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TELEPHONE TRANSMISSION QUALITY

VOCABULARY AND EFFECTS OF TRANSMISSION PARAMETERS ON CUSTOMER OPINION OF TRANSMISSION QUALITY AND THEIR ASSESSMENT

VOCABULARY OF TERMS ON TELEPHONE TRANSMISSION QUALITY AND TELEPHONE SETS

ITU-T Recommendation P.10

Superseded by a more recent version

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation P.10 was prepared by the ITU-T Study Group XII (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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VOCABULARY OF TERMS ON TELEPHONE TRANSMISSION QUALITY AND TELEPHONE SETS

(Geneva, 1980; amended at Malaga-Torremolinos, 1984; Melbourne, 1988 and Helsinki, 1993)

1 Introduction

This Recommendation contains terms and definitions appropriate to the work of Study Group 12 which were discussed within the Group of Experts N of the Joint Coordinating Group for the ITU-T, ITU-R and the IEC.

Terms which appear in the International Electrotechnical Vocabulary (IEV) have their IEV number reproduced here for reference purposes. Terms of the ITU-T have been classified in a manner similar to that used in the IEV.

2 Terms and definitions

For the purpose of this Recommendation, the following definitions apply:

01 Tests

01.01 acceptance test

F: essai d'acceptation

S: prueba de aceptación

A contractual test to prove to the customer that the device meets certain conditions of its specification.

151.04.20

01.02 type test

F: essai de type

S: prueba tipo

A test of one or more devices made to a certain design to show that the design meets certain specifications.

151.04.15

02 Telephone set components

02.01 supra-aural earphones (see Recommendation P.57)

F: écouteurs supra-auraux

S: auriculares supraaurales

Earphones which rest upon the pinna and have an external diameter (or maximum dimension) of at least 45 mm.

02.02 supra-concha earphones (see Recommendation P.57)

F: écouteurs supraconque

S: auriculares supraconcha

Earphones which are intended to rest upon the ridges of the concha cavity and have an external diameter (or maximum dimension) greater than 25 mm and less than 45 mm.

02.03 Y-ratio

F: rapport Y

S: relación Y

The ratio between the sending and receiving efficiencies of a passive telephone set circuit.

04 Telephone set types

04.01 group-audio terminals

F: terminal audio de communication de groupe

S: terminal audio de grupo

A hands free set primarily designed for use by several users.

04.02 hands free (telephone) set

F: poste (téléphonique) mains-libres

S: aparato telefónico manos libres; teléfono manos libres

A *telephone set* using a loudspeaker associated with an amplifier as a telephone receiver and which may be used without a handset.

722.04.11

04.03 loudspeaking (telephone) set

F: poste (téléphonique) à écoute (ou à réception) amplifiée sur haut-parleur

S: aparato telefónico con altavoz; teléfono de altavoz

A handset *telephone* using a *loudspeaker* associated with an amplifier as a *telephone receiver*.

722.04.10

04.04 multimedia terminals

F: terminaux multimedias

S: terminales multimedia; terminales multimedios

Terminals for multimedia services usually including telephony, with additional facilities such as videophone, videoconference, graphics, etc.

04.05 telephone set; telephone instrument

F: poste téléphonique: appareil téléphonique; téléphone

S: aparato telefónico; teléfono

An assembly of apparatus for *telephony* including at least a *telephone transmitter*, a *telephone receiver* and the wiring and components immediately associated with these transducers.

NOTE – A telephone set usually includes other components such as a *switchhook*, a built-in *telephone bell*, and a *dial*.

722.04.01

04.06 telephone station

F: poste téléphonique (installé)

S: estación telefónica

A *telephone set* with associated wiring and auxiliary equipment connected to a *telephone network* for the purpose of *telephony*.

NOTE – The auxiliary equipment may include, for example, an external *call indicating device*, a protector, a *local battery*.

722.04.02

05 Telephone set accessories

05.01 acoustic shock suppressor (in telephony)

F: anti-choc (en téléphonie)

S: supresor de choque acústico; antichoque (en telefonía)

A device associated with a *telephone station* and intended to prevent *acoustic shocks*, by setting an upper limit to the absolute values of the instantaneous electrical voltage that can be applied to the *telephone earphone*.

