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TELEGRAPH SWITCHING

DEFINITIONS

**DEFINITIONS OF ESSENTIAL TECHNICAL
TERMS RELATING TO TELEGRAPH
SWITCHING AND SIGNALLING**

ITU-T Recommendation U.140

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation U.140 was published in Fascicle VII.2 of the *Blue Book*. This file is an extract from the *Blue Book*. While the presentation and layout of the text might be slightly different from the *Blue Book* version, the contents of the file are identical to the *Blue Book* version and copyright conditions remain unchanged (see below).

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

Recommendation U.140

DEFINITIONS OF ESSENTIAL TECHNICAL TERMS RELATING TO TELEGRAPH SWITCHING AND SIGNALLING

The definitions given below have been identified as necessary for studies in the field of telegraph switching and signalling.

Sub-numbers in the 721.XX.YY range signify correspondence with definitions in the International Electrotechnical Vocabulary (IEV) of the International Electrotechnical Commission (IEC).

Sub-numbers in the range 35.ZZ or 37.ZZ signify definitions derived from the ITU List of Definitions of Essential Telecommunications Terms.

1 public telegraph network

F: réseau télégraphique public

S: red telegráfica pública

A telecommunication network set up to perform a telegraph service for the public.

Note – A public telegraph network is supplied, operated and controlled by an Administration or recognized private operating agency.

721.51.01

2 Gentex network

F: réseau Gentex

S: red géntex

Switched telegraph network used between Administrations or recognized private operating agencies to provide an international public telegram service.

721.51.02

3 subscriber's line; subscriber loop

F: ligne d'abonné; ligne de rattachement

S: línea de abonado; bucle de abonado

A link between equipment in a subscriber's premises and the local telecommunication centre providing required services.

721.51.03

4 dedicated circuit (in telegraphy and data transmission)

F: liaison spécialisée (en télégraphie et transmission de données)

S: circuito especializado (circuito dedicado) (en telegrafía y transmisión de datos)

A telegraph link established permanently without the use of switching facilities and dedicated to the exclusive use of a set of terminals.

721.51.05

5 international circuit

F: circuit international

S: circuito internacional

A circuit directly connecting two exchanges situated in different countries.

721.51.06

6 intercontinental circuit

F: circuit intercontinental

S: circuito intercontinental

A circuit connecting two exchanges situated in different countries on different continents.

721.51.07

7 set (group) of circuits

F: faisceau de circuits

S: haz (grupo) de circuitos

A group of circuits established between two exchanges, any circuit of which may be chosen without preference for the setting up of a connection.

721.51.08

8 private network (in telegraphy)

F: réseau privé (en télégraphie)

S: red privada (en telegrafía)

A group of terminals that can establish calls between one another without passing through the switching equipment of the public network.

721.51.09

9 overflow position (in a private network)

F: poste principal d'un réseau privé

S: posición de desbordamiento (en una red privada)

A nominated terminal of a private network to which an incoming call is redirected if the terminal identification has been omitted or if connection to the selected terminal is not possible.

721.51.10

10 closed private network

F: réseau privé fermé

S: red privada cerrada

A private network that does not permit intercommunication other than between terminals connected to it.

721.51.11

11 interworking between networks

F: interconnexion de réseaux

S: interfuncionamiento de redes

The means whereby terminals connected to a telecommunication network may communicate with terminals of another network.

721.51.12

12 path

F: chemin

S: trayecto

In a telegraph network, a route between any two exchanges.

721.51.21

13 (terminal) port

F: accès

S: puerto (acceso)

A functional unit of an exchange through which signals can enter or leave a network.

721.51.22

14 circuit-switched connection

F: liaison commutée

S: conexión conmutada de circuitos

A temporary connection that is established on request between two or more stations in order to allow the exclusive use of that connection until it is released.

721.51.24

15 multipoint connection

F: liaison multippoint

S: conexión multipunto

A connection established between three or more stations.

