

Chapter 4

Definitions and Particulars of Assignments

4.1 DEFINITIONS

The terms and definitions in this chapter apply to the application of these Radiocommunication Regulations, including the Table of Frequency Allocations and to the International Telecommunication Union international Radio Regulations.

4.1.1 Special Terms (General):

Where a definition is followed by the parenthetical expression "(RR)," it is an indication the definition is in the ITU Radio Regulations.

Accepted Interference¹: Interference at a higher level than that defined as permissible interference and which has been agreed upon between two or more administrations without prejudice to other administrations. (RR)

Active Satellite: A satellite carrying a station intended to transmit or retransmit radiocommunication signals. (RR)

Active Sensor: A measuring instrument in the Earth exploration-satellite service or in the space research service by means of which information is obtained by transmission and reception of radio waves. (RR)

Adaptive System: A radio-communication system which varies its radio characteristics according to channel quality. (RR)

Administration: Any governmental department or service responsible for discharging the obligations undertaken in the Constitution of the International Telecommunication Union, in the Convention of the International Telecommunication Union and in the Administrative Regulations. (RR)

Aeronautical Broadcast Station: An aeronautical station which makes scheduled broadcasts of meteorological information and notices to airmen. (In certain instances, an aeronautical broadcast station may be placed on board a ship.)

Aeronautical Earth Station: An Earth Station in the fixed-satellite service, or, in some cases, in the aeronautical mobile-satellite service, located at a specified fixed point on land to provide a feeder link for the aeronautical mobile-satellite service. (RR)

Aeronautical Fixed Service: A radiocommunication service between specified fixed points provided primarily for the safety of air navigation and for the regular, efficient and economical operation of air transport. (RR)

Aeronautical Fixed Station: A station in the aeronautical fixed service. (RR)

Aeronautical Marker Beacon Station: A radio-navigation land station in the aeronautical radionavigation service which employs a marker beacon.

Aeronautical Mobile Service: A mobile service between aeronautical stations and aircraft stations, or between aircraft stations, in which survival craft stations may participate; emergency position-indicating radiobeacon stations may also participate in this service on designated distress and emergency frequencies. (RR)

Aeronautical Mobile OR (OFF-ROUTE) Service: An aero-nautical mobile service intended for communications, including those relating to flight coordination, primarily outside national or international civil air routes. (RR)

Aeronautical Mobile R (ROUTE) Service: An aeronautical mobile service reserved for communications relating to safety and regularity of flight, primarily along national or international civil air routes. (RR)

Aeronautical Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board aircraft; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service. (RR)

Aeronautical Mobile-Satellite OR (OFF-ROUTE) Service: An aeronautical mobile-satellite service intended for communications, including those relating to flight coordination, primarily outside national and international civil air routes. (RR)

Aeronautical Mobile-Satellite R (ROUTE) Service: An aeronautical mobile-satellite service reserved for communications relating to safety and regularity of flight, primarily along

national or international civil air routes. (RR)

Aeronautical Mobile Satellite Space Station: A space station in the aeronautical mobile-satellite service.

Aeronautical Radiobeacon Station: A radio-beacon station in the aeronautical radionavigation service intended for the benefit of aircraft.

Aeronautical Radionavigation-Satellite Earth Station: A fixed earth station in the aeronautical radionavigation-satellite service.

Aeronautical Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the aeronautical radionavigation-satellite service.

Aeronautical Radionavigation-Satellite Service: A radionavigation-satellite service in which earth stations are located on board aircraft. (RR)

Aeronautical Radionavigation Service: A radionavigation service intended for the benefit and for the safe operation of aircraft. (RR)

Aeronautical Radionavigation-Satellite Space Station: A space station in the aeronautical radionavigation-satellite service.

Aeronautical Station: A land station in the aeronautical mobile service. In certain instances, an aeronautical station may be located, for example, on board ship or on a platform at sea. (RR)

Aeronautical Telemetry Land Station: A telemetry land station used in the flight testing of manned or

unmanned aircraft, missiles, or major components thereof.

Aeronautical Telemetry Mobile Station: A telemetry mobile station used for transmitting data directly related to the airborne testing of the vehicle (or major components), on which the station is installed.

Aeronautical Utility Land Station: A land station located at airdrome control towers and used for control of ground vehicles and aircraft on the ground at airdromes.

Aeronautical Utility Mobile Station: A mobile station used for communication at airdromes with the aeronautical utility land station, the airdrome control station, the flight service station, ground vehicles, and aircraft on the ground. (All transmissions shall be subject to the control of the airdrome control station and shall be discontinued immediately when so requested by the airdrome control operators.)

Aircraft Earth Station: A mobile earth station in the aeronautical mobile-satellite service located on board an aircraft. (RR)

Aircraft Station: A mobile station in the aeronautical mobile service, other than a survival craft station, located on board an aircraft. (RR)

Airdrome Control Station: An aeronautical station providing communication between an airdrome control tower and aircraft.

Allocation (of a frequency band): Entry in the Table of Frequency

Allocations of a given frequency band for the purpose of its use by one or more terrestrial or space radiocommunication services or the radio astronomy service under specified conditions. This term shall also be applied to the frequency band concerned. (RR)

Allotment (of a radio frequency or radio frequency channel): Entry of a designated frequency channel in an agreed plan, adopted by a competent conference, for use by one or more administrations for a terrestrial or space radio-communication service in one or more identified countries or geographical areas and under specified conditions. (RR)

Altimeter Station: A radionavigation mobile station in the aeronautical radionavigation service which employs a radio altimeter.

Altitude of the Apogee or of the Perigee: The altitude of the apogee or perigee above a specified reference surface serving to represent the surface of the Earth. (RR)

Amateur-Satellite Earth Station: An earth station in the amateur-satellite service.

Amateur-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purposes as those of the amateur service. (RR)

Amateur-Satellite Space Station: A space station in the amateur-satellite service.

Amateur Service: A radiocommunication service for the

purpose of self-training, intercommunication and technical investigation carried out by amateurs, that is, by duly authorized persons interested in radio technique solely with a personal aim and without pecuniary interest. (RR)

Amateur Station: A station in the amateur service. (RR)

ASDE: A radiolocation device employed for airport surface surveillance.

