or in the SIM card. These numbers can be called by accessing the appropriate memory and making a single key stroke
PIN
Personal Identity Number; a number, usually four digits, that must be keyed into a mobile phone to make it work. A security measure to prevent unauthorised usage

RCL
The function on a cellular phone which recalls a phone number from memory

Roaming
The ability to make and receive calls on the same mobile phone when travelling outside the area of the home network operator

Smartphone
A combination of mobile phone and personal digital assistant

SND
Send; the key on a cellular phone which initiates a call or answers an incoming call

Speed dialling
See One-touch dialling

Standby time
The length of time a battery can power a mobile phone when it is switched on but not making or receiving calls

Talk-time
The length of time a battery can power a mobile phone when making or receiving calls

Voicemail
A service offered by network operators whereby calls received when the mobile is in use, switched off or out of coverage can be diverted to an answering service which can be personalised by the user

WAP
Wireless Application Protocol; a standard whereby mobile phones can gain access to specially tailored Internet websites

WML
Wireless Markup Language; a specially designed markup language used for tailoring WAP content. WML enables optimum usage of the limited display capabilities of the mobile phone