721.51.25

16 point-to-point connection

F: liaison point à point

S: conexión punto a punto

A connection established between only two stations.

721.51.26

17 connection

F: chaîne de connexion

S: conexión

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

**721.52.01
37.18**

18 (complete) connection

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

S: conexión (completa)

A temporary association of channels or circuits, switching and other functional units set up to provide for the transfer of information between terminals in a telecommunication network.

721.52.02

19 (telex) call

F: communication (télex)

S: llamada (télex); comunicación (télex)

The establishment and possible use of a complete connection by connected telex terminals.

721.52.03

20 subscriber serving exchange

F: commutateur de rattachement

S: central de servicio de abonados

A public switching exchange which connects subscribers in a same area to one another, or which establishes connection between them and the other exchanges.

721.52.04

21 transit exchange

F: commutateur nodal télégraphique

S: centro de tránsito

A telegraph exchange which enables connections between other telegraph exchanges to be established.

721.52.05

22 telegraph switching exchange

F: centre de commutation télégraphique

S: centro de conmutación telegráfica

The set of equipments installed at a single location to switch telegraph traffic.

721.52.06

23 sub-centre

F: sous-centre

S: subcentro

A switching centre which serves a group of terminals and concentrates the traffic from this group towards a larger parent switching centre in which it is dependent for the routing of the whole of its traffic.

721.52.08
35.02

24 line concentrator

F: concentrateur de lignes

S: concentrador de líneas

A switching equipment remotely located in a local line network and enabling the traffic between the subscriber serving exchange and a number of subscribers to be carried by a smaller number of lines.

Note – A compatible equipment must normally be provided at the subscriber serving exchange.

721.52.09
35.09

25 trunk circuit

F: circuit interurbain

S: circuito interurbano

Telegraph circuit between two telegraph exchanges not belonging to the same local network.

26 telegraph junction circuit

F: jonction de sous-centre

S: circuito telegráfico de enlace

A telegraph circuit connecting a sub-centre with its parent switching centre.

721.52.11
35.12(a)

27 overline service

F: groupement de lignes

S: servicio de líneas agrupadas

Several subscriber line circuits grouped under the same address in such a way that a call to that address may reach any of the free lines of the group.

721.52.12

28 overflow (in telegraphy)

F: débordement (en télégraphie)

S: desbordamiento (en telegrafía)

Redirection by the network of calls or messages to a designated position, when a connection to the called position cannot be established, with a view to a later retransmission.

721.52.13
35.10

29 circuit switching

F: commutation de circuits

S: conmutación de circuitos

The temporary connection of two or more terminals upon request providing the exclusive use of a complete connection until it is released.

721.52.14

30 message switching; store and forward switching

F: commutation de messages; messagerie

S: conmutación de mensajes; conmutación en el servicio de almacenamiento y retransmisión

The process of routing messages comprising, in certain nodes of the network, a receiving, storing as necessary, and forwarding of messages within a telecommunication network.

721.52.15

31 reperforator switching

F: commutation avec retransmission par bande perforée

S: conmutación con retransmisión por cinta perforada

A tape relay system in which the tape from a reperforator feeds directly into a permanently associated automatic transmitter which can be switched to an outgoing channel.

Note – This switching may be manual, automatic or semi-automatic.

721.52.17
35.03

32 character switching

F: commutation de caractères

S: conmutación de caracteres

The temporary connection of two or more terminals upon request using a process of storing and transferring character by character from one line to another.

721.52.18

33 circuit switching exchange; switch (circuit)

F: commutateur de circuits

S: centro de conmutación de circuitos; conmutador (de circuitos)

A set of devices associated with a set of circuits intended to interconnect temporarily on request such circuits to constitute connections.

721.52.19

34 message switching exchange; switch (message)

F: commutateur de messages

S: centro de conmutación de mensajes; conmutador (de mensajes)

A set of devices associated with a set of circuits intended to receive, store as necessary, and forward messages without providing any exclusive connection between circuits.