Assigned Frequency: The center of the Frequency Band assigned to a station. (RR)

Assigned Frequency Band: The frequency band within which the emission of a station is authorized; the width of the band equals the necessary bandwidth plus twice the absolute value of the frequency tolerance. Where space stations are concerned, the assigned frequency band includes twice the maximum Doppler shift that may occur in relation to any point of the Earth's surface. (RR)

Assignment (of a radio frequency or radio frequency channel): Authorization given by an administration for a radio station to use a radio frequency or radio frequency channel under specified conditions. (RR)

Authorized Bandwidth: Authorized bandwidth is, for purposes of these Regulations, the necessary bandwidth (bandwidth required for transmission and reception of intelligence) and does not include allowance for transmitter drift or Doppler shift.

Aviation Instructional Station: A land or mobile station in the aeronautical mobile service used for radiocommunications pertaining to instructions to students or pilots while actually operating aircraft or engaged in soaring activities.

Base Earth Station: An earth station in the fixed-satellite service or, in some cases, in the land mobile-satellite service, located at a specified fixed point or within a specified area on land to provide a feeder link for the land mobile-satellite service. (RR)

Base Station: A land station in the land mobile service. (RR)

Bridge-to-Bridge Station: A ship station operating in the port operations service in which messages are restricted to navigational communications and which is capable of operation from the ship's navigational bridge or, in the case of a dredge, from its main control station, operating on a frequency or frequencies in the 156-162 MHz band.

Broadcasting-Satellite Service: A radiocommunication service in which signals transmitted or retransmitted by space stations are intended for direct reception by the general public. In the broadcasting-satellite service, the term "direct reception" shall encompass both individual reception and community reception. (RR)

Broadcasting-Satellite Space Station: A space station in the broadcasting-satellite service (television).

Broadcasting Service: A radiocommunication service in which the transmissions are intended for direct

reception by the general public. This service may include sound transmissions, television transmissions or other types of transmissions. (RR)

Broadcasting Station: A station in the broadcasting service. (RR)

Carrier Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle taken under the condition of no modulation. (RR)

Characteristic Frequency: A frequency which can be easily identified and measured in a given emission. A carrier frequency may, for example, be designated as the characteristic frequency. (RR) (See also Reference Frequency.)

Chip-Rate: The rate of encoding.

Class of Emission: The set of characteristics of an emission, designated by standard symbols, e.g., type of modulation of the main carrier, modulating signal, type of information to be transmitted, and also if appropriate, any additional signal characteristics. (RR)

Coast Earth Station: An earth station in the fixed-satellite service or, in some cases, in the maritime mobile-satellite service, located at a specified fixed point on land to provide a feeder link for the maritime mobile-satellite service. (RR)

Coast Station: A land station in the maritime mobile service. (RR)

Coded Squelch: A system wherein radio receivers are equipped with

devices which allow audio signals to appear at the receiver output only when a carrier modulated with a specific signal is received.

Community Reception (in the broadcasting-satellite service): The reception of emissions from a space station in the broadcasting-satellite service by receiving equipment, which in some cases may be complex and have antennae larger than those used for individual reception, and intended for use:

- by a group of the general public at one location; or
- through a distribution system covering a limited area. (RR)

Coordination Area: When determining the need for coordination, the area surrounding an earth station sharing the same frequency band with terrestrial stations, or surrounding a transmitting earth station sharing the same bidirectionally allocated frequency band with receiving earth stations, beyond which the level of permissible interference will not be exceeded and coordination is therefore not required. (RR)

Coordination Contour: The line enclosing the coordination area. (RR)

Coordination Distance: When determining the need for coordination, the distance on a given azimuth from an earth station sharing the same frequency band with terrestrial stations, or from a transmitting earth station sharing the same bidirectionally allocated frequency band with receiving earth stations, beyond which the level of permissible interference will not be exceeded and

coordination is therefore not required. (RR)

Coordinated Universal Time (UTC): Time scale, based on the second (SI), as defined in ITU-R recommendation ITU-R TF.460-5. For most practical purposes associated with the Radio Regulations, UTC is equivalent to mean solar time at the prime meridian (0° longitude), formerly expressed in GMT. (RR)

Deep Space: Space at distances from the Earth equal to or greater than 2×10^6 kilometers. (RR)

Direct Sequence Spread Spectrum: A signal structuring technique utilizing a digital code sequence having a chip rate much higher than the information signal bit rate. Each information bit of a digital signal is transmitted as a pseudo-random sequence of chips.

Distance Measuring Equipment (DME): Equipment that ascertains the distance of an interrogator from a transponder by measuring the time of transmission to and from the transponder.

Duplex Operation: Operating method in which transmission is possible simultaneously in both directions of a telecommunication channel² (RR)

Earth Exploration-Satellite Earth Station: An earth station in the Earth exploration-satellite service.

Earth Exploration-Satellite Service: A radiocommunication service between earth stations and one or more space stations, which may include links between space stations, in which:

- information relating to the characteristics of the Earth and its natural phenomena including data relating to the state of the environment is obtained from active sensors or passive sensors on earth satellites;
- similar information is collected from airborne or earth-based platforms;
- such information may be distributed to earth stations within the system concerned;
- platform interrogation may be included.

This service may also include feeder links necessary for its operation. (RR)

Earth Exploration-Satellite Space Station: A space station in the Earth exploration-satellite service.

