

GLOSSARY OF TELECOMMUNICATION

AA	ACCOUNTING AUTHORITY The organization named on a commissioning application form to administer the billing and settlement of the communication charges incurred by an MES.
AAIC	ACCOUNTING AUTHORITY IDENTIFICATION CODE A unique code assigned by the ITU to identify an accounting authority.
AERO C	An aeronautical service which supports two-way 600bps store-and-forward data messaging, polling and integrated GPS position-reporting for non-safety-related purposes.
AERO H	An aeronautical service which provides multi-channel voice, 10.5kbps fax and data, delivered via a high-gain antenna within the satellites' global beams. ICAO approved for safety services.
AERO H+	An aeronautical service which provides multi-channel voice, 10.5kbps fax and data, delivered via a high-gain antenna within the spot beams of the INMARSAT-3 satellites and the full footprint of the INMARSAT-4 Atlantic Ocean Region (AOR) satellite, at a lower cost per connection. ICAO approved for safety services.
AERO I	An aeronautical service which provides multi-channel voice, 4.8kbps circuit-mode data and fax, delivered via an intermediate-gain antenna. Also supports low-speed packet data. Available in the spot beams of the INMARSAT-3 satellites and the full footprint of the INMARSAT-4 AOR satellite. ICAO approved for safety services.
Aero L	An aeronautical service which provides global data communications at 600 to 1200bps, principally to support air traffic control and airline operations. Supports Acars / Aircom messaging. ICAO approved for safety services.
AMVER	AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE SYSTEM A vessel position-reporting system operated by the United States Coast Guard for any merchant vessel of 1000grt or more on a voyage lasting longer than 24 hours, to and from anywhere on the world.
ANALOGUE	Any signal which represents a changing value over time.
ANSWERBACK	An identifier given to an INMARSAT MES and used in message transmissions. The format must be four letters (A-Z; no numbers) finishing with an x.
AOR-E	Atlantic Ocean Region (East).
AOR-W	Atlantic Ocean Region (West).
APPLICANT	The person who completes and signs a maritime commissioning application form when applying to have an INMARSAT MES commissioned. The applicant must submit the form to the national routing organization for the country where the vessel is registered.
ARQ	AUTOMATIC REQUEST REPEAT The error correction process used in store-and-forward messaging by which a receiver checks for errors in received data packets and requests the sending end to re-transmit any packets which were received containing an error.
ASCII	AMERICAN STANDARD CODE FOR INFORMATION INTERCHANGE A standard alphanumeric character set based on 7-bit codes.
AUSREP	A vessel position-reporting system similar to AMVER, but operated by the Australian Authorities.
BEER	Bulletin Board Error Rate
BGAN	BROADBAND GLOBAL AREA NETWORK The world's first mobile communications service provided by INMARSAT, introduced in 2005. Delivers simultaneous voice and broadband data communications via a lightweight, notebook-size device. Provides seamless network coverage across most of the world's landmass and offers Standard IP at speeds up to 492kbps and "on-demand" Streaming IP at up to 256kbps.

BIT	The basic unit of digital communications; may be either 1 or 0.
BER	BIT ERROR RATE Used as a measure of the quality of reception by the MES of the Bulletin Board of a TDM Channel.
BPS	BITS PER SECOND A unit of measurement for speed of data transfer or throughput.
BB	BULLETIN BOARD :IN A TDM CHANNEL A data packet transmitted in each frame of a TDM channel which contains information about the status of the INMARSAT B/M, mini-M and C network configurations and the current frame number, used by the MES as a timing reference.
BBS	BULLETIN BOARD SERVICE A notice board on which information can be exchanged or posted for others to download. Byte: One byte comprises eight bits and may represent either one alphanumeric character or numeric information.
CAG	Customer Activation Group
CASE-APPROVAL	The official approval given by INMARSAT to an MES model which is typically still undergoing development by a manufacturer so as to permit the model to access an INMARSAT communications system. See also type-approval.
CCITT	COMITE CONSULTATIF INTERNATIONAL TELEGRAPHIQUE ET TELEPHONIQUE An advisory committee to the International Telecommunication Union (ITU). The CCITT publishes standards and recommendations to enable telecommunications systems and equipment world-wide to communicate with each other. Examples of CCITT standards are the X.25 and X.400 protocols used on PSDN land-lines.
