INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.142

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

SPECIFICATIONS OF SIGNALLING SYSTEM No. 5

DOUBLE SEIZING WITH BOTH-WAY OPERATION

ITU-T Recommendation Q.142

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.142 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.

2.2 DOUBLE SEIZING WITH BOTH-WAY OPERATION

2.2.1 *Unguarded interval*

Considering that on long international (intercontinental) circuits:

a) the sending end splitting time may be 50 ms prior to signal transmission;

b) TASI may occasionally clip the initial 500 ms of seizing signals;

c) circuit propagation time may be relatively long;

d) the signal receiver response time must be taken into account;

e) the recognition time of seizing signals is 40 ± 10 ms;

the unguarded interval relative to double seizing in the extreme case approaches 600 ms plus the circuit propagation time and the signal receiver response time. The signalling system should therefore detect double seizing and take action as defined in § 2.2.2.

2.2.2 *Detection of double seizing*

In the event of double seizing, the same frequency (*f* 1) is received as is being transmitted at each terminal. This condition shall be detected by the signalling equipment and shall cause stoppage of the outgoing seizing signal at each end. An end having detected double seizing, and terminated the outgoing seizing signal 850 ± 200 ms after this signal has been transmitted, will maintain the circuit in the busy condition until the stoppage of the incoming seizing signal from the distant end. Each outgoing seizing signal maintained for at least 850 ± 200 ms will ensure that both ends of the circuit will detect the double seizing.

The signalling equipment will be released on termination of both the outgoing and incoming seizing signals and a clear-forward shall not be sent.

Either of the following arrangements may apply on detection of double seizing:

a) an automatic repeat attempt to set up the call; or

b) a re-order indication is given to the operator or to the subscriber and no automatic repeat attempt is made.

Method a) is the preferred arrangement (see Recommendation Q.108).

Method a) does not require the repeat attempt to be limited to the circuit used at the first attempt, but should the first circuit be seized again at the second attempt on the second search over the circuits, a minimum time of 100 ms shall elapse between the termination of the first attempt outgoing seizing signal (or the recognition of the cessation of the incoming seizing signal, whichever occurs later) and the commencement of the second attempt seizing signal.

To minimize the probability of double seizing, the circuit selection at the two ends should be such that, as far as possible, double seizing can occur only when a single circuit remains (e.g. by selection of circuits in opposite order at the two ends).