Earth Station: A station located either on the Earth's surface or within the major portion of the Earth's atmosphere and intended for communication:

- with one or more space stations; or
- with one or more stations of the same kind by means of one or more reflecting satellites or other objects in space. (RR)

Effective Antenna Gain Contour (of a steerable satellite beam): An envelope of antenna gain contours resulting from moving the boresight of a steerable satellite beam along the limits of the effective boresight area. (RR)

Effective Boresight Area (of a steerable satellite beam): An area on the surface of the Earth within which the

boresight of a steerable satellite beam is intended to be pointed. There may be more than one unconnected effective boresight area to which a single steerable satellite beam is intended to be pointed. (RR)

Effective Monopole Radiated Power (e.m.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a short vertical antenna in a given direction. (RR)

Effective Radiated Power (e.r.p.) (in a given direction): The product of the power supplied to the antenna and its gain relative to a halfwave dipole in a given direction. (RR)

Electromagnetic Compatibility (EMC): Electro-magnetic compatibility is the condition which prevails when telecommunications equipment is performing its individually designed function in a common electromagnetic environment without causing or suffering unacceptable degradation due to unintentional electromagnetic interference to or from other equipment in the same environment.

Emergency locator transmitter (ELT): A transmitter of an aircraft or survival craft actuated manually or automatically that is used as an alerting and locating aid for survival purposes.

Emergency Position-Indicating Radiobeacon Station: A station in the mobile service the emissions of which are intended to facilitate search and rescue operations. (RR)

Emission: Radiation produced, or the production of radiation, by a radio

transmitting station. For example, the energy radiated by the local oscillator of a radio receiver would not be an emission but a radiation. (RR)

Environmental Communications: Communications in the maritime mobile service for the broadcast of information pertaining to the environmental conditions in which vessels operate, i.e., weather, sea conditions, time signals of a grade adequate for practical navigation, notices to mariners and hazards to navigation.

Equivalent Isotropically Radiated Power (e.i.r.p.): The product of the power supplied to the antenna and the antenna gain in a given direction relative to an isotropic antenna (absolute or isotropic gain). (RR)

Equivalent Satellite Link Noise Temperature: The noise temperature referred to the output of the receiving antenna of the earth station corresponding to the radio frequency noise power which produces the total observed noise at the output of the satellite link excluding noise due to interference coming from satellite links using other satellites and from terrestrial systems. (RR)

Expendable Launch Vehicle (ELV): A booster rocket that can be used only once to launch a payload, such as a missile or space vehicle.

Experimental Developmental Station: An experimental station used for evaluation or testing of electronics equipment or systems in a design or development stage.

Experimental Research Station: An experimental station used in basic studies concerning scientific investigations looking toward the improvement of the art of radiocommunications.

Experimental Station: A station utilizing radio waves in experiments with a view to the development of science or technique. This definition does not include amateur stations. (RR)

Experimental Testing Station: An experimental station used for the evaluation or testing of electronics equipment or systems, including site selection and transmission path surveys, which have been developed for operational use.

Facsimile: A form of telegraphy for the transmission of fixed images, with or without half-tones, with a view to their reproduction in a permanent form. (RR)

Feeder Link: A radio link from an earth station at a given location to a space station, or vice versa, conveying information for a space radiocommunication service other than for the fixed-satellite service. The given location may be at a specified fixed point, or at any fixed point within specified areas. (RR)

Field-Disturbance Sensor: A restricted radiation device which establishes a radio frequency field in its vicinity and detects changes in that field resulting from the movement of persons or objects within the radio frequency field. Examples: microwave intrusion sensors; devices that use RF energy for production line counting and sensing.

Fixed Earth Station: An earth station intended to be used at a specified fixed point.

Fixed-Satellite Earth Station: An earth station in the fixed-satellite service.

Fixed-Satellite Service: A radiocommunication service between earth stations at given positions when one or more satellites are used; the given position may be a specified fixed point or any fixed point within specified areas; in some cases this service includes satellite-to-satellite links, which may also be operated in the inter-satellite service, the fixed-satellite service may also include feeder links for other space radiocommunication services. (RR)

Fixed-Satellite Space Station: A space station in the fixed-satellite service.

Fixed Service: A radiocommunication service between specified fixed points. (RR)

Fixed Station: A station in the fixed service. (RR)

Foreign Communication or Foreign Transmission: A radio communication or transmission of energy by radio from or to any place in the Federated States of Micronesia to or from a foreign country, or between a station in the Federated States of Micronesia and a mobile station located outside the Federated States of Micronesia.

Frequency-Hopping Spread Spectrum: A signal structuring technique employing automatic switching of the transmitted frequency. Selection of the frequency to be transmitted is typically made in a

pseudo-random manner from a set of frequencies covering a band wider than the information band-width. The intended receiver would frequency-hop in synchronization with the code of the transmitter in order to retrieve the desired information.

Frequency Sharing: The common use of the same portion of the radio frequency spectrum by two or more users where a probability of interference exists.

Frequency-Shift Telegraphy: Telegraphy by frequency modulation in which the telegraph signal shifts the frequency of the carrier between predetermined values. (RR)

Frequency Tolerance: The maximum permissible departure by the center frequency of the frequency band occupied by an emission from the assigned frequency or, by the characteristic frequency of an emission from the reference frequency. The frequency tolerance is expressed in parts in 10^6 or in Hertz. (RR)

Full Carrier Single-Sideband Emission: A single-sideband emission without reduction of the carrier. (RR)

Gain of an Antenna: The ratio, usually expressed in decibels, of the power required at the input of a loss free reference antenna to the power supplied to the input of the given antenna to produce, in a given direction, the same field strength or the same power flux-density at the same distance. When not specified otherwise, the gain refers to the direction of maximum radiation. The gain may be considered for a specified polarization.

Depending on the choice of the reference antenna a distinction is made between:

- absolute or isotropic gain (G_i), when the reference antenna is an isotropic antenna isolated in space;
- gain relative to a half-wave dipole (G_d), when the reference antenna is a half-wave dipole isolated in space whose equatorial plane contains the given direction;
- gain relative to a short vertical antenna (G_v), when the reference antenna is a linear conductor, much shorter than one quarter of the wavelength, normal to the surface of a perfectly conducting plane which contains the given direction. (RR)

Geostationary Satellite: A geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator and which thus remains fixed relative to the Earth; by extension, a satellite which remains approximately fixed relative to the Earth.(RR)

Geostationary Satellite Orbit: The orbit of a geosynchronous satellite whose circular and direct orbit lies in the plane of the Earth's equator . (RR)

Geosynchronous Satellite: An earth satellite whose period of revolution is equal to the period of rotation of the Earth about its axis. (RR)

Glide Path (Slope) Station: A radionavigation land station which provides vertical guidance to aircraft during approach to landing.

