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**Information technology —  
Telecommunications and information  
exchange between systems — Private  
Integrated Services Network — Circuit  
mode bearer services — Inter-exchange  
signalling procedures and protocol**

**AMENDMENT 2: Additional progress  
descriptions**

*Technologies de l'information — Télécommunications et échange  
d'information entre systèmes — Réseau privé avec intégration de  
services — Services porteurs en mode circuit — Procédures et protocoles  
de signalisation d'interéchange*

*AMENDEMENT 2: Descriptions de progrès additionnels*

## Foreword

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In the field of information technology, ISO and IEC have established a joint technical committee, ISO/IEC JTC 1. Draft International Standards adopted by the joint technical committee are circulated to national bodies for voting. Publication as an International Standard requires approval by at least 75 % of the national bodies casting a vote.

Amendment 2 to International Standard ISO/IEC 11572:1997 was prepared by Joint Technical Committee ISO/IEC JTC 1, *Information technology*, Subcommittee SC 6, *Telecommunications and information exchange between systems*.

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Printed in Switzerland

## Introduction

This Amendment defines the changes required to ISO/IEC 11572 (2nd edition, 1997) to provide additional progress descriptions for providing information on interworking.

The contents are expressed as amendments to be made to the base standard. Only those clauses for which amendments are specified are to be changed.

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# Information technology — Telecommunications and information exchange between systems — Private Integrated Services Network — Circuit mode bearer services — Inter-exchange signalling procedures and protocol

## AMENDMENT 2: Additional progress descriptions

### Subclause 14.5.17, table 32

In table 32, following the first occurrence of the words "All other values are reserved" (i.e. in relation to the codepoints for the Coding standard, octet 3) add the words "(note 5)".

In table 32, following the words "Progress description (octet 4)", add (as underlined text) the words "(note 5)".

In table 32, following the third occurrence of the words "All other values are reserved" (i.e. in relation to the codepoints for the Progress description, octet 4) add the words "(note 5)".

In the notes at the end of table 32, add a new note:

"5: Additional progress descriptions are specified in annex ZB."

### Annex A

Insert the following new subclause at the end of annex A:

#### A.3.15 Additional progress descriptions

Item	Question/feature	Reference	Status	N/A	Support
M1	Up to three Progress indicator information elements within the same message	annex ZB	m		Yes [ ]
M2	Additional progress descriptions	annex ZB	m		Yes [ ]

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**New annex ZB.**

Add the following new annex ZB:

**Annex ZB**

(normative)

**Additional progress descriptions****ZB.1 Introduction**

The coding of the Progress indicator information element in 14.5.17 defines several progress descriptions for interworking situations. The procedures in 10 specify the circumstances when each is used. In particular, progress descriptions are transmitted over an inter-PINX link:

- by an Incoming Gateway PINX for calls entering the PISN from another network; and
- by an Outgoing Gateway PINX for calls passing from the PISN to another network.

This annex specifies some additional codings (and their use) for the progress description field of the Progress indicator information element. These additional progress descriptions can be used to convey supplementary information about the interworking environment applicable to a particular call.

It is mandatory to support the progress descriptions and procedures specified in this annex. The requirements specified in this annex are additional to the requirements specified in 10 of this International Standard.

**ZB.2 General requirements**

In addition to the progress descriptions listed in 14.5.17, a PINX shall also support the following progress descriptions:

- 16 "interworking with a public network";
- 17 "interworking with a network unable to supply a release signal";
- 18 "interworking with a network unable to supply a release signal before answer"; and
- 19 "interworking with a network unable to supply a release signal after answer".

A PINX shall be capable of sending ALERTING, CONNECT, PROGRESS and SETUP messages containing up to three Progress indicator information elements, as appropriate to the circumstances of a particular call.

NOTE 1 — More than one Progress indicator information element may be sent in the same message, to indicate different conditions.

A PINX shall also be capable of receiving and acting upon such messages, including in the case of a Transit PINX, passing all Progress indicators received on to the next PINX.