722.05.07

13 Private telephone systems

13.01 private (telephone) installation

F: installation (téléphonique) intérieure

S: instalación (telefónica) privada

A *telephone network* installed on the premises of a single individual or organization.

NOTE – By convention, private telephone installations include sets of *telephone stations* which are connected to one *subscriber's line.*

722.13.01

21 Telephone calls description

21.01 call

F: communication

S: comunicación

The establishment and use of a *complete connection* following a *call attempt.*

722.21.04; identical to 701.03.05

21.02 call attempt (by a user)

F: (tentative d')appel (par un usager)

S: intento de llamada (por un usuario)

A sequence of operations made by a user of a telecommunication network trying to obtain the desired user or service.

Associated term: to *call.*

722.21.01; identical to 701.03.04

21.03 connection

F: chaîne de connexion

S: conexión; cadena de conexión

A temporary association of transmission channels or telecommunication circuits, switching and other functional units set up to provide the means of a transfer of information between two or more points in a telecommunication network.

722.21.02; identical to 701.03.01

21.04 (complete) connection

F: chaîne de connexion complète; (chemin de) communication

S: conexión (completa); cadena de conexión completa

A *connection* between users' terminals.

722.21.03; identical to 701.03.02

31 Local line networks

31.01 local line network

F: réseau local de lignes (téléphoniques)

S: red local de líneas (telefónicas)

All the *subscribers' telephone lines* and ancillary equipment provided to connect *subscribers* to their *local switching entity*.

722.31.01

31.02 local (telephone) system (LS) (see Recommendation G.101)

F: système (téléphonique) local (LS)

S: sistema (telefónico) local (LS)

The combination of subscriber's station, subscriber's line and feeding bridge if existing.

NOTE – This term is used in the context of transmission planning and performance.

722.16.16

31.03 subscriber system (in transmission planning) (see Recommendation G.101)

F: système d'abonné (en planification de la transmission)

S: sistema de abonado (en planificación de transmisión)

A subscriber's line associated with that part of the private telephone installation connected to this line during a telephone call, see Figure 1/G.101 (see also Recommendation P.10, term 31.04).

NOTE – This term is used in the context of transmission planning and performance.

722.16.17

31.04 subscriber's (telephone) line; subscriber loop (in telephony)

F: ligne (téléphonique) d'abonné; ligne (de) réseau

S: línea (telefónica) de abonado; bucle de abonado (en telefonía)

A link between a public *switching entity* and a *telephone station* or a *private telephone installation* or another terminal using signals compatible with the *telephone network*.

NOTE – In French, the term "ligne de réseau" is used only when the private telephone installation is a *private branch exchange* or an *internal telephone system*.

722.31.02

32 Telephone station usage

32.01 acoustic hood

F: abri téléphonique; abriphone

S: cabina acústica; burbuja acústica

A hood lined with sound-absorbing material to facilitate the use of a *telephone station* by reducing the *ambient noise* level.

722.32.03

32.02 telephone booth

F: cabine téléphonique

S: cabina telefónica cerrada

A small cabin containing a *telephone station* and providing a certain measure of acoustic insulation and privacy for the user.

722.32.04

32.03 telephone stall

F: cabine téléphonique ouverte

S: cabina telefónica abierta

A *telephone booth* without a door.

722.32.05

41 Transmission performance

41.01 absolute category rating (ACR) (see Recommendation P.80)

F: évaluation par catégories absolues (ACR)

S: evaluación por categorías absolutas (ACR)

Listening-only test method in which subjects are asked to express opinion judgements using absolute quality scales (excellent, good, ...).

41.02 acoustic shock (in telephony)

F: choc acoustique (en téléphonie)

S: choc acústico (en telefonía)

Any temporary or permanent disturbance of the functioning of the ear, or of the nervous system, which may be caused to the user of a *telephone earphone* by a sudden sharp rise in the acousstic pressure produced by it.

NOTE – An acoustic shock usually results from the occurrence, in abnormal circumstances, of short-lived high voltages at the terminals of a *telephone set*.

722.41.20

41.03 degradation category rating (DCR) (see Recommendation P.80)

F: évaluation par catégories de dégradation (DCR)

S: evaluación por categorías de degradación (DCR)

A modification of the ACR test method where subjects compare the system under test with a reference system and express their opinion using a degradation scale (degradation inaudible, audible but not annoying, slightly annoying, ...).