Harmful Interference: Interference which endangers the functioning of a radionavigation service or of other safety services or seriously degrades, obstructs, or repeatedly interrupts a radiocommunication service operating in accordance with these Regulations. (RR)

Hertz: A unit of frequency which is equivalent to one cycle per second.

High Altitude Platform Station: A station located on an object at an altitude of 20 to 50 km and at a specified, nominal, fixed point relative to the earth. (RR)

Hydrologic and Meteorological Fixed Station: A fixed station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

Hydrologic and Meteorological Land Station: A land station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

Hydrologic and Meteorological Mobile Station: A mobile station the emissions of which are used for the automatic transmission of either hydrologic or meteorological data, or both.

Incidental Radiation Device: A device that radiates radio frequency energy during the course of its operation although the device is not intentionally designed to generate radio frequency energy.

Inclination of an Orbit (of an earth satellite): The angle determined by the plane containing the orbit and the plane

of the Earth's equator measured in degrees between 0-180 and in counter-clock wise direction from the Earth's equatorial plane at the ascending node of the orbit. (RR)

Individual Reception (in the broadcasting-satellite service): The reception of emissions from a space station in the broadcasting-satellite service by simple domestic installations and in particular those possessing small antennae. (RR)

Industrial Heating Equipment: Any apparatus which utilizes a radio frequency oscillator or any other type of radio frequency generator and transmits radio frequency energy used for or in connection with industrial heating operations utilized in a manufacturing or production process.

Industrial, Scientific and Medical (ISM) Applications (of radio frequency energy): Operation of equipment or appliances designed to generate and use locally radio frequency energy for industrial, scientific, medical, domestic or similar purposes, excluding applications in the field of telecommunications. (RR)

Instrument Landing System (ILS): A radio-navigation system which provides aircraft with horizontal and vertical guidance just before and during landing and, at certain fixed points, indicates the distance to the reference point of landing. (RR)

Instrument Landing System Glide Path: A system of vertical guidance embodied in the instrument landing system which indicates the vertical

deviation of the aircraft from its optimum path of descent. (RR)

Instrument Landing System Localizer: A system of horizontal guidance embodied in the instrument landing system which indicates the horizontal deviation of the aircraft from its optimum path of descent along the axis of the runway. (RR)

Interference: The effect of unwanted energy due to one or a combination of emissions, radiations, or inductions upon reception in a radiocommunication system, manifested by any performance degradation, misinterpretation, or loss of information which could be extracted in the absence of such unwanted energy. (RR)

International Broadcasting Station: A broadcasting station, employing frequencies allocated to the broadcasting service between 5950 kHz and 26100 kHz, whose transmissions are intended to be received directly by the general public in foreign countries.

Inter-Satellite Service: A radiocommunication service providing links between artificial earth satellites. (RR)

Interstate Communication or Interstate Transmission: A radio communication or transmission of energy by radio from any place in one State in the Federated States of Micronesia to another State in the Federated States of Micronesia.

Ionosphere Sounder: A device that transmits signals for the purpose of determining ionospheric conditions.

Ionospheric Scatter: The propagation of radio waves by scattering as a result of irregularities or discontinuities in the ionization of the ionosphere. (RR)

Land Earth Station: An earth station in the fixed-satellite service or, in some cases, in the mobile-satellite service, located at a specified fixed point or within a specified area on land to provide a feeder link for the mobile-satellite service. (RR)

Land Mobile Earth Station: A mobile earth station in the land mobile-satellite service capable of surface movement within the geographical limits of a country or continent (RR)

Land Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on land. (RR)

Land Mobile-Satellite Space Station: A space station in the land mobile-satellite service.

Land Mobile Service: A mobile service between base stations and land mobile stations, or between land mobile stations. (RR)

Land Mobile Station: A mobile station in the land mobile service capable of surface movement within the geographical limits of a country or continent. (RR)

Land Station: A station in the mobile service not intended to be used while in motion. (RR)

Left-Hand (or Anti-Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in any

fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a left-hand or anticlockwise direction. (RR)

Licensee: The holder of a radio station license granted or continued in force by the Government of the Federated States of Micronesia.

Localizer Station: A radionavigation land station in the aeronautical radionavigation service which employs an Instrument Landing System Localizer.

Loran Station: A long distance radionavigation land station transmitting synchronized pulses. Hyperbolic lines of position are determined by the measurement of the difference in the time of arrival of these pulses.

Low-Power Communication Device: A restricted radiation device, exclusive of those employing conducted or guided radio frequency techniques, used for the transmission of signs, signals (including control signals), writing, images and sounds or intelligence of any nature by radiation of electromagnetic energy. Examples: Wireless microphone, phonograph oscillator, radio-controlled garage door opener, and radio-controlled models.

Marine Broadcast Station: A coast station which makes scheduled broadcasts of time, meteorological, and hydrographic information.

Marine Radiobeacon Station: A radiobeacon station in the maritime radionavigation service intended for the benefit of ships.

Maritime Mobile-Satellite Earth Station: An earth station in the maritime mobile-satellite service at a specified fixed points.

Maritime Mobile-Satellite Service: A mobile-satellite service in which mobile earth stations are located on board ships; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service. (RR)

Maritime Mobile-Satellite Space Station: A space station in the maritime mobile-satellite service.

Maritime Mobile Service: A mobile service between coast stations and ship stations, or between ship stations, or between associated on-board communication stations; survival craft stations and emergency position-indicating radiobeacon stations may also participate in this service. (RR)

Maritime Radionavigation-Satellite Earth Station: An fixed earth station in the maritime radionavigation- satellite service.

Maritime Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the maritime radionavigation-satellite service.

Maritime Radionavigation-Satellite Service: A radionavigation-satellite service in which earth stations are located on board ships. (RR)

Maritime Radionavigation-Satellite Space Station: A space station in the maritime radionavigation-satellite service.