CHANNEL NUMBER	The number representing the frequency of an INMARSAT communications channel.
CHARACTER	One element of an alphanumeric character set. One character is equivalent to one byte or 8 bits.
CLASS 1 INMARSAT C MES	A Class 1 MES is capable of ship-to-shore and shore-to-ship message transfer and distress alerting, but is not capable of receiving EGC messages.
CLASS 2 INMARSAT C MES	A Class 2 MES is capable of two modes of operation (selected by the operator): As Class 1, and also capable of receiving EGC messages when not engaged in INMARSAT C traffic. Ready for EGC message reception exclusively (and not available in that mode for INMARSAT C message transfer).
CLASS 3 INMARSAT C MES	A Class 3 MES has two independent receivers, one for receiving two-way INMARSAT C messages, the other for receiving EGC messages.
CLASSIC AREO	INMARSAT's Classic range of aeronautical services supports high-quality voice, low-speed data and safety communications. The six services which vary in capability, coverage, equipment size and cost are: Aero H, Aero H+, Aero I, Aero L, Mini M Aero, and Aero C.
CLOSED NETWORK	A private network, with access limited to registered users. The INMARSAT C system allows two types of closed networks: data reporting networks, identified by a Data Reporting Network Identification (DNID) code, and EGC FleetNET networks, identified by an EGC Network Identification (ENID) code.
COMMISSIONING COMPANDED	The process by which an MES is registered for use via the INMARSAT network. A method of transmission, meaning 'compressed/expanded', which is used to improve signal-to-noise ratio. At the sending end, a 'compressor' electronic circuit amplifies low-level signals and reduces high levels to a mean level according to an algorithm. At the receiving end, an 'expander' circuit uses similar methods to return

	the signal levels to their original values before passing them on to other circuits. See also uncompounded.
COSPAS-SARSAT	A satellite-based distress beacon locating system
COVERAGE AREA	The area which covered by INMARSAT
CSS	Coordinator Surface Search.
DATA REPORT	PROGRAMMED UNRESERVED, P A short collection of data (up to 32 bytes in three packets) which is transmitted by an MES at random times in unreserved time slots of a signaling channel after receipt of polling command from an operational centre.
DATA REPORT	RESERVED, R A small amount of data (up to 32 bytes in three packets) which is transmitted by an MES in reserved times slots in a signaling channel, in response to an earlier polling command from an operational centre.
DATA REPORT	UNRESERVED, U A small amount of data (up to 32 bytes in three packets) which is transmitted in unreserved time slots of a signaling channel by an MES to an operational centre.
DATA SERVICES	This is how a terminal may send and receive electronic messages such as e-mail.
DCE	Data circuit terminating equipment: a component part of an INMARSAT C MES. An MES contains a DCE receiver and a DCE transmitter which are used for communication between the MES and an INMARSAT C LES.
DECCA NAVIGATOR	A position-fixing system, based on chains of shore-based radio transmissions.
DHSD	Duplex high-speed data
DIFFERENTIAL GPS	A global positioning system used with INMARSAT terminals and based on GPS satellites, with accuracy enhanced by the use of transmission of differential corrections from suitably located shore-based radio beacons.
DIGITAL	A signal which represents values in the form of binary numbers.
DISTRESS ALERTING	A facility available on all maritime MESs, enabling the MES to send distress priority messages through the INMARSAT system to a rescue co-ordination centre (RCC). This is not available on the INMARSAT-mini-M network.
DISTRESS PRIORITY MESSAGE	This is a message prepared and sent with distress priority using the INMARSAT system to a rescue co-ordination centre (RCC).
DMG	Distress Message Generator.
DNIC	Data Network Identification Code.
DNID	Data reporting Network Identification code. See data report (unreserved), data report (reserved) and data report (pre-assigned).
DOWNLOADING	The process by which an INMARSAT C MES receives information from a service provider. For data reporting purposes, an operational centre downloads a DNID code and Member Number to the MES. In the EGC Fleet NETTM service, an information provider downloads an EGC Network Identification (ENID) code to an MES.
DTE	DATA TERMINAL EQUIPMENT a component part of an INMARSAT C MES, used primarily for storage and interfacing external devices (such as a keyboard or monitor). For other INMARSAT systems, this can be a computer connected to the MES for use for data communications.