**ZB.3 Coding requirements for additional progress descriptions**

The Progress indicator information element defined in 14.5.17 is a variable length category 1 (see 10.4.11.2) information element with the format shown in figure 23. Up to three Progress indicator information elements may appear in a single message (to indicate more than one condition).

NOTE 2 — The Progress indicator information element can be conveyed in ALERTING, CONNECT, PROGRESS, and SETUP messages. Subclauses 13.2.1, 13.2.3, 13.2.7 and 13.2.10 respectively define these messages.

The CCITT standardised coding for the information element is shown in table 32. The coding for the Additional progress descriptions is shown in table ZB.1.

**Table ZB.1: Coding of Additional progress descriptions**

<u>Coding standard (octet 3)</u>		
<b>Bits</b>		
7 6		
0 1	ISO/IEC standard	
Other values are defined in table 32		
<u>Location (octet 3)</u>		
Coded as shown in table 32		
<u>Progress description (octet 4) (NOTE)</u>		
<b>Bits</b>	<b>No</b>	<b>Meaning</b>
7 6 5 4 3 2 1		
0 0 1 0 0 0 0	16	Interworking with a public network
0 0 1 0 0 0 1	17	Interworking with a network unable to supply a release signal
0 0 1 0 0 1 0	18	Interworking with a network unable to supply a release signal before answer
0 0 1 0 0 1 1	19	Interworking with a network unable to supply a release signal after answer
All other values are reserved.		
NOTE — Octet 4 shall be coded as shown in this table when the coding standard (octet 3) is "ISO/IEC standard". When the coding standard is "CCITT standardised coding", octet 4 shall be coded as shown in table 32.		

**ZB.4 Actions at a Transit PINX**

A Transit PINX receiving a message containing more than one valid Progress indicator information elements, one or more of which can contain one of the additional progress descriptions described in ZB.3.1, shall act as described in 10.4. That is to say:

- if any of the Progress indicator information elements in the received message contains progress description number 1 "call is not end to end ISDN, further information may be available in band" or number 8 "in band information or appropriate pattern now available" the information channel shall be through connected in the backwards direction if this has not already occurred; and
- all Progress indicator information elements received shall be passed on to the next PINX.

**ZB.5 Actions at an Incoming Gateway PINX**

The requirements specified in the following subclauses are in addition to the requirements specified in 10.7.2, thus leading to the possibility of more than one Progress indicator information element being transmitted in the SETUP message.

**ZB.5.1 Interworking with a public network**

If the call has entered the PISN from a public network (ISDN or non-ISDN), a Progress indicator information element shall be sent in the direction of the called user. This Progress indicator information element shall contain progress description 16 "Interworking with a public network".

**ZB.5.2 Interworking with a network with limited release capability**

If the call has entered the PISN from a network that is unable, or not always able, to supply to the PISN with an indication that the call has been released, a Progress information element shall be sent in the direction of the called user. This Progress indicator information element shall contain one of the following progress descriptions:

- 17 "interworking with a network unable to supply a release signal";
- 18 "interworking with a network unable to supply a release signal before answer"; or
- 19 "interworking with a network unable to supply a release signal after answer".

Progress description number 18 shall be used if the other network is able to indicate release after it has received an answer signal from the PISN, but is not always able to indicate release prior to receiving an answer signal. In this case, the other network will rely on receiving a release signal from the PISN if answer does not occur within a reasonable time.

Progress description number 19 shall be used if the other network is able to indicate release prior to the receipt of an answer signal from the PISN, but is not always able to indicate release after receiving an answer signal. In this case, the other network will rely on receiving a release signal from the PISN when release is initiated by the called user.

Progress description number 17 shall be used if the other network is not always able to indicate release prior to answer and is not always able to indicate release after answer. In this case, the other network will rely on receiving a release signal from the PISN if answer does not occur within a reasonable time and when release is initiated by the called user.

### **ZB.5.3 On receipt of a PROGRESS, ALERTING or CONNECT message**

Action, if any, on receipt of any of the additional progress descriptions specified in table ZB.1 during call establishment is an implementation matter.

NOTE 3 — The Incoming Gateway PINX can make use of these progress descriptions to determine whether the call is to be allowed to continue. However, normally the peer Outgoing Gateway PINX will have avoided the establishment of undesirable calls, based on progress descriptions received in the SETUP message (see ZB.6.1).