Maritime Radionavigation Service: A radio-navigation service intended for the benefit and for the safe operation of ships. (RR)

Marker Beacon: A transmitter in the aeronautical radionavigation service which radiates vertically a distinctive pattern for providing position information to aircraft. (RR)

Mean Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during an interval of time sufficiently long compared with the lowest frequency encountered in the modulation taken under normal operating conditions. (RR)

Medical Diathermy Equipment: Any apparatus (other than surgical diathermy apparatus designed for intermittent operation with low power), which utilizes a radio frequency oscillator or any other type of radio frequency generator and transmits radio frequency energy used for therapeutic purposes.

Meteor Burst Communications: Communications by the propagation of radio signals reflected by ionized meteor trails.

Meteorological Aids Service: A radiocommunication service used for meteorological, including hydrological, observations and exploration. (RR)

Meteorological Radar Station: A station in the meteorological aids service employing radar.

Meteorological-Satellite Earth Station: An earth station in the meteorological-satellite service.

Meteorological-Satellite Service: An Earth exploration-satellite service for meteorological purposes. (RR)

Meteorological-Satellite Space Station: A space station in the meteorological-satellite service.

Miscellaneous ISM Equipment: Any apparatus other than that defined as medical diathermy equipment or industrial heating equipment, or otherwise excepted by those definitions, in which radio frequency energy is applied to materials to produce physical, biological, or chemical effects such as heating, ionization of gases, mechanical vibrations, hair removal, and acceleration of charged particles, which do not involve communications or the use of radio receiving equipment.

Mobile Earth Station: An earth station in the mobile-satellite service intended to be used while in motion or during halts at unspecified points. (RR)

Mobile-Satellite Service: A radiocommunication service:

- between mobile earth stations and one or more space stations, or between space stations used by this service; or
- between mobile earth stations by means of one or more space stations.

This service may also include feeder links necessary for its operation. (RR)

Mobile-Satellite Space Station: A space station in the mobile-satellite service.

Mobile Service: A radiocommunication service between mobile and land stations, or between mobile stations. (RR)

Mobile Station: A station in the mobile service intended to be used while in motion or during halts at unspecified points. (RR)

Multi-Function System: A system that provides for more than one type of telecommunication with the same equipment. This system can have one or more principal functions and may have one or more secondary functions contained within the signal format or structure. The signal structure technique can be either of a conventional or spread spectrum type.

Multi-Satellite Link: A radio link between a transmitting earth station and a receiving earth station through two or more satellites, without any intermediate earth station. A multi-satellite link comprises one up-link, one or more satellite-to-satellite links and one downlink. (RR)

Necessary Bandwidth: For a given class of emission, the width of the frequency band which is just sufficient to ensure the transmission of information at the rate and with the quality required under specified conditions. (RR) (See Annex J for formulas used to calculate necessary bandwidth.)

Occupied Bandwidth: The width of a frequency band such that, below the lower and above the upper frequency limits, the mean powers emitted are each equal to a specified percentage B/2 of the total mean power of a given emission. Unless otherwise specified by

the ITU-R for the appropriate class of emission, the value of B/2 should be taken as 0.5%. (RR)

Oceanographic Data Interrogating Station: A station in the maritime mobile service the emissions of which are used to initiate, modify or terminate functions of equipment directly associated with an oceanographic data station, including the station itself.

Oceanographic Data Station: A station in the maritime mobile service located on a ship, buoy, or other sensor platform the emissions of which are used for transmission of oceanographic data.

Omnidirectional Range Station: A radionavigation land station in the aeronautical radionavigation service providing direct indication of the bearing (omnibearing) of that station from an aircraft.

On-Board Communication Station: A low-powered mobile station in the maritime mobile service intended for use for internal communications on board a ship, or between a ship and its lifeboats and life rafts during lifeboat drills or operations, or for communication within a group of vessels being towed or pushed, as well as for line handling and mooring instructions. (RR)

Orbit: The path, relative to a specified frame of reference, described by the center of mass of a satellite or other object in space subjected primarily to natural forces, mainly the force of gravity. (RR)

Out-of-band Emission: Emission on a frequency or frequencies immediately outside the necessary bandwidth which

results from the modulation process, but excluding spurious emission. (RR)

Passive Sensor: A measuring instrument in the Earth exploration-satellite service or in the space research service by means of which information is obtained by reception of radio waves of natural origin. (RR)

Peak Envelope Power (of a radio transmitter): The average power supplied to the antenna transmission line by a transmitter during one radio frequency cycle at the crest of the modulation envelope taken under normal operating conditions. (RR)

Perimeter Protection System: A field disturbance sensor which uses buried leaky cables installed around a facility to detect any unauthorized entry or exit.

Period (of a satellite): The time elapsing between two consecutive passages of a satellite through a characteristic point on its orbit. (RR)

Permissible Interference: Observed or predicted interference which complies with quantitative interference and sharing criteria contained in these Regulations or in ITU-R Recommendations or in special agreements as provided for in these Regulations. (RR)

Port Operations Service: A maritime mobile service in or near a port, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the operational handling, the movement and the safety of ships and, in emergency, to the safety of persons. Messages which are of a public

correspondence nature shall be excluded from this service. (RR)

Port Station: A coast station in the port operations service. (RR)

Portable Land Mobile Station: A portable station operating in the land mobile service.

Portable Mobile Station: A portable station operating in the mobile service.

Portable Station: A station designed to be carried by a person and capable of transmitting and/or receiving while in motion or during brief halts at unspecified locations.

Power: Whenever the power of a radio transmitter etc. is referred to it shall be expressed in one of the following forms, according to the class of emission, using the arbitrary symbols indicated:

- peak envelope power (PX or pX);
- mean power (PY or pY);
- carrier power (PZ or pZ).

For different classes of emission, the relationships between peak envelope power, mean power and carrier power, under the conditions of normal operation and of no modulation, are contained in ITU-R Recommendations which may be used as a guide. For use in formulae, the symbol p denotes power expressed in watts and the symbol P denotes power expressed in decibels relative to a reference level. (RR) (See also Carrier Power of a Radio Transmitter, Effective Radiated Power, Mean Power of a Radio Transmitter, and Peak Envelope Power of a Radio Transmitter.)

