INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.656

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

(03/93)

INTERWORKING OF SIGNALLING SYSTEMS

INTERWORKING OF SIGNALLING SYSTEMS – LOGIC PROCEDURES FOR INTERWORKING OF SIGNALLING SYSTEM No. 6 TO SIGNALLING SYSTEM No. 7 (ISUP)

ITU-T Recommendation Q.656

(Previously "CCITT Recommendation")

FOREWORD

The ITU Telecommunication Standardization Sector (ITU-T) is a permanent organ of the International Telecommunication Union. The ITU-T is responsible for studying technical, operating and tariff questions and issuing Recommendations on them with a view to standardizing telecommunications on a worldwide basis.

The World Telecommunication Standardization Conference (WTSC), which meets every four years, established the topics for study by the ITU-T Study Groups which, in their turn, produce Recommendations on these topics.

ITU-T Recommendation Q.656 was prepared by the ITU-T Study Group XI (1988-1993) and was approved by the WTSC (Helsinki, March 1-12, 1993).

NOTES

1 As a consequence of a reform process within the International Telecommunication Union (ITU), the CCITT ceased to exist as of 28 February 1993. In its place, the ITU Telecommunication Standardization Sector (ITU-T) was created as of 1 March 1993. Similarly, in this reform process, the CCIR and the IFRB have been replaced by the Radiocommunication Sector.

In order not to delay publication of this Recommendation, no change has been made in the text to references containing the acronyms "CCITT, CCIR or IFRB" or their associated entities such as Plenary Assembly, Secretariat, etc. Future editions of this Recommendation will contain the proper terminology related to the new ITU structure.

2 In this Recommendation, the expression "Administration" is used for conciseness to indicate both a telecommunication administration and a recognized operating agency.

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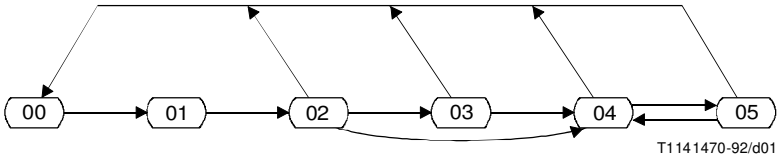
INTERWORKING OF SIGNALLING SYSTEMS – LOGIC PROCEDURES FOR INTERWORKING OF SIGNALLING SYSTEM No. 6 TO SIGNALLING SYSTEM No. 7 (ISUP)

(Helsinki, 1993)



State number	*State description*	*Sheet number*
00	Idle	1, 2, 3, 4, 5
01	Wait for CPCI-FITE	1
02	Wait for address-complete	2
03	Wait for answer	4
04	Answered	4
05	Wait for resume	5

FIGURE 1/Q.656

State overview diagram for interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

FIGURE 2/Q.656

(Reserved for future notes)