### **ZB.5.4 On receipt of a Progress indicator information element subsequent to call establishment**

Action, if any, on receipt of any of the additional progress descriptions specified in table ZB.1 subsequent to call establishment is an implementation matter.

NOTE 4 — Any of these progress descriptions can be received from a peer Gateway PINX subsequent to the use of a supplementary service such as Call Transfer. The Incoming Gateway PINX can use this information in conjunction with local knowledge to determine whether the call is to be allowed to continue. Checks can be similar to those conducted at an Outgoing Gateway PINX on receipt of a SETUP message (see ZB.6.1).

## **ZB.6 Actions at an Outgoing Gateway PINX**

The requirements specified in the following subclauses are in addition to the requirements specified in 10.8.3, thus leading to the possibility of more than one Progress indicator information element being transmitted.

### **ZB.6.1 On receipt of the SETUP message**

Certain information in the Progress indicator information element(s) contained within a SETUP message received by an Outgoing Gateway PINX may affect the decision of the PINX to route the call to another network. In particular, the Outgoing Gateway PINX shall not establish a call that cannot be released. This can be determined by the presence of a Progress indicator information element containing one of the progress descriptions: 17 "interworking with a network unable to supply a release signal", 18 "interworking with a network unable to supply a release signal before answer", or 19 "interworking with a network unable to supply a release signal after answer", and the Outgoing Gateway PINX's knowledge of the ability of the other network to signal release.

In addition, the presence of a Progress indicator information element containing progress description 16 "interworking with a public network" may influence routing.

NOTE 5 — For example, the establishment of a call between two public networks can be prevented, if required.

### **ZB.6.2 Interworking with a public network**

If the call is to enter a public network (ISDN or non-ISDN), a Progress indicator information element shall be sent in the direction of the calling user. This Progress indicator information element shall contain progress description 16 "Interworking with a public network".

### **ZB.6.3 Interworking with a network with limited release capability**

If the call is to enter a network that is unable, or not always able, to supply an indication to the PISN that the call has been released, a Progress indicator information element shall be sent in the direction of the calling user. This Progress indicator information element shall contain one of the following progress descriptions:

- 17 "interworking with a network unable to supply a release signal";
- 18 "interworking with a network unable to supply a release signal before answer"; or
- 19 "interworking with a network unable to supply a release signal after answer".



Progress description number 18 shall be used if the other network is able to indicate release after it has sent an answer signal to the PISN, but is not always able to indicate release in the event of no reply. The other network will rely on receiving a release signal from the PISN when release is initiated by the calling user or if answer does not occur within a reasonable time.

Progress description number 19 shall be used if the other network is able to indicate release prior to sending an answer signal to the PISN, but is not always able to indicate release after sending an answer signal. In this case, the other network will rely on receiving a release signal from the PISN when release is initiated by the calling user.

Progress description number 17 shall be used if the other network is not always able to indicate release prior to answer and is not always able to indicate release after answer. In this case, the other network will rely on receiving a release signal from the PISN if answer does not occur within a reasonable time and when release is initiated by the calling user.

#### **ZB.6.4 On receipt of a Progress indicator information element subsequent to call establishment**

Action, if any, on receipt of any of the additional progress descriptions specified in table ZB.1 subsequent to call establishment is an implementation matter.

NOTE 6 — Any of these progress descriptions can be received from a peer Gateway PINX subsequent to the use of a supplementary service such as Call Transfer. The Outgoing Gateway PINX can use this information in conjunction with local knowledge to determine whether the call is to be allowed to continue. Checks can be similar to those conducted at an Outgoing Gateway PINX on receipt of a SETUP message (see ZB.6.1).

#### **ZB.7 Actions at an Originating PINX or a Terminating PINX**

Action, if any, on receipt of any of the additional progress descriptions specified in table ZB.1 is an implementation matter. Possible actions include the following:

- provision of an appropriate indication to the user on receipt of progress description 16;
- use later in the call as part of the process of determining whether a request for a supplementary service such as Call Transfer should be accepted.

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