DUPLEX	The ability of a communications channel to transmit data simultaneously in both directions. Also known as Full Duplex.
EGC	The EGC (Enhanced Group Call) services provided in the INMARSAT C system are

	EGC Safety NET, EGC Fleet NET and INMARSAT system messages.
EIRP	Effective Isotropic ally Radiated Power, a measure of transmitted power.
E-MAIL	ELECTRONIC MAIL A global message-handling system whereby subscribers to commercial e-mail services can exchange electronic messages and data files between computers. E-mail services are provided by some service providers and private organizations. Access to e-mail services may be via PSTN, PSDN networks or the Internet.
ENID	EGC network identification (ENID) code.
EPIRB	Emergency position-indicating radio beacon.
ESAS	Electronic Service Activation System.
FAX	FACSIMILE MACHINE A device used to transmit a copy of an original document. The INMARSAT-A, B/M and mini-M systems support two-way fax transmissions. The INMARSAT C system is able to send only text messages (no graphics) to a fax terminal in the ship-to-shore direction. It is only possible to send text messages (no graphics) in the shore-to-ship direction by using a third party fax bureau.
FAX BUREAU SERVICE	A service offered by some private organizations and service providers to send and receive fax messages
FLEET NET	service provided by FleetNET information providers to distribute commercial information to MESs belonging to a FleetNET group, identified by an unique ENID code.
FLEET BROADBAND	The first maritime communications service to provide cost-effective broadband data and voice, simultaneously, through a compact antenna on a global basis. Two types of terminal are available, FB250 and FB500. Both terminals provide different performance capabilities and size offering and support voice, fax and SMS.
FLEET PHONE	A satellite phone service for the maritime sector. Low-cost, easy to use fixed telephony solution, that is ideal both for master and crew on smaller fishing vessels, leisure craft and regional merchant fleets.
FLEET 77, 55, AND 33	These three maritime services offer a combination of global voice and fax communications, Mobile ISDN data at 64kbps and 128kbps, and our original always-on IP-based Mobile Packet Data Service (MPDS) for email, web browsing and other office applications.
FOOTPRINT	OF A SATELLITE The area on the Earth's surface (sea or land) covered by the satellite and where an antenna can obtain line-of-sight communications. In the INMARSAT systems, this area is also known as the ocean region or coverage area.
GATEWAY	An interface between communications systems such as the INMARSAT C system and the national and international telecommunications networks.
GLONASS	A global positioning system similar to GPS but using satellites of the former Soviet Union.
GMDSS	The Global Maritime Distress and Safety System: the INMARSAT-A/B and C systems are the only INMARSAT networks included in the GMDSS by the IMO International Maritime Organization.
Gold Franc GF	A nominal currency used by LESs and accounting authorities to calculate communication charges incurred by an MES. A fixed rate of exchange exists between the GF and the nominal currency the SDR: 1 SDR = 3.061 GF.
GPS	GLOBAL POSITIONING SYSTEM System which provides the geographic location of a vessel. This service uses American military satellites which have been made available for civilian use.
GROUND SEGMENT	The network of LESs which provide a link between the space segment and the terrestrial telecommunication networks.

HSD	HIGH-SPEED DATA. This service allows for data to be transferred at data rates of up to 64kbit/s. A definitive reference to INMARSAT and satcom speak.
IA5	INTERNATIONAL ALPHABET 5 A standard alpha- numeric character set, also known as ASCII, based on 7-bit codes. Supports both upper and lower case characters.
IHO	International Hydrographic Organization.
IMN	INMARSAT MOBILE NUMBER The number assigned by the national routing organization to an INMARSAT MES as its identity number. An INMARSAT-A maritime IMN has the format 1xxxxxx; an INMARSAT-B maritime IMN has the format 3xxxxxxxx; an INMARSAT C maritime IMN has the format 4xxxxxxxx; an INMARSAT-M maritime IMN has the format 6xxxxxxxx; and an INMARSAT-mini-M maritime IMN has the format 76xxxxxxxx.
IMO	International Maritime Organization.
INFORMATION PROVIDER	An organization which provides MSI messages for broadcasting to MESs via the EGC Safety NETTM service, which can be received by vessels fitted with an EGC receiver.