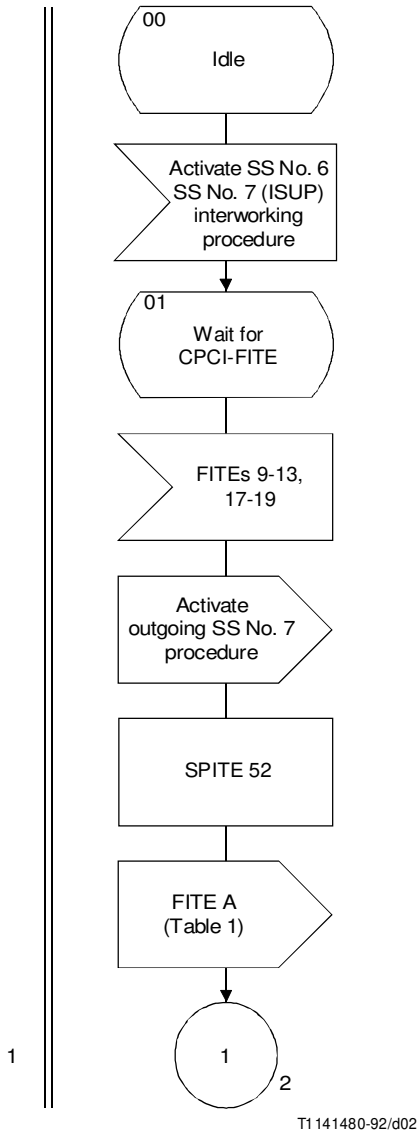
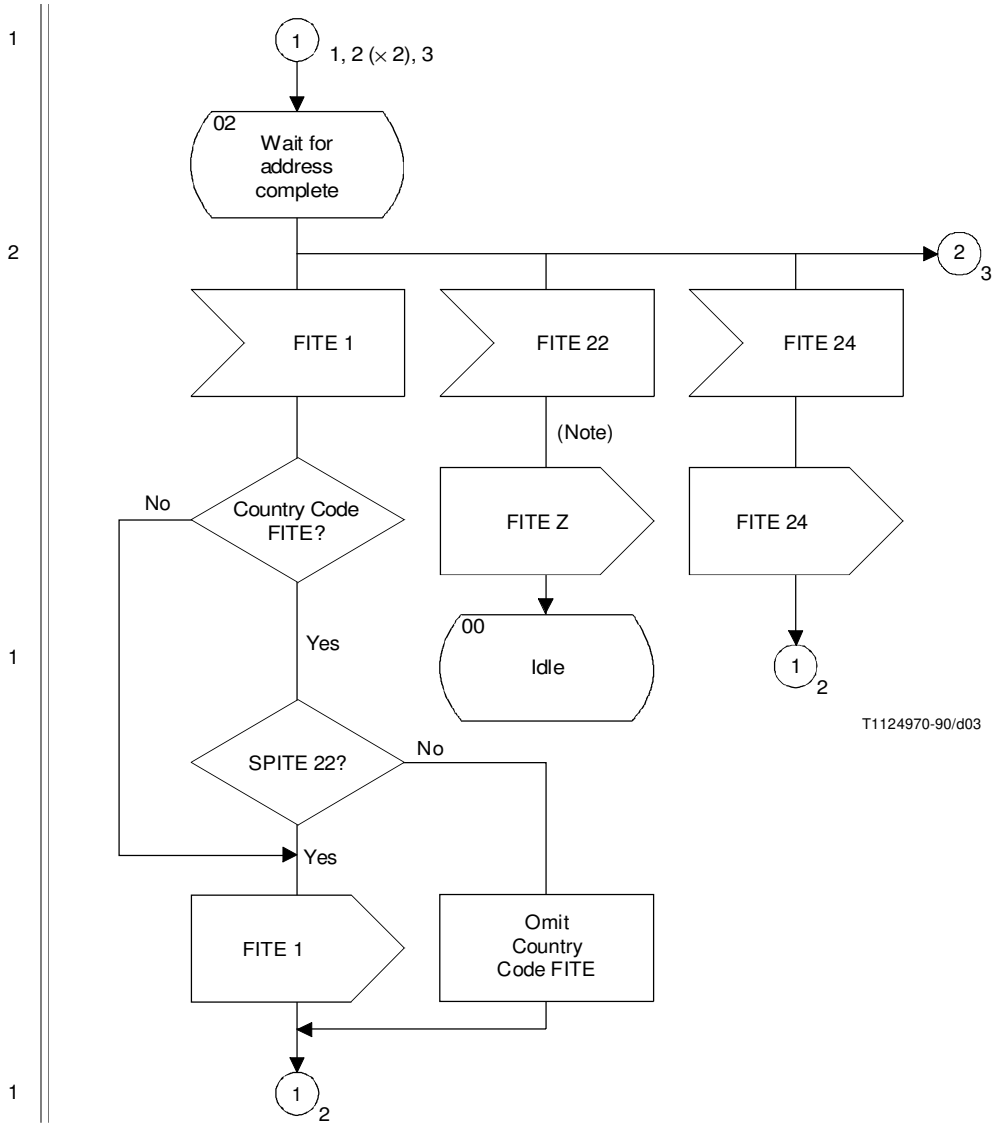


FIGURE 3/Q.656 (sheet 1 of 5)

Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)



NOTE – In principle, FITE 22 should result in cause 16. However, in cases where FITE 22 results from a timeout expiry, cause 127 should be sent.