Primary Radar: A radiodetermination system based on the comparison of

reference signals with radio signals reflected from the position to be determined. (RR)

Priority: Priority, unless specifically qualified, is the right to occupy a specific frequency for authorized uses, free of harmful interference from stations of other stations.

Processing Gain: The ratio of the post processing signal-to-noise ratio to the received signal-to-noise ratio, usually expressed in dB.

Protection Ratio (R.F.): The minimum value of the wanted-to-unwanted signal ratio, usually expressed in decibels, at the receiver input determined under specified conditions such that a specified reception quality of the wanted signal is achieved at the receiver output. (RR)

Public Correspondence: Any telecommunication which the offices and stations must, by reason of their being at the disposal of the public, accept for transmission. (RR)

Radar: A radiodetermination system based on the comparison of reference signals with radio signals reflected, or retransmitted, from the position to be determined. (RR)

Radar Beacon (racon): A transmitter-receiver associated with a fixed navigational mark which, when triggered by a radar, automatically returns a distinctive signal which can appear on the display of the triggering radar, providing range, bearing and identification information. (RR)

Radar Beacon (racon) Station: A station which employs a radar beacon (racon).

Radar Transponder: A receiver-transmitter facility the function of which is to transmit signals automatically when proper interrogation is received.

Radiation: The outward flow of energy from any source in the form of radio waves. (RR)

Radio: A general term applied to the use of radio waves. (RR)

Radio Altimeter: Radionavigation equipment, on board an aircraft or spacecraft, used to determine the height of the aircraft or the spacecraft above the Earth's surface or another surface. (RR)

Radio Astronomy: Astronomy based on the reception of radio waves of cosmic origin. (RR)

Radio Astronomy Service: A service involving the use of radio astronomy. (RR)

Radio Astronomy Station: A station in the radio astronomy service. (RR) (This is always a receiving station.)

Radio Beacon Mobile Station: A mobile station the emissions of which are used to determine its location.

Radiobeacon Station: A station in the radio-navigation service the emissions of which are intended to enable a mobile station to determine its bearing or direction in relation to the radiobeacon station. (RR)

Radio Communication or Communication by Radio: The transmission by radio of writing, signs, signals, pictures, and sounds of all kinds, including all instrumentalities, facilities, apparatus, and services (among other things, the receipt, forwarding and delivery of communications) incidental to such transmissions.

Radiocommunication Service: A service as defined in this Section involving the transmission, emission and/or reception of radio waves for specific telecommunication purposes. In these regulations, unless otherwise stated, any radiocommunication service relates to terrestrial radiocommunication. (RR)

Radiodetermination: The determination of the position, velocity and/or other characteristics of an object, or the obtaining of information relating to these parameters, by means of the propagation properties of radio waves. (RR)

Radiodetermination-Satellite Earth Station: An fixed earth station in the radiodetermination-satellite service.

Radiodetermination-Satellite Mobile Earth Station: A mobile earth station in the radiodetermination- satellite service.

Radiodetermination-Satellite Service: A radiocommunication service for the purpose of radio-determination involving the use of one or more space stations. This service may also include feeder links necessary for its own operation. (RR)

Radiodetermination Service: A radiocommunication service for the purpose of radiodetermination. (RR)

Radiodetermination Station: A station in the radiodetermination service. (RR)

Radio Direction-Finding: Radiodetermination using the reception of radio waves for the purpose of determining the direction of a station or object. (RR)

Radio Direction-Finding Station: A radiodetermination station using radio direction-finding. (RR)

Radiolocation: Radiodetermination used for purposes other than those of radionavigation. (RR)

Radiolocation Land Station: A station in the radiolocation service not intended to be used while in motion. (RR)

Radiolocation Mobile Station: A station in the radiolocation service intended to be used while in motion or during halts at unspecified points. (RR)

Radiolocation-Satellite Service: A radiodetermination-satellite service used for the purpose of radiolocation. This service may also include the feeder links necessary for its operation. (RR)

Radiolocation Service: A radiodetermination service for the purpose of radiolocation. (RR)

Radionavigation: Radiodetermination used for the purposes of navigation, including obstruction warning. (RR)

Radionavigation Land Station: A station in the radionavigation service not

intended to be used while in motion. (RR)

Radionavigation Land Test Station (Maintenance Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit maintenance testing by aircraft radio service personnel.

Radionavigation Land Test Station (Operational Test Facility): A radionavigation land station in the aeronautical radionavigation service which is used as a radionavigation calibration station for the transmission of essential information in connection with the testing and calibration of aircraft navigational aids, receiving equipment and interrogators at predetermined surface locations. The primary purpose of this facility is to permit the pilot to check a radionavigation system aboard the aircraft prior to takeoff.

Radionavigation Mobile Station: A station in the radionavigation service intended to be used while in motion or during halts at unspecified points. (RR)

Radionavigation-Satellite Earth Station: An earth station in the radionavigation-satellite service.

Radionavigation-Satellite Mobile Earth Station: A mobile earth station in the radionavigation-satellite service.

Radionavigation-Satellite Service: A radiode-termination- satellite service used for the purpose of radionavigation. This service may also include feeder links necessary for its operation. (RR)

Radionavigation-Satellite Space Station: A space station in the radionavigation-satellite service.

Radionavigation Service: A radiodetermination service for the purpose of radionavigation. (RR)

Radiosonde: An automatic radio transmitter in the meteorological aids service usually carried on an aircraft, free balloon, kite, or parachute, and which transmits meteorological data. (RR)

Radiosonde Ground Station: A station in the meteorological aids service employing a ground station associated with a radiosonde.

Radiosonde Station: A station in the meteorological aids service employing a radiosonde.