INMARSAT	The operator of global mobile satellite communications, part of the INMARSAT Ventures Ltd group of companies.
INMARSAT A	The original INMARSAT system, which operated from 1982 to 2007. It was based on analogue techniques and was capable of global two-way telephony, facsimile, data and telex communications.
INMARSAT B	An INMARSAT system based on digital technology, and capable of high quality telephony, facsimile, data and telex services.
INMARSAT C	A digital system based on a low-cost MES with low power consumption. This system provides global two-way store-and-forward messaging, distress alerting, EGC Safety NETTM and Fleet NETTM, data reporting and polling.
INMARSAT E	A distress alerting system based on EPIRBs. Now discontinued.
INMARSAT M	Introduced in 1993, based on digital technology and capable of two-way voice telephony, distress alerting, fax and data services at lower data rates.
INMARSAT MINI M	Introduced in 1995, based on digital technology and capable of two-way voice telephony, alerting, fax and data services. Operates only in the reduced coverage offered by the spot beams
ISLs	INTER-STATION SIGNALLING LINKS These signaling channels are used between an NCS and the LESs in its ocean region to pass system information around the system.
INTERNET	An international network of computers linked to enable information to be exchanged.
IOR	Indian Ocean Region
ISATM2M	A two-way burst messaging service enabling a wide range of machine-to-machine applications for tracking and monitoring remote fixed or mobile assets on a global basis - whether on land, at sea or in the air.
ISATPHONE	A mobile satellite phone service available across Asia, Africa and the Middle East via the INMARSAT-4 Indian Ocean satellite and is expected to go global in 2009. The handset is a lightweight, pocket-size dual-mode satellite and GSM 900 mobile phone, with an easy to use icon-driven menu and a full range of accessories.
ISDN	INTEGRATED SERVICE DIGITAL NETWORK A high capacity digital line which lets users send voice and data at 64kbit/s over one telephone line from a common network interface.
ISP	INMARSAT SERVICE PROVIDER

	An entity which establishes a contract with one or more of the SPs to bill, promote and retail the services of the contracted SPs to end users. It can be an alternative to an AA.
ITA2	INTERNATIONAL TELEGRAPH ALPHABET 2 A standard alphanumeric character set, generally used for sending messages on the international telex networks. The character set is based on 5-bit codes, also known as telex format, or 5-bit packed.
ITU	The International Telecommunication Union, which publishes a list of approved accounting authorities.
JASREP	A vessel position-reporting system similar to AMVER, but operated by the Japanese authorities.
KBYTES	1024 bits or 128 characters.
LAN	LOCAL AREA NETWORK A network which allows computers and printers to communicate with each other, have access to and share expensive peripherals such as fax servers, modem servers and centralized databases.
LES	LAND EARTH STATION The name used in the INMARSAT network for a shore-based receiving and transmitting station which acts as an interface between MESs and the terrestrial communications networks. LESs are owned and operated by service providers.
LANDPHONE	A fixed satellite phone service ideal for remote users. Operable indoors or outdoors as a private or business telephone, or as a payphone-type solution in conjunction with prepaid cards. Connects to a standard telephone and remote antenna, and is currently available across Asia, Africa and the Middle East.
LES TDM CHANNEL	A TDM channel used by an LES to transmit system information and data addressed to an MES.
LOG IN	The action performed on an INMARSAT C MES to inform the NCS in an ocean region that the MES is available for communications.
LOG OUT	The action performed on an INMARSAT C MES to inform the NCS in an ocean region that the MES is not available for communication.
LORAN-C	A position-fixing system, based on chains of shore-based, low-frequency radio transmissions.
MEM	Macro-encoded message
MEMBER NUMBER	The number downloaded with a DNID to an MES, when the MES is registered to a data-reporting network.
MES	MOBILE EARTH STATION The generic name used to describe an INMARSAT-approved terminal which is allowed to access the network, and applicable to both maritime and land mobile communications
MESSAGE CHANNEL	A channel assigned by the NCS for an MES to send a message through an LES to its required destination.
METAREA	Meteorological area corresponding to the NAVAREAs defined by the IMO.
MINI M AERO	An aeronautical service which provides single-channel voice, fax or 2400bps data, for general aviation and smaller corporate aircraft. Supports STU-III encrypted voice.