721.52.20

35 national subscriber's telex number

F: numéro télex national d'abonné

S: número télex nacional de abonado

A sequence of digits that a caller must normally select to connect to a called subscriber situated in the same country.

721.52.21

36 local telex number

F: numéro télex local

S: número de télex local

A sequence of digits shorter than the national subscriber's telex number used to connect a called subscriber situated in a restricted geographical area.

721.52.22

37 alternative selection signals

F: pluralité des codes de signaux de sélection

S: pluralidad de señales de selección

The acceptance by the network of several different codes for selection signals, e.g. International Telegraph Alphabet No. 2 and International Alphabet No. 5, the choice of code being either fixed for a given subscriber, or variable at the subscriber's choice, for each call attempt.

721.52.28

38 prefix giving access to the long distance telex network

F: préfixe d'accès à grande distance

S: prefijo de acceso a la red télex de larga distancia

A digit or sequence of digits giving access to the remainder of the national telex network from an area inside which local telex numbers are used.

721.52.29

39 prefix giving access to the international telex network

F: préfixe d'accès à l'international

S: prefijo de acceso a la red télex internacional

A digit or a sequence of digits that must be selected by a subscriber, possibly after the prefix giving access to the long distance telex networks, to connect with the international network.

721.52.30

40 prefix giving access to the intercontinental telex network

F: préfixe d'accès à l'intercontinental

S: prefijo de acceso a la red télex intercontinental

A digit or a sequence of digits that must be selected by a subscriber, possibly after the prefix giving access to the long distance telex networks, to connect with the intercontinental network.

721.52.31

41 destination code

F: code télex de destination

S: código de destino

A sequence of digits identifying the country in which the called subscriber is located or a specified network in that country.

Note – The telex destination codes have been fixed by Recommendation F.69.

721.52.32

42 international selection sequence

F: numéro de batterie

S: secuencia de selección internacional

First sequence of digits in an international two-stage selection.

721.52.33

43 international two-stage selection

F: numérotation internationale en deux temps

S: selección internacional de dos etapas

The process of establishing international calls using two sequences of digits, the first sequence characterizing the called country or network, and the second sequence characterizing the called subscriber in that country or network.

721.52.34

44 traffic routing (in circuit switching)

F: acheminement (en commutation de circuits)

S: encaminamiento de tráfico (en conmutación de circuitos)

Designating in accordance with given rules the set of circuits to be used for setting up a connection from a given exchange for a given call attempt.

721.52.36

45 normal (traffic) routing

F: acheminement normal

S: encaminamiento normal (de tráfico)

Designating in accordance with given rules the set of circuits on a first priority basis from which a circuit is to be selected, provided that a free circuit exists in that set for a given call attempt.

721.52.37

46 alternative traffic routing

F: acheminement détourné: détournement

S: encaminamiento alternativo (de tráfico)

Designating in accordance with given rules the set of circuits to be taken in the case where no circuit is available in the set of normal traffic routing circuits for a given call attempt.

721.52.38

47 first choice set of circuits

F: faisceau de premier choix

S: haz de circuitos de primera elección

A set of circuits to be used on a first priority basis if a free circuit from this set is available.

721.52.39

48 emergency routing

F: acheminement de secours

S: encaminamiento de emergencia

The routing to be chosen exceptionally if neither the normal traffic routing nor any alternative traffic routing set of circuits is available.

721.52.40

49 re-routing

F: réacheminement

S: reencaminamiento

In case of congestion in a transit exchange, the re-direction of the call backwards to a preceding exchange in the already partly established connection with a view to finding an alternative traffic routing from that exchange.

721.52.41

50 switching signal

F: signal de commutation

S: señal de conmutación

A signal transmitted between two exchanges or between one exchange and a terminal for establishing and clearing a call.

721.52.42

51 forward switching signal

F: signal (de commutation) vers l'avant

S: señal de conmutación hacia adelante

A switching signal transmitted in the direction from the caller to the called party.