41.04 interruptibility (see Recomendation G.114)

F: interruptibilité

S: interrumpibilidad

The possibility for one party in a telephone conversation to interrupt the other party, as in normal conversation. Interruptibility can be affected by the use of voice activated devices, total transmission time, etc.

41.05 intra-concha earphones (see Recommendation P.57)

*F: écouteurs intraconque*s

S: auriculares intraconcha

Earphones which are intended to rest within the concha cavity of the ear. They have an external diameter (or maximum dimension) of less than 25 mm but are not made to enter the ear canal.

41.06 mean opinion score (MOS) (see Recommendation P.80)

F: note moyenne d'opinion (MOS)

S: nota media de opinión (MOS)

The mean of opinion scores such as defined in 41.08 (see Recommendation P.10).

41.07 modulated noise reference unit (MNRU) (see Recommendation P.81)

F: appareil de référence à bruit modulé (MNRU)

S: unidad de referencia para ruido modulado (MNRU)

A device producing a calibrated distortion which is subjectively similar to that produced by logarithmically companded PCM systems. The MNRU distortion is expressed in decibels corresponding to the ratio of a signal to the multiplicative noise.

41.08 opinion score (in telephony)

F: note d'opinion (en téléphonie)

S: nota de opinión (en telefonía)

The value on a predefined scale that a subject assigns to his opinion of the performance of the telephone transmission system used either for conversation or only for listening to spoken material.

NOTE – According to the IEV, the scale generally consists of five values, for example: excellent, good, fair, bad, unfair. This example does not correspond to CCITT practice (see Notes 2 and 3 of Recommendation P.82).

722.41.24

42 Measuring apparatus

42.01 acousitc coupler (in telephonometry)

F: coupleur acoustique (en téléphonométrie)

S: acoplador acústico (en telefonometría)

A cavity of defined shape and volume used for the testing of *telephone earphones* or *telephone transmitters* in conjunction with a calibrated microphone adapted to measure the pressure developed within the cavity.

722.42.12

42.02 artificial conversational speech (see Recommendation P.59)

F: voix artificielle de conversation

S: voz artificial de conversación

A signal which reproduces the on-off characteristics of human conversational speech for characterizing speech processing systems which have speech detectors, such as hands-free telephones, echo control devices, digital circuit multiplication equipment (DCME) and asynchronous transfer mode (ATM) systems.

42.03 artificial ear

F: oreille artificielle

S: oído artifical

A device for the calibration of earphones incorporating an *acoustic coupler* and a calibrated microphone for the measurement of sound pressure and having an overall acoustic impedance similar to that of the average human ear over a given frequency band.

722.42.13

42.04 artifical mouth

F: bouche artificielle

S: boca artificial

A device consisting of a *loudspeaker* mounted in an enclosure and having a directivity and radiation pattern similar to those of the average human mouth.

722.42.14

42.05 artifical voice

F: voix artificielle

S: voz artificial

A mathematically defined signal which reproduces human speech characteristics, relevant to the characterisation of linear and nonlinear telecommunication systems. It is intended to give a satisfactory correlation between objective measurements and tests with real speech.

722.42.15

42.06 acoustic artificial voice

F: voix artificielle acoustique

S: voz artificial acústica

Acoustic signal at the MRP (Mouth Reference Point) of the artificial mouth. It complies with the same time and spectral specifications as the electrical artificial voice.

42.07 artificial mouth excitation signal

F: signal d'excitation de la bouche artificielle

S: señal de excitación de boca artificial

A signal applied to the artificial mouth in order to produce the acoustic artificial voice. It is obtained by equalizing the electrical artificial voice for compensating the sensitivity/frequency characteristic of the mouth.

42.08 ear simulator (see Recommendation P.57)

F: simulateur d'oreille

S: simulador de oído

Device for measuring the output sound pressure of an earphone under well defined loading conditions in a specified frequency range. It consists essentially of a principal cavity, acoustic load networks, and a calibrated microphone. The location of the microphone is chosen so that the sound pressure at the microphone corresponds approximately to the sound pressure existing at the human ear-drum.