MMSI	MARITIME MOBILE SYSTEM IDENTITY A nine-digit format assigned by the maritime authority to identify a vessel. The first three digits are the code of the country where the vessel is registered as defined by the ITU.
MODEM	MODULATOR/DEMODULATOR a device used to transmit digital data, by converting (modulating) a digital signal into an analogue form and re-converting (demodulating) the analogue signal into

	digital form at the receiving end.
MSI	MARITIME SAFETY INFORMATION Information supplied by shore-based information providers and forwarded to an INMARSAT C LES for broadcasting over the INMARSAT C system to MESs fitted with an EGC receives capability.
MULTI-CHANNEL MES	An MES which is capable of making more than one call at a time. Most MESs are only single channel.
NAVAREA	One of 16 areas of sea as defined by the IMO, into which the world's oceans are divided for the dissemination of navigational and meteorological warnings. See also METAREA.
NAVTEX	The low-frequency system developed by the IMO for the broadcast and automatic reception of coastal MSI by means of direct-printing telegraphy.
NCS	An INMARSAT network co-ordination station; a specially equipped LES appointed as the NCS for each INMARSAT system and ocean region, which monitors and co-ordinates the operation of all of the MESs and SPs within that ocean region.
NCS COMMON SIGNALLING CHANNEL	Also known as the NCS Common Channel. A TDM channel used by the NCS to transmit system information and message announcements to MESs.
NETWORK	A group of communication channels which enable the sharing of information and resources between several users.
NOC	Operations Centre, located at INMARSAT's headquarters in London, which monitors and controls the operation of the INMARSAT network.
NETWORK NUA	Network user address
OCEAN REGION	The coverage area of an INMARSAT satellite within which an MES may send and receive messages.
OMEGA	A position-fixing system based on chains of shore-based, very-low frequency radio transmissions.
OMNI-DIRECTIONAL ANTENNA	An antenna which is capable of line-of-sight communication with a satellite without requiring any pointing. Generally used on an INMARSAT C MES.
OPERATIONAL CENTRE	A shore-based centre for controlling a data-reporting network. The operational centre initially downloads a DNID code and member number to an MES which joins the group. The centre subsequently sends polling commands to instruct selected MESs to return pre-assigned data reports or to perform a defined task such as SCADA. The centre also receives unreserved data reports from MESs belonging to the closed network.
OPERATOR-ASSISTED SERVICES	Communications services provided by some service providers, for example forwarding a text message from an MES as a voice message to a shore-based telephone.
OPTION 1 STAND-ALONE EGC RECEIVER	A type of stand-alone EGC receiver which can receive only EGC messages and cannot engage in non-EGC message transfer.
OPTION 2 STAND-ALONE EGC RECEIVER	This type of stand-alone EGC receiver may be added to the antenna of an INMARSAT-A or B MES so that the vessel may meet its GMDSS requirements.
PACKET	An 'envelope' or block of data sent over a network; each packet contains addressing information as well as the data being sent.
POLLING	The facility whereby an operational centre sends an instruction (a polling command) to selected MESs to perform a defined task, such as returning a pre-assigned data report or performing a SCADA operation.
POR	Pacific Ocean Region
PRESENTATION	A code included in a transmission (ship-to-shore or shore-to-ship), indicating to the

CODE	recipient the presentation or formatting of the data contained in the message.
PROTOCOL	: A defined set of communications standards which lay down the parameters to which all users must abide. Protocols in general use are X.25 and X.400.
PSA	Point of Service Activation.
PSDN	Packet Switched Data Network
PSTN	Public Switched Telephone Network.
PVT	Performance Verification Test; used to test the performance of INMARSAT C .
RCC	Rescue co-ordination centre.
SAFETY NETTM	This service is provided by SafetyNETTM information providers to distribute MSI to MESs fitted with an EGC receive capability.
SAR	Search-and-rescue.
SART	Search and Rescue Radar Transponder.
SCADA	Supervisory Control and Data Acquisition.
SCC	Satellite control centre.
SDR	SPECIAL DRAWING RIGHT A nominal currency used by service providers and accounting authorities to calculate communication charges incurred by an MES. A fixed rate of exchange exists between the SDR and the nominal currency of the GF: 1 SDR = 3.061 GF.
