



INTERNATIONAL TELECOMMUNICATION UNION

**ITU-T**

TELECOMMUNICATION  
STANDARDIZATION SECTOR  
OF ITU

**Q.472**

**SPECIFICATIONS OF SIGNALLING SYSTEM R2  
SIGNALLING PROCEDURES**

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**AT THE LAST INCOMING R2 REGISTER  
SITUATED IN A TRANSIT EXCHANGE**

**ITU-T Recommendation Q.472**

(Extract from the *Blue Book*)

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## NOTES

1 ITU-T Recommendation Q.472 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.

### 5.3.3 AT THE LAST INCOMING R2 REGISTER SITUATED IN A TRANSIT EXCHANGE

#### 5.3.3.1 *Successful routing*

Interregister signalling to such a register can be terminated after all the address digits are received. In order to determine that the number is complete the same criteria as described in Recommendation Q.471 are used.

When criterion *a*) (analysis) is applied:

- 1) if the signalling system employed on the outgoing link enables the condition of the called subscriber's line to be sent backwards within an acceptable period compared to the time-out of the outgoing international R2 register, the last incoming R2 register can react in accordance with one of the following methods:
  - i) address-complete signal A-3 is sent in acknowledgement of the last address digit followed by the relevant Group B signal depending upon the condition of the called subscriber's line;
  - ii) signal A-1 is sent in acknowledgement of the last address digit, and signal I-15 if received, to deliberately suspend compelled signalling and later,
    - when the condition of the called subscriber's line is known, address-complete signal A-3 is sent in pulse form followed by the relevant Group B signal. This makes it possible to avoid maintaining on-line the Group II signal sent after reception of signal A-3,
    - when the called subscriber's line is free, it is preferable to send the address-complete signal A-6 in pulse form,
- 2) if the signalling system employed on the outgoing link does not enable the condition of the called subscriber's line to be transmitted backwards or if such information is only available at the last incoming R2 register after a delay incompatible with the time-out of the outgoing international R2 register, then address-complete signal A-6 is sent in acknowledgement of the last address digit.

When criterion *b*) (electrical conditions) is applied:

Only signal A-1 can be used to acknowledge each address digit. Upon receipt of an electrical signal on the outgoing link, the last incoming R2 register acts in one of the following ways:

- if the condition of the called subscriber's line is not known or is known to be *free*, address-complete signal A-6 is sent in pulse form;
- if the condition of the called subscriber's line is known to be other than *free*, address-complete signal A-3 is sent in pulse form, followed by the relevant Group B signal.

Criterion *c*) (end-of-pulsing) is only applicable if the last incoming R2 register can receive 6 forward signalling frequencies (see also Recommendation Q.473). In this case, when end-of-pulsing signal I-15 is received and recognized, the last incoming R2 register can perform in the way described under criterion *a*).

When criterion *d*) (time-out) is applied:

Address-complete signal A-6 is sent in pulse form after the specified time has elapsed (see Recommendation Q.476).

#### 5.3.3.2 *Congestion*

If congestion is encountered, the procedure described in Recommendation Q.470 is followed. However, if address-complete signal A-3 has already been sent then congestion signal B-4 is sent in acknowledgement of the Group II signal which commences the last compelled signalling cycle.