Radiotelegram: A telegram, originating in or intended for a mobile station or a mobile earth station transmitted on all or part of its route over the radiocommunication channels of the mobile service or of the mobile-satellite service. (RR)

Radiotelemetry: Telemetry by means of radio waves. (RR)

Radiotelephone Call: A telephone call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the

mobile service or of the mobile-satellite service. (RR)

Radiotelex Call: A telex call, originating in or intended for a mobile station or a mobile earth station, transmitted on all or part of its route over the radiocommunication channels of the mobile service or the mobile-satellite service. (RR)

Radio Waves or Hertzian Waves: Electromagnetic waves of frequencies arbitrarily lower than 3000 GHz, propagated in space without artificial guide. (RR)

Reduced Carrier Single-Sideband Emission: A single-sideband emission in which the degree of carrier suppression enables the carrier to be reconstituted and to be used for demodulation. (RR)

Reference Frequency: A frequency having a fixed and specific position with respect to the assigned frequency. The displacement of this frequency with respect to the assigned frequency has the same absolute value and sign that the displacement of the characteristic frequency has with respect to the center of the frequency band occupied by the emission. (RR) (See also Characteristic Frequency.)

Reflecting Satellite: A satellite intended to reflect radiocommunication signals. (RR)

Restricted Radiation Device: A device in which the generation of radio frequency energy is intentionally incorporated into the design, and in which the radio frequency energy is conducted along wires or is radiated,

exclusive of transmitters and exclusive of Industrial, Scientific, and Medical (ISM) equipment.

Right-Hand (or Clockwise) Polarized Wave: An elliptically or circularly-polarized wave, in which the electric field vector, observed in any fixed plane, normal to the direction of propagation, whilst looking in the direction of propagation, rotates with time in a right-hand or clockwise direction. (RR)

RF Stabilized Arc Welder: Any welding equipment that utilizes radio frequency energy to initiate and stabilize the arc. An RF stabilized arc welder includes the source of the RF and welding currents, the welding torch, and all interconnecting cables.

Safety Service: Any radiocommunication service used permanently or temporarily for the safeguarding of human life and property. (RR)

Satellite: A body which revolves around another body of preponderant mass and which has a motion primarily and permanently determined by the force of attraction of that other body. (RR)

Satellite Emergency Position-Indicating Radio-beacon: An earth station in the mobile-satellite service the emissions of which are intended to facilitate search and rescue operations. (RR)

Satellite Link: A radio link between a transmitting earth station and a receiving earth station through one satellite. A satellite link comprises one uplink and one downlink. (RR)

Satellite Network: A satellite system or a part of a satellite system, consisting of only one satellite and the cooperating earth stations. (RR)

Satellite System: A space system using one or more artificial earth satellites. (RR)

Secondary Radar: A radiodetermination system based on the comparison of reference signals with radio signals retransmitted from the position to be determined. (RR)

Semi-Duplex Operation: A method which is simplex operation at one end of the circuit and duplex operation at the other. (RR)

Ship Earth Station: A mobile earth station in the maritime mobile-satellite service located on board ship. (RR)

Ship's Emergency Transmitter: A ship's transmitter to be used exclusively on a distress frequency for distress, urgency or safety purposes. (RR)

Ship Movement Service: A safety service in the maritime mobile service other than a port operations service, between coast stations and ship stations, or between ship stations, in which messages are restricted to those relating to the movement of ships. Messages which are of a public correspondence nature shall be excluded from this service. (RR)

Ship Station: A mobile station in the maritime mobile service located on board a vessel which is not permanently moored, other than a survival craft station. (RR)

Simplex Operation: Operating method in which transmission is made possible alternately in each direction of a telecommunication channel, for example, by means of manual control.ⁱⁱ (RR)

Single-Sideband Emission: An amplitude modulated emission with one sideband only. (RR)

Sounder Network Station: A station equipped with an ionosphere sounder used for the realtime selection of frequencies for operational communication circuits.

Sounder Prediction Station: A station equipped with an ionosphere sounder for realtime monitoring of upper atmosphere phenomena or to obtain data for the prediction of propagation conditions.

Spacecraft: A man-made vehicle which is intended to go beyond the major portion of the Earth's atmosphere. (RR)

Space Operation Earth Station: An earth station in the space operation service.

Space Operation Service: A radiocommunication service concerned exclusively with the operation of spacecraft, in particular space tracking, space telemetry and space telecommand. These functions will normally be provided within the service in which the space station is operating. (RR)

Space Operation Space Station: A space station in the space operation service.

Space Radiocommunication: Any radiocommunication involving the use of one or more space stations or the use of one or more reflecting satellites or other objects in space. (RR)

Space Research Earth Station: An earth station in the space research service.

Space Research Service: A radiocommunication service in which spacecraft or other objects in space are used for scientific or technological research purposes. (RR)

Space Research Space Station: A space station in the space research service.

Space Station: A station located on an object which is beyond, is intended to go beyond, or has been beyond, the major portion of the Earth's atmosphere. (RR)

Space System: Any group of cooperating earth stations and/or space stations employing space radiocommunication for specific purposes. (RR)

Space Telecommand: The use of radiocommunication for the transmission of signals to a space station to initiate, modify or terminate functions of equipment on an associated space object, including the space station. (RR)

Space Telecommand Earth Station: An earth station the emissions of which are used for space telecommand.

Space Telecommand Space Station: A space station which receives emissions used for space telecommand.

Space Telemetry Earth Station: An earth station which receives emissions used for space telemetry.

Space Telemetry Space Station: A space station the emissions of which are used for space telemetry.

Space Telemetry: The use of telemetry for the transmission from a space station of results of measurements made in a spacecraft, including those relating to the functioning of the spacecraft. (RR)

Space Tracking: Determination of the orbit, velocity or instantaneous position of an object in space by means of radiodetermination, excluding primary radar, for the purpose of following the movement of the object. (RR)

Space Tracking Earth Station: An earth station which transmits or receives emissions used for space tracking.

Space Tracking Space Station: A space station which transmits or receives and retransmits emissions used for space tracking.

Space Transponder: A receiver-transmitter combination on board a satellite or space craft which receives a signal and transmits it at a different carrier frequency.

