

RECOMMENDATION ITU-R F.1399-1* **

Vocabulary of terms for wireless access

(Questions ITU-R 215/8 and ITU-R 140/9)

(1999-2001)

1 Introduction

This Recommendation consists primarily of those terms and definitions that are considered essential to the understanding and application of the principles of wireless access. However, they are not exclusive to wireless access and are recommended also for application, insofar as they are relevant, to other types of telecommunication systems and services.

Included are terms that may already be defined in the Radio Regulations (RR) and other ITU-R/ITU-T Recommendations. However, the definitions given here embrace only the essential concepts and on this basis it is considered that they are not inconsistent with the more specialized definitions that appear in those texts.

Where a truncated term is widely used in an understood context, the complete term is quoted following the colloquial form.

Some definitions include terms in italic face to indicate that these terms are defined elsewhere in this Recommendation.

Technologies in use today for implementing wireless access include cellular systems, cordless phone and cordless telecommunication systems, satellite systems, etc. New technologies and systems such as IMT-2000, wireless broadband ISDN, wireless ATM, HAPS, etc., also form part of wireless access if they satisfy the basic criteria of end-user radio connection(s) to core networks (see § 4.4 for list of acronyms and abbreviations).

Wireless access may be considered from many perspectives, for example:

- *Mobility capabilities* of the terminal: fixed, nomadic (may be used in different places but the terminal must be stationary while in use), mobile, restricted mobility (e.g. within a single cell), etc.
- *Service support capabilities*: narrow-band, broadband, multimedia, etc.
- *Type of telecommunication service*: conversational, distribution, information retrieval.
- *Connectivity*: (which would depend on the switched network that the terminal accesses, e.g. Internet, PSTN, etc.). (See § 4.4 for list of acronyms and abbreviations.)
- *Radio transmission technology*: access technique (TDMA, CDMA, etc.), modulation technique (analogue, digital, etc.), duplex technique (FDD, TDD, etc.), etc. (See § 4.4 for list of acronyms and abbreviations.)
- *Delivery mechanism*: terrestrial, satellite, etc.

* This Recommendation was developed jointly by Radiocommunication Study Groups 8 (Working Party 8A) and 9 (Working Party 9B), and any further revision should be undertaken jointly.

** This Recommendation should be brought to the attention of Radiocommunication Study Groups 4A, 8 (Working Party 8A) and Coordination Committee for Vocabulary (CCV).

Of particular interest are the mobility characteristics of wireless access systems; thus this Recommendation provides definitions of the terms “fixed”, “mobile” and “nomadic” wireless access.

The purpose of this Recommendation is to specify terms and definitions for terrestrial wireless access.

2 Scope

The Recommendation specifies definitions for terms primarily focused in the field of terrestrial wireless access systems. Wireless access applications may be provided within the definitions of the radio services FS, MS, FSS and MSS contained in the RR.

The ITU has deprecated the use of the term “loop” (see References below: CCITT Blue Book, Vol. I, Fascicle I.3, 1988); for this reason, and more so because this term does not make any sense with radio technologies, the use of the terms that include loop are deprecated. These include wireless local loop, radio local loop, and wireless access local loop.

It should be noted that in many cases systems may be able to support a mixture of users (i.e. fixed, mobile and nomadic) and possibly with restrictions on the type of mobility. It is not practical to define terms for each possible combination, but those above should suffice to refer to the primary characteristics of the system.

3 References

The following references have been used in the development of the vocabulary of terms for wireless access:

- ITU, terms and definitions; abbreviations and acronyms; recommendations on means of expression (Series B), General Telecommunications Statistics (Series C), CCITT Blue Book, Vol. I, Fascicle I.3, 1988.
- Recommendation ITU-R F.592: Terminology used for radio-relay systems
- Recommendation ITU-R M.1224: Vocabulary of terms for International Mobile Telecommunications-2000 (IMT-2000)
- ITU-T Recommendation D.000: Terms and definitions for the Series-D Recommendations
- ITU-T Recommendation E.600: Terms and definitions of traffic engineering
- ITU-T Recommendation G.100: Definitions used in Recommendations on general characteristics of international telephone connections and circuits
- ITU-T Recommendation I.112: Vocabulary of terms for ISDNs
- ITU-T Recommendation I.113: Vocabulary of terms for broadband aspects of ISDNs
- ITU-T Recommendation I.114: Vocabulary of terms for universal personal telecommunication
- ITU-T Recommendation J.112: Transmission systems for interactive cable television services.

4 Recommendations

The ITU Radiocommunication Assembly recommends that the terms and definitions for wireless access in this Recommendation be adopted.

4.1 Vocabulary of terms: Main terms

4.1.1 Wireless access

F: accès hertzien; accès sans fil

S: acceso inalámbrico

End-user radio connection(s) to core networks.

NOTE 1 – Core networks include, for example, PSTN, ISDN, PLMN, PSDN, Internet, WAN/LAN, CATV, etc. (See § 4.4 for list of acronyms and abbreviations.)