42.09 electrical artificial voice

F: voix artificielle électrique

S: voz artificial eléctrica

The artificial voice produced as an electric signal, for testing transmission channels or other electric devices.

42.10 head and torso simulator (HATS) (see Recommendation P.58)

F: simulateur de tête et de torse (HATS)

S: simulador de cabeza y torso (HATS)

Manikin extending downward from the top of the head to the waist, designed to simulate the sound pick-up characteristics and the acoustic diffraction produced by a median human adult and to reproduce the acoustic field generated by the human mouth.

42.11 occluded-ear simulator (see Recommendation P.57)

F: simulateur d'oreille occluse

S: simulador de oído ocluido

Ear simulator which simulates the inner part of the ear canal, from the tip of an ear insert to the ear-drum.

42.12 PCM digital reference sequence (DRS)

F: séquence numérique de référence MIC (DRS)

S: secuencia de referencia digital MIC (DRS)

A PCM digital reference sequence is one of the set of possible PCM code sequences that, when decoded by an ideal decoder, produces an analogue sinusoidal signal at the reference frequency (i.e. 1020 Hz) at a level of 0 dBm0. Conversely an analogue sinusoidal signal at 0 dBm0 at the reference frequency applied to the input of an ideal coder will generate a PCM digital reference sequence (see 2.9/G.101).

43 Telephonometry

43.01 acoustical telephony gain (telephonic transfer function) (see Recommendation P.58)

F: gain acoustique de la liaison téléphonique

S: ganancia acústica telefónica

Ratio of the pressure at the ear reference point of a listener to the pressure at the mouth reference point of a talker connected by a telephone channel.

43.02 acoustically closed earphones (nominally sealed) (see Recommendation P.57)

F: écouteurs acoustiquement fermés (hermétiques)

S: auriculares acústicamente cerrados (herméticos)

Earphones which are intended to prevent any acoustic coupling between the external environment and the ear canal.

43.03 acoustically open earphones (nominally unsealed) (see Recommendation P.57)

F: écouteurs acoustiquement ouverts (non hermétiques)

S: auriculares abiertos acústicamente (no herméticos)

Earphones which intentionally provide an acoustic path between the external environment and the ear canal.

43.04 band sensation level

F: niveau de sensation dans la bande

S: nivel de sensación en la banda

Difference, expressed in decibels, between the sound integrated over a frequency band and the sound pressure level in that band at the threshold of audibility, there being no other disturbing sound.

43.05 circum-aural earphones (see Recommendation P.57)

F: écouteurs circumauraux

S: auriculares circumaurales

Earphones which enclose the pinna and seat on the surrounding surface of the head. Contact to the head is normally maintained by compliant cushions. Circum-aural earphones may touch but not significantly compress the pinna.

43.06 corrected reference equivalents (CRE)

F: équivalents de référence corrigés (CRE)

S: equivalentes de referencia corregidos (ERC)

Values of sending or receiving *reference equivalent* converted by a defined, nonlinear, transformation into corresponding values that obey the laws of algebraic addition.

NOTE – The conversion is performed to avoid some of the difficulties experienced in applying *reference equivalents*. It is defined in Annex C/G.111.

722.43.17

43.07 Δ_{SM} **(DELSM)**

F: Δ_{SM} *(DELSM)*

S: Δ_{SM} *(DELSM)*

Delta $_{SM}$ is defined as the difference between the sending sensitivity of a telephone set using a real mouth and voice, S_{MJ}, and that using a diffuse room noise source $S_{MJ/RN}$, such that

$$\Delta_{SM} = S_{MJ/RN} - S_{MJ} \text{ dB.}$$

(See also Recommendations P.11, P.64, P.76, P.79, Supplement No. 11 to Series P Recommendations and the *Handbook on Telephonometry*.)

NOTE – For most practical purposes Δ_{SM} will be closely approximated by the quantity Δ_{Sm} which is easier to determine.

43.08 Δ_{Sm} **(DELSm)**

F: Δ_{Sm} *(DELSm)*

S: Δ_{Sm} *(DELSm)*

Delta $_{Sm}$ is defined as the difference between the sending sensitivity of a telephone set using an artifical mouth S_{mJ}, and that using a diffuse room noise source $S_{mJ/RN}$, such that

$$\Delta_{SM} = S_{mJ/RN} - S_{mJ} \text{ dB.}$$

(See also Recommendations P.11, P.64, P.76, P.79, Supplement No. 11 to Series P Recommendations and the *Handbook on Telephonometry*.)