721.52.43

52 return switching signal

F: signal (de commutation) vers l'arrière

S: señal de conmutación hacia atrás

A switching signal transmitted in the direction from the called party to the caller.

721.52.44

53 free circuit condition

F: état de disponibilité

S: estado de circuito libre

The characteristic state of a circuit available for the setting up of a call.

721.52.45
35.13

54 calling signal

F: signal d'appel

S: señal de llamada

A forward switching signal retransmitted on a circuit or a subscriber's line to indicate that the setting up of a call is requested.

721.52.50
35.15

55 call control procedure

F: procédure de commande d'appel

S: procedimiento de control de la llamada

The entire set of interactive signals necessary to establish, maintain and release a call.

721.52.51

56 call-confirmation signal

F: signal de confirmation d'appel

S: señal de confirmación de llamada

A return switching signal, in response to a calling signal, to acknowledge the receipt of the calling signal.

721.52.52
35.16

57 call accepted signal

F: signal d'acceptation d'appel

S: señal de llamada aceptada; señal de aceptación de la llamada

A signal sent over the return channel, indicating that the call can be accepted by a terminal.

721.52.53

58 selection signals

F: séquence de sélection

S: señales de selección

A sequence of forward signals giving to an exchange information necessary to the setting up of a call.

721.52.54

59 address (in circuit switching)

F: adresse (en commutation de circuits)

S: dirección (en conmutación de circuitos)

The part of the selection signals which indicates the destination of a call.

721.52.55

60 address (in information processing)

F: adresse (en traitement de l'information)

S: dirección (en tratamiento de la información)

A character or group of characters that identifies a storage or a device without the use of any intermediate reference.

721.52.56

61 processed-to-select signal

F: signal d'invitation à numéroté

S: señal de invitación a marcar

A return switching signal transmitted by an exchange in response to a calling signal or after a call-confirmation signal to indicate that the exchange is ready to receive the selection signals.

721.52.57
35.17

62 (user) class of service signal

F: signal de catégorie

S: señal de clase de servicio (de usuario)

A character or group of characters among the selection signals identifying the user's class of service of the calling party.

721.52.58

63 pre-signal

F: présignal

S: preseñal

A class of service signal transmitted at the beginning of the selection signals.

721.52.59

64 post-signal

F: postsignal

S: postseñal

A class of service signal transmitted after the sequence of digits characterizing the called terminal.

721.52.60

65 end of selection signal

F: signal de fin de sélection

S: señal de fin de selección

A switching signal transmitted among the selection signals after the digits of the called subscriber's number to indicate that there is no further digit belonging to this number.

721.52.61

66 keyboard selection

F: numérotation au clavier (en télégraphie)

S: selección por teclado (marcación por teclado)

In automatic telegraph switching, the use of telegraph alphabet signals sent from the teleprinter's keyboard or from an automatic equipment to form the selection sequence.

721.52.62

67 dial selection (in telegraph)

F: numérotation au cadran (en télégraphie)

S: selección por disco (marcación por disco) (en telegrafía)

In automatic telegraph switching, the use of dial pulse trains from a dial or an automatic equipment to form the selection sequence.

721.52.63

68 call-connected signal

F: signal de communication établie

S: señal de comunicación establecida

The switching signal returned over the backward signalling path to indicate that the call is extended to the called station.

721.52.64
35.19

69 clearing signal

F: signal de libération

S: señal de liberación

The switching signal transmitted over a circuit to release a switched connection.

721.52.65
35.20

70 confirmation of clearing signal

F: signal de confirmation de libération

S: señal de confirmación de liberación

Return switching signal which indicates that the clearing signal has been executed.

721.52.66

71 service signal

F: signal de service

S: señal de servicio

Signal transmitted automatically by the network to the calling terminal indicating the progress of a call or the cause of failure of the call attempt.