NOTE 2 – The *end-user* may be a single *user* or a *user* accessing the services on behalf of multiple *users*.

4.1.2 Fixed wireless access (FWA)

F: accès hertzien fixe (AHF)

S: acceso inalámbrico fijo (FWA)

Wireless access application in which the location of the *end-user termination* and the network access point to be connected to the end-user are fixed.

4.1.3 Mobile wireless access (MWA)

F: accès hertzien mobile (AHM)

S: acceso inalámbrico móvil (MWA)

Wireless access application in which the location of the *end-user termination* is mobile.

4.1.4 Nomadic wireless access (NWA)

F: accès hertzien transportable ou nomade (AHN)

S: acceso inalámbrico nómada (NWA)

Wireless access application in which the location of the *end-user termination* may be in different places but it must be stationary while in use.

4.2 Vocabulary of terms: General terms

4.2.1 Backhaul communication

F: liaison de raccordement

S: comunicación de enlace de retroceso

Transport of aggregate communication signals from base stations to the core network.

4.2.2 Base station

F: station de base

S: estación de base

See central station.

4.2.3 Broadband wireless access (BWA)

F: accès hertzien à large bande (AHLB)

S: acceso inalámbrico de banda ancha (BWA)

Wireless access in which the connection(s) capabilities are higher than the primary rate.

4.2.4 Central station

F: station centrale

S: estación central

The common name for all the radio equipment located at one and the same place used for serving one or several cells.

NOTE 1 – Also known as hub station, and also as base station, even though RR No. 1.71 defines base station more restrictively as “a land station in the land mobile service”.

4.2.5 Customer premises equipment/network

F: équipement/réseau des locaux d'abonné

S: equipo/red en las instalaciones del cliente

The equipment/network administered by the user.

NOTE 1 – Based on ITU-T Recommendation H.310.

4.2.6 Distribution system

F: système de distribution

S: sistema de distribución

System for unidirectional delivery (transmission) of services to end-users.

NOTE 1 – This is strictly not wireless access as such, for the latter requires an additional return (reverse) or interaction channel to be included. Such distribution systems include LMDS, but it should be noted that some systems labelled distribution systems are in fact MWS systems and should be so referenced.

4.2.7 Dynamically variable bandwidth

F: largeur de bande dynamiquement variable

S: anchura de banda dinámicamente variable

A capability of a system to be able to change the bandwidth of the information payload capacity of a communication channel available to a user for services according to negotiated user requirements.

NOTE 1 – This is also known as bandwidth on demand.

4.2.8 End-user

F: utilisateur final

S: usuario final

A human being, organization, or telecommunications system that accesses the network in order to communicate via the services provided by the network.

(See ITU-T Recommendation J.112.)

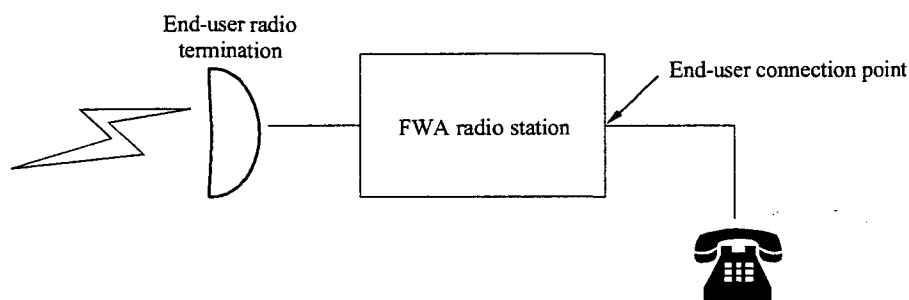
4.2.9 End-user connection point*F: point de connexion d'utilisateur final**S: punto de conexión de usuario final*

Point at which the *end-user* obtains the communications service (see Fig. 1).

4.2.10 End-user termination, end-user radio termination*F: terminaison radioélectrique d'utilisateur final**S: terminación de usuario final; terminación radioeléctrica de usuario final*

The *end-user* radio equipment antenna (see Fig. 1).

FIGURE 1
Illustration of terms



1399-01

4.2.11 High altitude platform station (HAPS)*F: station placée sur une plate-forme à haute altitude (SPHA)**S: estación en plataforma a gran altitud (HAPS)*

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 (see Note 1).

(See RR No. 1.66A.)

NOTE 1 – Systems using HAPS which consist of a HAPS and ground stations located at the end-user termination provide wireless access serving as links for various communications. The communication mode of a system using HAPS is, for the time being, limited to FWA applications on account of technical reasons at the ground station equipment. However, nomadic or mobile wireless access applications are also expected in the future.

4.2.12 Hub station*F: station pivot**S: estación central*

See central station.

4.2.13 Internet protocol*F: protocole Internet**S: protocolo Internet*

Networking protocol defined by IETF standards.