43.09 **ear canal entrance point (EEP)** (see Recommendation P.57)

F: *point d'entrée du canal auditif (EEP)*

S: *punto de entrada del canal auditivo (EEP)*

A point located at the centre of the ear canal opening.

43.10 **ear canal extension** (see Recommendation P.57)

F: *prolongateur de conduit auditif*

S: *prolongación del canal auditivo*

Cylindrical cavity, extending the simulation of the ear canal provided by the Occluded Ear Simulator (P.57, Type 2) out to the concha cavity.

43.11 **ear reference point (ERP)** (see Recommendation P.57)

F: *point de référence oreille (ERP)*

S: *punto de referencia oído (ERP)*

A virtual point for geometric reference located at the entrance to the listener's ear, traditionally used for calculating telephonometric loudness ratings.

43.12 **earcap reference plane**

F: *plan de référence écouteur*

S: *plano de referencia auricular*

That plane formed by the contacting points of a flat surface against a telephone earcap.

43.13 **earcap reference point (ECRP)**

F: *point de référence écouteur (ECRP)*

S: *punto de referencia auricular (ECRP)*

Point in the *earcap reference plane*, used as a reference parameter.

43.14 ear-drum reference point (DRP) (see Recommendation P.57)

F: point de référence tympan (DRP)

S: punto de referencia tímpano (DRP)

A point located at the end of the ear canal, corresponding to the ear-drum position.

43.15 earphone coupling loss (L_E)

F: affaiblissement de couplage de l'écouteur (L_E)

S: pérdida de acoplamiento del auricular (L_E)

That quantity defined as the receiving sensitivity of a handset (usually as a function of frequency) when applied to an artificial ear minus the receiving sensitivity of the same handset on a human ear.

43.16 guard-ring

F: anneau de garde

S: anillo de guarda

Annular ring fitted, during tests, onto the transmitter housing of a telephone handset, to localize the sound source in a prescribed position relative to the microphone.

43.17 insert earphones (see Recommendation P.57)

F: inserts

S: auriculares de inserción

Earphones which are intended to partially or completely enter the ear canal.

43.18 lip plane

F: position équivalente des lèvres

S: plano de labios; posición equivalente de los labios

Outer plane of the lip ring.

43.19 lip ring

F: anneau de garde (pour les lèvres)

S: anillo de labios

Circular ring of thin rigid rod, used for localizing the equivalent lip position of artificial mouths.

43.20 listener sidetone rating (LSTR)

F: affaiblissement d'effet local pour la personne qui écoute (LSTR)

S: índice de efecto local para el oyente (LSTR)

The loudness of a diffuse room noise source as heard at the subscriber's (earphone) ear via the electric sidetone path in the telephone instrument, compared with the loudness of the intermediate reference system (IRS) overall, in which the comparison is made incorporating a speech signal heard via the human sideone path *(L_{MEHS})* as a masking threshold.

43.21 loudness rating

F: équivalent pour la sonie

S: índice de sonoridad

A measure, expressed in decibels, for characterizing the *loudness* performance of *complete telephone connections* or of parts thereof such as *sending system*, *line*, *receiving system*.

NOTE – (added by the CCITT) – This definition is very general and corresponds to what is described as *loudness loss* in CCITT texts; in those texts, the term "loudness rating" should be confined to measurements in conformity with Recommendation P.76, and may be abbreviated as LR.

722.43.25

43.22 metre air path

F: trajet d'un mètre à l'air libre

S: trayecto de un metro en el aire

Measured reference of sound pressure loss over a 1 metre air path. In an anechoic environment, the sound pressure attenuation of such a path is approximately 30 dB measured from the MRP.

43.23 modal distance

F: distance modale

S: distancia modal

Distance between the centre of the microphone protective grid or front sound opening on a handset, and the centre of the guard-ring.

43.24 modal gauge

F: jauge modale

S: calibre modal

Template used to check a guard-ring position on a handset relative to the receiver *earcap reference plane*.

43.25 modal position

F: position modale

S: posición modal

Prescribed position and inclination of a handset relative to a fixed sound source.