721.52.67

72 engaged; busy signal

F: signal d'occupation

S: señal de ocupado; señal de ocupación

A busy signal which indicates that the called station is busy or not available.

721.52.68

73 barred signal

F: signal d'interdiction

S: señal de acceso prohibido

A service signal which indicates that a call cannot be established because access is barred.

721.52.69

74 call set-up time

F: temps d'établissement d'une communication

S: tiempo de establecimiento de la comunicación

The interval of time between the sending of the calling signal by the calling party and the reception of the call-connect signal.

721.52.70

75 pre-selection delay

F: temps de présélection

S: tiempo de preselección

The interval of time between the sending of the calling signal by the calling party and the reception of the proceed-to-select signal.

721.52.71

76 selection time

F: temps de numérotation

S: tiempo de selección (tiempo de marcación)

The interval of time between the reception by the calling party of the proceed-to-select signal and the end of reception by the exchange of the selection sequence.

721.52.72

77 post-selection time

F: temps de sélection

S: periodo de espera después de marcar

The interval of time between the end of the sending of the selection sequence by the calling party and the reception of the call-connect signal.

721.52.73

78 effective duration of a call

F: durée d'une communication

S: duración efectiva de una comunicación

The interval of time between the reception by the calling party of the call-connect signal and the sending of the clearing signal.

721.52.74

79 stored program control (SPC)

F: commande par programme enregistré

S: control por programa almacenado (CPA)

The control of an exchange by means of a set of instructions which are stored and can be modified.

721.52.75

80 common channel signalling

F: signalisation par canal sémaphore; signalisation sur voie commune

S: señalización por canal común

A signalling method in which signalling information relating to a multiplicity of circuits is conveyed over a single channel by labelled messages.

721.52.76

81 channel associated signalling

F: signalisation voie par voie

S: señalización asociada al canal

A signalling method in which the signals for the traffic carried by a single transmission channel are transmitted over that channel itself or over a signalling channel permanently associated with it.

Note – This term may also apply when the signals for a circuit are transmitted over the channel carrying the traffic.

721.52.77

82 call clearing delay

F: temps de libération

S: tiempo de liberación de la llamada

The interval of time between the beginning of the sending of the clearing signal by a terminal and the appearance of the free circuit condition on the return line.

721.52.78

- 83 unsuccessful call**
F: appel infructueux
S: llamada infructuosa
- A call attempt which does not result in the establishment of a complete connection.
- 721.52.79**
- 84 call not accepted signal**
F: signal de refus d'appel
S: señal de rechazo de la llamada
- A call control signal sent by the called terminal to indicate that it does not accept the incoming call.
- 721.52.80**
- 85 lost call**
F: appel perdu
S: llamada perdida
- A request for a connection which is rejected due to network congestion.
- 721.52.81**
- 86 head-on collision**
F: double prise (sur circuit mixte); collision frontale
S: colisión frontal
- The condition which exists when, on a transmission path capable of being used to set up calls in both directions, the path is seized from both ends simultaneously or nearly so. The seizure of the path by the distant end is not apparent, due to propagation delays.
- 721.52.82**
- 87 terminal connection method (in telex)**
F: mode de raccordement (en télex)
S: método de conexión del terminal (en télex)
- The characteristics of the interface between a telex subscriber's line and a subscriber-serving exchange.
- 721.52.83**
- 88 speed converter concentrator**
F: concentrateur-diffuseur
S: concentrador convertidor de velocidad
- The temporary storing of data arriving from slow channels and their retransmission on high speed channels and vice versa.
- 721.52.84**
- 89 system control station**
F: centre directeur
S: estación de control del sistema
- Station which is responsible for maintenance and clearance of faults on a transmission system.
- 721.52.86**

90 indication of duration

F: indication de durée

S: indicación de duración

The indication by the network to the paying *terminal* of the chargeable time of a call prior to the release of the paying terminal or by recall at a convenient time.

Note – This information may be provided automatically or on demand.

721.53.32