INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.151

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SPECIFICATIONS OF SIGNALLING SYSTEM No. 5

SIGNAL CODE FOR REGISTER SIGNALLING

ITU-T Recommendation Q.151

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.151 was published in Fascicle VI.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.

3.1 SIGNAL CODE FOR REGISTER SIGNALLING

3.1.1 *General*

1) Automatic access to the international circuits must be used for outgoing traffic and the numerical signals from the operator or subscriber are stored in an outgoing international register before an international circuit is seized. As soon as the ST (end-of-pulsing) condition is available to the outgoing register, a free international circuit is selected and a seizing line signal transmitted. On receipt of a proceed-to-send line signal the seizing signal is terminated and a KP ("start of pulsing") pulse, followed by the numerical signals, is transmitted by the register. The final register signal transmitted is an end-of-pulsing (ST) pulse. The register signalling is not required to be TASI-prefixed.

2) Link-by-link register signalling applies. The register signals are always sent en bloc[1)]. En bloc non-overlap[1)] applies at the outgoing international register. En bloc overlap[1)] applies at the transit and incoming international registers.

3) On a particular link, the KP signal sent by the international register (outgoing or transit register) on receipt of a proceed-to-send signal may be used to prepare the distant international register on this link for the receipt of the subsequent numerical signals. This signal may also serve to discriminate between terminal and transit traffic:

   a) Terminal KP (KP1). Used to create conditions at the next exchange so that equipment (or techniques) used exclusively for switching the call to the national network of the incoming country is brought into circuit.

   b) Transit KP (KP2). Used to bring into circuit, at the next exchange, equipment (or techniques) required to switch to call to another international exchange.

4) The register signalling is a 2-out-of-6 multifrequency code, forward signalling only, as shown in Table 2.

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1) *En bloc register signalling* is the transmission, by a register, of all the call information as a whole in a regular timed sequence of signals.

The technique requires that, in one register on the connection, all the relevant call information from a subscriber or operator shall be completely stored before output en bloc signal transmission takes place from that register.

At registers subsequent to the one where all the call information from a subscriber or operator is completely stored, the output signal transmission may commence before the complete reception of the input information; thus overlap to any desired degree of the output signal transmission with the input signal reception may occur and this may be understood as being *en block overlap.* Alternatively, the output signal transmission may be delayed until all the call information is received and stored. This may be understood as being *en bloc non-overlap.*

TABLE 2

Register signal code of system No. 5

Signal	Frequencies *(compound)* Hz	Remarks
KP1	1100 + 1700	Terminal traffic
KP2	1300 + 1700	Transit traffic
Digit 1	700 + 900	
’ ’ 2	700 + 1100	
’ ’ 3	900 + 1100	
’ ’ 4	700 + 1300	
’ ’ 5	900 + 1300	
’ ’ 6	1100 + 1300	
’ ’ 7	700 + 1500	
’ ’ 8	900 + 1500	
’ ’ 9	1100 + 1500	
’ ’ 0	1300 + 1500	
Code 11	700 + 1700	Code 11 operator
Code 12	900 + 1700	Code 12 operator
ST	1500 + 1700	End-of-pulsing

3.1.2 *Sending sequence of register signals*

The sequence of the register signals shall conform to the sequence indicated in Recommendation Q.107, noting the following:

a) a KP start-of-pulsing signal shall precede the sequence of numerical signals in all the cases indicated;

b) the ST end-of-pulsing signal will be transmitted from the register in automatic as well as in semi-automatic operation;

c) exceptionally, special numbers for giving access to incoming operators or delay operators may be dialled by outgoing operators and submitted by outgoing international registers instead of code 11 and code 12 signals.