43.26 mouth reference point (MRP)

F: point de référence bouche (MRP)

S: punto de referencia boca (MRP)

Point 25 mm in front of and on the axis of the lip position of a typical human mouth (or artificial mouth) (see Figure A.1/P.64).

43.27 obstacle effect; obstruction effect

F: effet d'obstacle; effet d'obstruction

S: efecto de obstáculo; efecto de obstrucción

The change in the acoustic field close to a human or artificial mouth as obstacles (e.g. telephone transmitter) are brought into close proximity.

43.28 occlusion effect

F: effet d'occlusion

S: efecto de oclusión

The change in human sidetone that occurs when the ear canal is occluded, e.g. by a telephone receiver.

43.29 optimum listening level

F: niveau d'écoute optimal

S: nivel de escucha óptimo

The speech level that in a listening or conversation test corresponds to the highest opinion score on a *Quality scale* (a rating scale going from “Excellent” to “Bad”).

NOTE – It has been shown that the *optimum* listening level may be significantly higher than the preferred listening level. This indicates the importance of making a distinction between the optimum and *preferred* listening levels.

43.30 orthoreference acoustic gain for telephony (see Recommendation P.58)

F: gain acoustique en condition d'orthoréférence pour la téléphonie

S: ganancia acústica de ortorreferencia para telefonía

Ratio of the pressure at the ear reference point of the listener to the pressure at the mouth reference point of the talker under orthoreference conditions for telephony.

43.31 orthoreference condition for telephony (see Recommendation P.58)

F: conditions d'orthoréférence pour la téléphonie

S: condición de ortorreferencia para telefonía

Acoustic path between a talker and a listener, facing each other at a distance of 1 metre in the free field.

43.32 orthotelephonic gain (insertion gain) (see Recommendation P.58)

F: gain orthotéléphonique (gain d'insertion)

S: ganancia ortotelefónica (ganancia de inserción)

Ratio of the total electroacoustic gain to the orthotelephonic acoustic reference gain.

43.33 planning equivalent

F: équivalent de planification

S: equivalente de planificación

Result of a measurement with an objective meter which may be considered equal to an *R25 equivalent* or to a *corrected reference equivalent* with an accuracy which is sufficient for planning purposes.

43.34 pinna simulator (see Recommendation P.57)

F: simulateur de pavillon

S: simulador del pabellón auricular

A device which has the approximate shape of dimensions of a median adult human pinna.

43.35 preferred listening level

F: niveau d'écoute préféré

S: nivel de escucha preferido

The speech level that, in a listening or conversation test, is judged as preferred on a *Loudness Preference* scale [a rating scale going from "(Much) Louder than Preferred" to "(Much) Quieter than Preferred"].

NOTE – See "optimum listening level".

43.36 reference equivalent

F: équivalent de référence

S: equivalente de referencia

The loss, expressed in decibels, constant at all frequencies transmitted, which has to be introduced into the new *fundamental system for the determination of reference equivalents* or NOSFER in order to obtain in a given direction the same *loudness* as the *complete telephone connection* being considered, the *acoustical speech power* emitted by the talker being the same in both cases.

NOTES

1 The reference equivalent is positive or negative according to whether it has been necessary for a loss to be added or removed from the NOSFER.

2 The reference equivalent is strictly defined by the measuring method described in Recommendation P.72 *(Red Book)*.

722.43.14

43.37 R25 equivalent

F: équivalent R25

S: equivalente R25

Loudness loss determined as a *reference equivalent* in accordance with Recommendation P.72 *(Red Book)*, except that the listening level is constant, corresponding to 25 dB in NOSFER.

43.38 sidetone balance network

F: réseau d'équilibrage d'effet local

S: red equilibradora del efecto local

An electrical network as part of a 2- to 4-wire balance point within a telephone set circuit for the purpose of controlling the telephone sidetone path loss.

43.39 sidetone masking rating (STMR)

F: affaiblissement d'effet local par la méthode de masquage (STMR)

S: índice de enmascaramiento del efecto local (STMR)

The loudness of a telephone sidetone path compared with the loudness of the intermediate reference system (IRS) overall in which the comparison is made incorporating the speech signal heard via the human sidetone path L_{MEHS} as a masking threshold.

