



INTERNATIONAL TELECOMMUNICATION UNION

ITU-T

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

Q.464

**SPECIFICATIONS OF SIGNALLING SYSTEM R2
SIGNALLING PROCEDURES**

**SIGNALLING BETWEEN THE OUTGOING
INTERNATIONAL R2 REGISTER AND THE
LAST INCOMING R2 REGISTER**

ITU-T Recommendation Q.464

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.464 was published in Fascicle VI.4 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 Q.464

5.1.4 SIGNALLING BETWEEN THE OUTGOING INTERNATIONAL R2 REGISTER AND THE LAST INCOMING R2 REGISTER

5.1.4.1 General

The usual System R2 signalling procedure is to request in succession the remainder of the address digits stored in the outgoing international R2 register by the repetitive use of signal A-1 until it is determined at the incoming end that the complete address information has been received by the incoming exchange or that the call cannot be routed.

System R2 enables transmission of information concerning a large number of different conditions of called subscriber's line or reasons why call set-up has failed. But this can only be sent if the switching systems and other signalling systems employed on the remaining links of the connection offer the possibility of differentiating several line conditions. Group B-signals are provided for this purpose.

Transition from Group A to Group B meanings is indicated by means of address-complete signal A-3. However, if the incoming exchange is unable to send any signals concerning the condition of the called subscriber's line it is unnecessary to send signal A-3 followed by a Group B signal. In such cases the address-complete signal A-6, provided for the purpose is used.

If congestion is encountered after transmission of the address-complete signal A-3 the congestion signal B-4 is sent in place of signal A-4 or A-15.

5.1.4.2 When the last incoming R2 register is able to transmit the condition of the called subscriber's line

When the condition of the called subscriber's line can be determined the incoming R2 register can send signals conveying this information after receipt of the address digits.

As soon as the last address digit is received the last incoming R2 register sends the address-complete signal A-3 to announce changeover to the transmission of Group B signals. In response the outgoing international R2 register sends the appropriate calling party's category signal (II-7 to II-10). The last incoming R2 register acknowledges this with the relevant Group B signal indicating the condition of the called subscriber's line.

Immediately the compelled signalling sequence is complete the incoming R2 register is released and depending upon the Group B signal sent the speech-path may be through-connected.

When the condition of the called subscriber's line is determined by an electrical signal to the last incoming R2 register and if the called subscriber's line is free the address-complete signal A-6 can be sent instead of signal A-3, possibly in pulse form. This will be the last interregister signal. After signal A-6 is sent the incoming R2 register is released, the speech-path is through-connected and ringing tone returned to the calling subscriber. Outgoing international R2 registers must be able to interpret all Group B signals.

On recognition of the last backward signal the outgoing exchange releases the outgoing international R2 register and either through-connects the speech-path or releases the outgoing connection and causes the return of an appropriate tone or special announcement or both alternately to the calling subscriber.

5.1.4.3 When the last incoming R2 register is not able to transmit the condition of the called subscriber's line

In this case the last incoming R2 register sends the address-complete signal A-6, possibly in pulse form, as the last interregister signal. After this is sent, the last incoming R2 register is released and the speech-path is through-connected.

When the last incoming R2 register is in the exchange to which the called subscriber is connected, an appropriate tone is returned to the calling subscriber from this exchange.

On recognition of address-complete signal A-6, the outgoing exchange releases the outgoing international R2 register and through-connects the speech-path. The calling subscriber will then hear ringing tone, busy tone, special information tone or a recorded announcement alternately with special information tone sent by the incoming equipment.