SP	SERVICE PROVIDER
SIGNALLING CHANNEL (MES - LES)	A random access TDMA channel, used by an MES to transmit signalling information and data to an LES.
SIGNALLING CHANNELS (MES - NCS)	A random access TDMA channel, used by an MES to transmit signalling information and data to an NCS.
SIM CARD	SUBSCRIBER IDENTITY MODULE Used with INMARSAT mini-M, SIM cards are easily installed and removed, allowing one terminal to be used by multiple users without having complex billing arrangements.
SIMPLEX	The ability of a communication channel to carry communication traffic in one direction only.
SOLAS	Safety of Life at Sea.
SPACE SEGMENT	Consists of the communications satellites operated by INMARSAT.
SPECIAL ACCESS CODE	A destination addresses code used in a ship-to-shore or shore-to-ship message to access a special service provided by a service provider. The two-digit codes are examples of special access codes.
SPOT BEAM	A concentrated area offering coverage within the global footprint for particular regions in the world.
STORE-AND-FORWARD MESSAGING	The protocol used by the INMARSAT C system to transfer text or data messages in data packets to receiving equipment.
SWIFT 64	Provides bandwidth for applications such as high-quality voice, email, internet and intranet access, and videoconferencing, via its Mobile ISDN and IP-based Mobile Packet Data Service (MPDS) offerings.
SWIFT BROADBAND	Designed to meet the demand for more bandwidth across all areas of aviation. The service provides a high-quality voice channel with the full functionality of land-based fixed phone services and a generic SMS service as well as delivering the same high-quality voice communications that is customary from INMARSAT.
SYSTEM MESSAGE	A message originated by INMARSAT containing information relevant to the INMARSAT system, broadcast on the NCS Common Channel and received by all

	MESs.
TCP / IP	TRANSMISSION CONTROL PROTOCOL / INTERNET PROTOCOL The set of protocols used to communicate via the Internet and between multiple networks.
TDM	TIME DIVISION MULTIPLEX The process by which multiple signals can share the same communication channel, each using a different time slot.
TDM CHANNEL	The INMARSAT system uses different TDM channels, each transmitted on an unique frequency. The TDM channels are used for system control and message transfer to MESs. See LES TDM Channel and NCS Common Channel.
TDMA	TIME DIVISION MULTIPLE ACCESS The process by which MESs communicate with an LES or NCS.
TNID	TERRESTRIAL NETWORK IDENTITY
TTN	TERRESTRIAL TELECOMMUNICATION NETWORKS The national and international telephone, telex and data networks with which the service providers interface to route calls to and from MESs via the space segment.
TIME SLOT	Basic unit into which one time frame of a TDM channel is divided.
TYPE-APPROVAL	The official approval given by INMARSAT to an MES model produced by an independent manufacturer when the MES meets the technical standards defined by INMARSAT. Only models which have been granted type-approval (or case-approval) are permitted to operate via the INMARSAT network.
UNCOMPANDED	A method of transmission which does not use companding techniques and is used for data and fax transmission on the INMARSAT-A network. See companded.
UTC	UNIVERSAL CO-ORDINATED TIME A term which, for practical purposes, has the same meaning as Greenwich Mean Time (GMT).
VALUE-ADDED SERVICE (VAS) PROVIDER	A private organization which provides services such as weather forecasting to vessels using INMARSAT and other networks.
VIDEO CONFERENCING	Video and audio communication between two or more people via a videocodec (coder/decoder) at either end and linked by digital circuits.
WAN	WIDE AREA NETWORK A network which connects users over large distances, often crossing geographical boundaries.
WMO	World Meteorological Organization.
X.25	The communications protocol used on the national and international PSDN networks to exchange digital data between devices attached to the network.
X.400	A message-handling protocol used to exchange electronic mail (e-mail) messages around the world. Able to use the X.25 (PSDN) networks.
TWO-DIGIT CODES	Special examples of Special Access Codes
5-BIT PACKED	ALSO KNOWN AS TELEX FORMAT OR ITA2 A format based on 5-bit codes used for sending alpha-numeric characters to and from telex terminals.
7-BIT ASCII	A format based on 7-bit codes used for sending the alphanumeric characters of the ASCII character set.
8-BIT DATA	A format based on 8-bit codes used for encoding information such as text, national character sets and numerical information.