43.40 sidetone path

F: trajet d'effet local

S: trayecto de efecto local

Any path, acoustic, mechanical or electrical by which a telephone user's speech and/or room noise is heard in his own ear(s) (at ERP).

43.41 sidetone path loss

F: affaiblissement du trajet d'effet local

S: atenuación de trayecto de efecto local

The loss of the sidetone path expressed as a loss compared with the speech at the MRP. Symbols in common use are:

L_{MEHS} for sidetone paths within a human head,

L_{MEST} for electro-acoustic sidetone paths within the telephone set,

L_{MEMS} for mechanical sidetone paths within a telephone handset.

L_{RNST} for electro-acoustic sidetone path from a diffuse room noise source to the earphone.

Each of these paths may be measured as sensitivities, in which case they become S_{MEHS}, S_{MEST}, S_{MEMS} and S_{RNST}, and experience a change of sign. Thus, for example, $S_{MEST} = -L_{MEST}$.

43.42 speech volume penalty

F: pénalisation en volume sonore

S: penalización en volumen sonoro

The reduction in a subscriber's talking level (usually expressed as a function of a speech sidetone rating, e.g. STMR) due to the presence of sidetone.

43.43 talking resistance

F: résistance de conversation

S: resistencia de conversación

Fixed resistance used for test purposes, which has a resistance equal to that of a carbon microphone at a particular current.

43.44 terminal coupling loss (TCL); weighted terminal coupling loss (TCLw) (see Recommendations P.30 and P.31)

F: équivalent de couplage du terminal (TCL); équivalent pondéré de couplage du terminal (TCLw)

S: atenuación por acoplamiento de terminal (TCL); atenuación por acoplamiento de terminal ponderada (TCLw)

The (frequency dependent) coupling loss between the receiving port and the sending port of a terminal due to :

– acoustical coupling at the user interface,

– electrical coupling due to crosstalk in the handset cord or within the electrical circuits,

– seismic coupling through the mechanical parts of the terminal.

NOTES

1 The receiving port and the sending port of a digital voice terminal is a 0 dBr point.

2 The coupling at the user interface will depend on the conditions.

3 Weighted Terminal Coupling Loss should use the weighting of G.122.

43.45 virtual source function

F: fonction de source virtuelle

S: función de la fuente virtual

The change in virtual source position as a function of some other parameter, e.g. frequency, proximity of obstacles.

43.46 virtual source position

F: position de la source virtuelle

S: posición de la fuente virtual

That position within a human or artificial mouth at which emitted sounds appear to have their source.

43.47 weighted terminal coupling loss: see terminal coupling loss (43.44)

F: équivalent pondéré de couplage du terminal: voir *équivalent de couplage du terminal* (43.44)

S: atenuación ponderada por acoplamiento de terminal: véase *atenuación por acoplamiento de terminal* (43.44)

43.48 zero sidetone line impedance (Z_{S0})

F: impédance de ligne à effet local nul (Z_{S0})

S: impedancia de línea de efecto local nulo (Z_{S0})

That circuit impedance which, when connected across the terminals of a telephone set, causes the sidetone to be reduced to zero.

44 Speech level measurements

44.01 active time

F: durée d'activité

S: tiempo activo

Aggregate of all intervals of time when speech is deemed to be present according to the criterion adopted by CCITT (see Recommendation P.56) for the purpose of measuring.

44.02 active speech level (see Recommendation P.56)

F: niveau de parole active

S: nivel vocal activo

A quantity, expressed in decibels relative to a stated reference, e.g. volts or pascals, formed by averaging the speech-signal's power over the active time, according to Recommendation P.56, method B.

44.03 activity factor

F: coefficient d'activité

S: factor de actividad

Ratio of the active time to total timed elapsed during a measurement, usually expressed as a percentage.

44.04 volume or speech volume

F: volume ou volume de la parole

S: volumen o volumen vocal

A quantity which is related to speech power and is measured at a stated point in a telephone circuit by means of a specified instrument, suitable for rapid real-time control or adjustment of level by a human observer (e.g. vu meter, ARAEN volume meter, peak programme meter).

44.05 speech level

F: niveau vocal

S: nivel vocal

A general term embracing speech volume, active speech level and any other similar quantity expressed in decibels relative to a stated reference.