Special Service: A radiocommunication service, not otherwise defined in this Section, carried on exclusively for specific needs of general utility, and not open to public correspondence. (RR)

Spread Spectrum: A signal structuring technique that employs direct sequence, frequency hopping or a hybrid of these, which can be used for multiple access

and/or multiple functions. This technique decreases the potential interference to other receivers while achieving privacy and increasing the immunity of spread spectrum receivers to noise and interference. Spread spectrum generally makes use of a sequential noise-like signal structure to spread the normally narrowband information signal over a relatively wide band of frequencies. The receiver correlates the signals to retrieve the original information signal.

Spurious Emission: Emission on a frequency or frequencies which are outside the necessary bandwidth and the level of which may be reduced without affecting the corresponding transmission of information. Spurious emissions include harmonic emissions, parasitic emissions, intermodulation products and frequency conversion products, but exclude out-of-band emissions. (RR)

Squelch: A circuit function that acts to suppress the audio output of a receiver.

Standard Frequency and Time Signal Station: A station in the standard frequency and time signal service. (RR)

Standard Frequency and Time Signal-Satellite Service: A radiocommunication service using space stations on earth satellites for the same purpose as those of the standard frequency and time signal service. This service may also include feeder links necessary for its operation. (RR)

Standard Frequency and Time Signal-Satellite Space Station: A space station in the standard frequency and time signal-satellite service.

Standard Frequency and Time Signal Service: A radiocommunication service for scientific, technical and other purposes, providing the transmission of specified frequencies, time signals, or both, of stated high precision, intended for general reception. (RR)

Station: One or more transmitters or receivers or a combination of transmitters and receivers, including the accessory equipment, necessary at one location for carrying on a radiocommunication service, or the radio astronomy service. Each station shall be classified by the service in which it operates permanently or temporarily. (RR)

Steerable Satellite Beam: A satellite antenna beam that can be re-pointed. (RR)

Suppressed Carrier Single-Sideband Emission: A single-sideband emission in which the carrier is virtually suppressed and not intended to be used for demodulation. (RR)

Surface Telemetry Land Station: A telemetry land station the emission of which are intended to be received on the surface of the Earth.

Surface Telemetry Mobile Station: A telemetry mobile station located on the surface of the Earth and the emissions of which are intended to be received on the surface of the Earth.

Surveillance Radar Station: A radionavigation land station in the aeronautical radionavigation service employing radar to display the presence of aircraft within its range. (In certain

instances, a surveillance radar station may be placed on board a ship.)

Survival Craft Station: A mobile station in the maritime mobile service or the aeronautical mobile service intended solely for survival purposes and located on any lifeboat, life-raft or other survival equipment. (RR)

Telecommand: The use of telecommunication for the transmission of signals to initiate, modify or terminate functions of equipment at a distance. (RR)

Telecommand Base Station: A land station in the land mobile service the emissions of which are used for terrestrial telecommand.

Telecommand Fixed Station: A fixed station in the fixed service the emissions of which are used for terrestrial telecommand.

Telecommand Land Station: A land station in the mobile service the emissions of which are used for terrestrial telecommand.

Telecommand Land Mobile Station: A mobile station in the land mobile service the emissions of which are used for terrestrial telecommand.

Telecommand Mobile Station: A mobile station in the mobile service the emissions of which are used for terrestrial telecommand.

Telecommunication: Any transmission, emission or reception of signs, signals, writings, images and sounds or intelligence of any nature by wire, radio, optical or other electromagnetic systems. (RR)

Telegram: Written matter intended to be transmitted by telegraphy for delivery to the addressee. This term also includes radiotelegrams unless otherwise specified. (RR)

Telegraphy: A form of telecommunication in which the transmitted information is intended to be recorded on arrival as a graphic document; the transmitted information may sometimes be presented in an alternative form or may be stored for subsequent use. (RR)

Telemetry Fixed Station: A fixed station the emissions of which are used for telemetry.

Telemetry Land Station: A land station the emissions of which are used for telemetry.

Telemetry Mobile Station: A mobile station the emissions of which are used for telemetry.

Telemetry: The use of telecommunication for automatically indicating or recording measurements at a distance from the measuring instrument. (RR)

Telephony: A form of telecommunication primarily intended for the exchange of information in the form of speech. (RR)

Television: A form of telecommunication for the transmission of transient images of fixed or moving objects. (RR)

Terrestrial Radiocommunication: Any radiocommunication other than space

radiocommunication or radio astronomy.
(RR)

Terrestrial Station: A station effecting terrestrial radiocommunication. In these Regulations, unless otherwise stated, any station is a terrestrial station. (RR)

Time-Gated Direct Sequence Spread Spectrum: Direct-Sequence Spread Spectrum where the transmitter is on only for a short fraction of a time interval. The on-time can be periodic or random within a time interval.

Transportable Station: A station which is transferred to various fixed locations but is not intended to be used while in motion.

Travelers Information Station: A base station in the Land Mobile Service used to transmit non-commercial voice information pertaining to traffic and road conditions, traffic hazard and travelers advisories, directions, availability of lodging, rest stops and service stations, and descriptions of local points of interest.

Tropospheric Scatter: The propagation of radio waves by scattering as a result of irregularities or discontinuities in the physical properties of the troposphere.
(RR)

Ultrasonic Equipment: Any apparatus which generates radio frequency energy and utilizes that energy to excite or drive an electro-mechanical transducer for the production of sonic or ultrasonic mechanical energy for industrial, scientific, medical, or other non-communication purposes.

Ultra-Wideband Radar: A radar having an instantaneous bandwidth greater than 25 percent of its center frequency.

Unwanted Emissions: Consist of spurious emissions and out-of-band emissions. (RR)

Wired Radio Frequency Systems: Systems employing restricted radiation devices in which the radio frequency energy is conducted or guided along wires or in cables, including electric power and telephone lines.

ⁱ The terms "permissible interference" and "accepted interference" are used in the coordination of frequency assignments between administrations. (RR)

ⁱⁱ In general, duplex operation and semi-duplex operation require two frequencies in radiocommunications; simplex operation may use either on.

*** NOTE: SERVICES, STATION CLASSES, AND STATIONS ARE CONTAINED IN TABLE A OF ANNEX D.**