

GPRS - USEFUL ACRONYMS

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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. A 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

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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, FCCH and SCH*

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

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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-SCDMA et al

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 locationCell 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.

SeeSDCCH, SACCHandFACCH

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 *thedownlink* and another, widely separated, band is used for traffic from the subscriber to the network *theuplink*

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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 *seecodec*

EFT

Electronic Funds Transfer

EGSM

Extended *frequencyrange* 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

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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 multislots 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.

HCS

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

HDLC

High level Data Link Control

HIPERLAN

High Performance Radio Local Access Network; a wireless local area network being standardised by ETSI *AlsoHIPERLAN2*

HLR

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

HSCSD

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

HSPSD

High Speed Packet Switched Data

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

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Iur

The interface between RNCs in a UMTS network

Iups

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

Iucs

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

I-ETS

Interim European Telecommunications Standard

I-mode

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

IMEI

International Mobile Equipment Identity

IMSI

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

Integrated Services Digital Network

ISO

International Standards Organisation

ISP

Internet Service Provider

ITU

International Telecommunications Union

ITU-R

ITU Telecommunications Radio Sector

ITU-T

ITU Telecommunications Standardisation Sector

IWF

Interworking Function

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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

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LAN

Local Area Network

LANS

Local Area Network Services

LAP

Link Access Protocol

LEO

Low Earth Orbit; refers to satellites, which orbit the Earth at around 1,000 kilometres

LMSS

Land Mobile Satellite Service

LOS

Line of Sight

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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

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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

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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 *seealso*DCS1800. 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

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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

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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

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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 160characters 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

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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 *see* *NB*, *FB*, *SB*, *AB* and *DB*

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*

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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

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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

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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 *upto11Mbit/sdownload* 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

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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 *NiCad*, nickel metal hydride *NiMH* and lithium ion *Li – 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 *fixedormobile* 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

as CLI

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