FIGURE 3/Q.656 (sheet 2 of 5)

Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

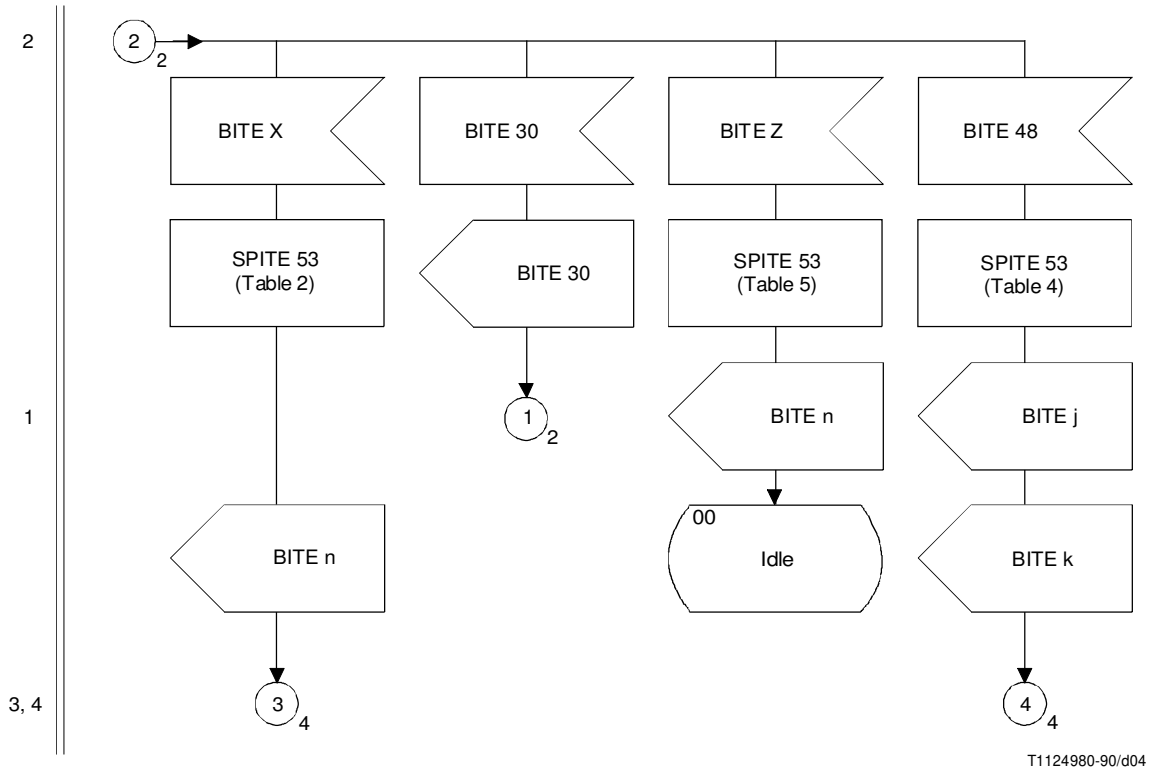


FIGURE 3/Q.656 (sheet 3 of 5)

Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

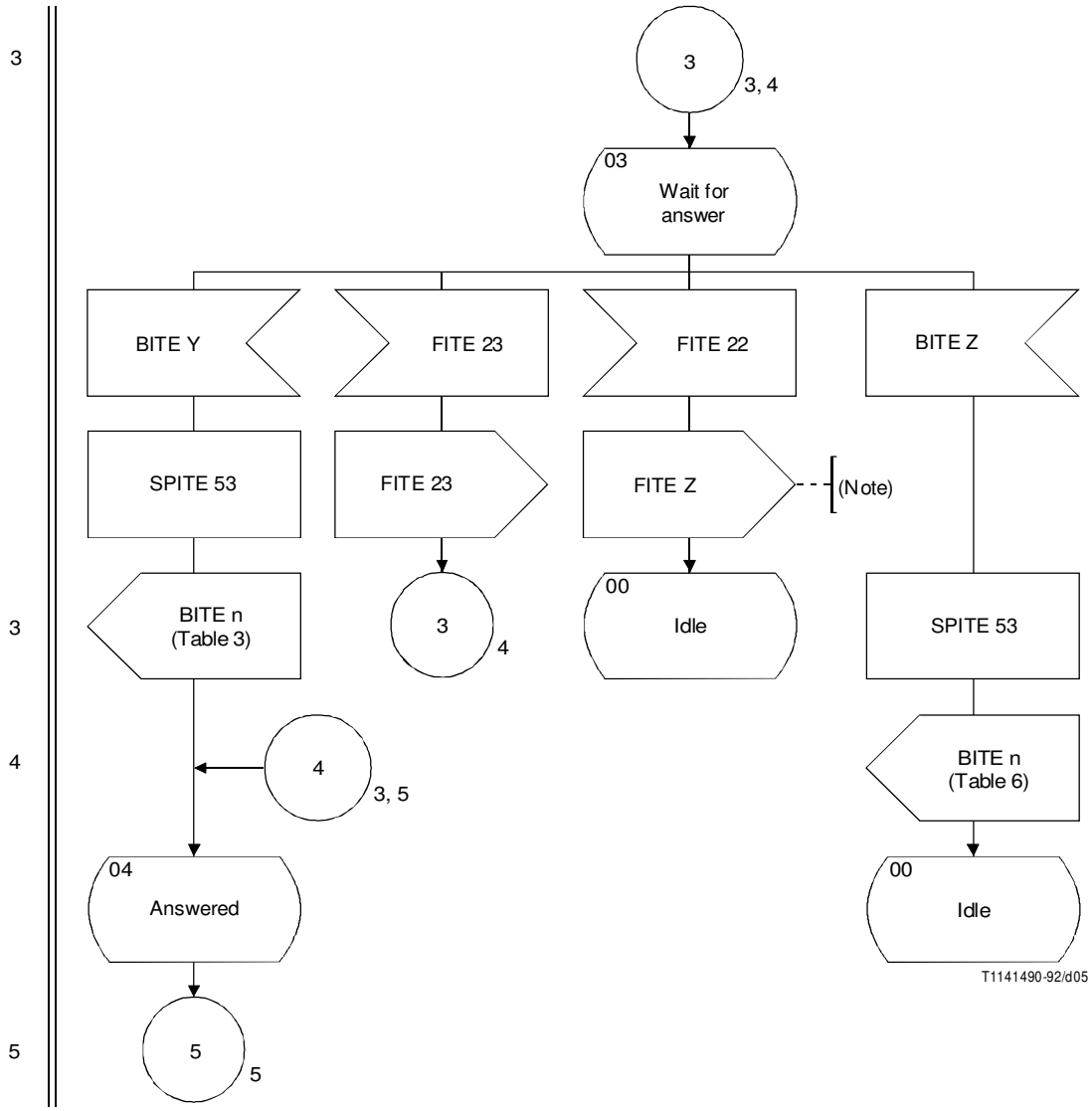


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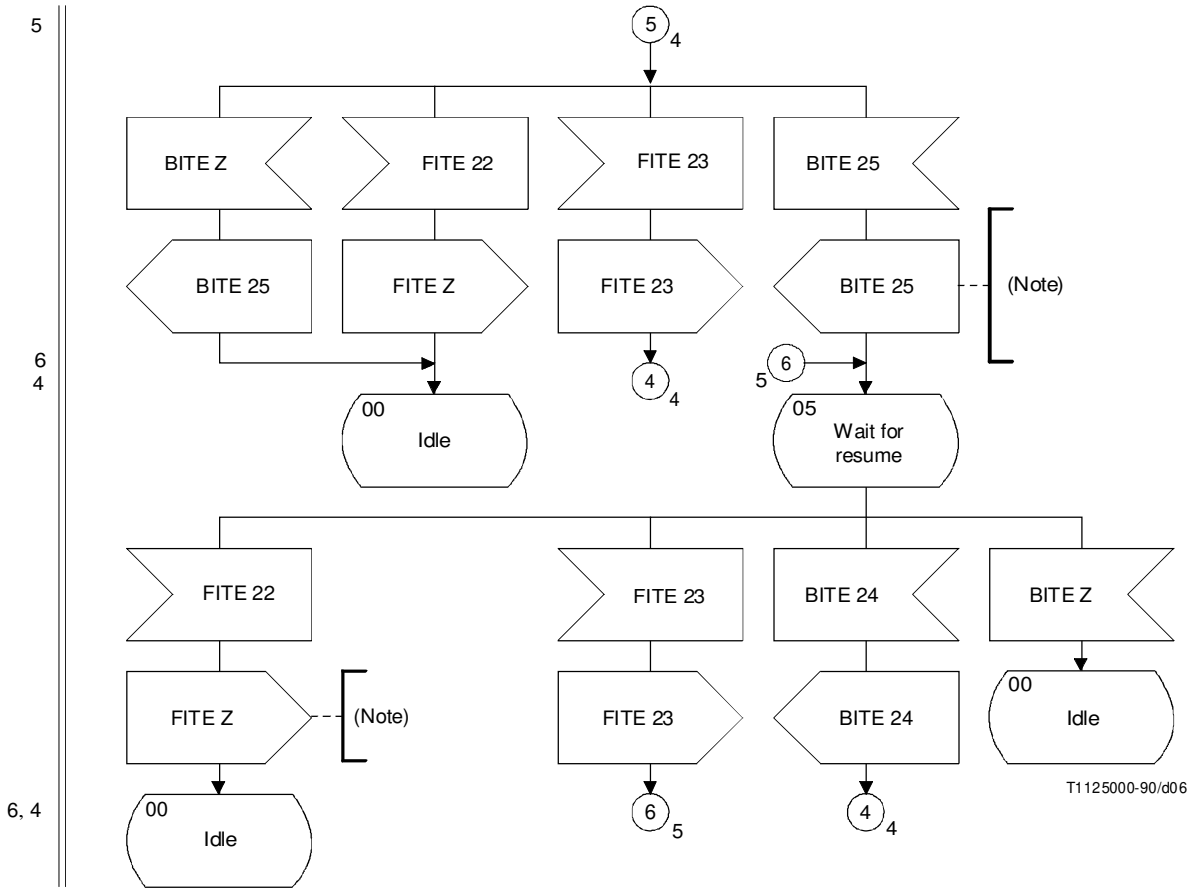
FIGURE 3/Q.656 (sheet 4 of 5)

Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)



NOTE – In principle, FITE 22 should result in cause 16. However, in cases where FITE 22 results from a timeout expiry, cause 127 should be sent.

FIGURE 3/Q.656 (sheet 5 of 5)

Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

TABLE 1/Q.656

FITE A construction – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received FITE	CPC
9	1
10	2
11	3
12	4
13	5
17	10
18	11
19	12

SPITE 36	CCH
Yes	01
No	10

SPITE 22	NAI
Yes	100
No	011

SPITE 20	SI
Yes	01
No	00

SPITE 21	ECI
Yes	1
No	0

TMR = 11

CPC Calling party's category
CCH Continuity check indicator
NAI Nature of address indicator
SI Satellite indicator
ECI Echo control indicator
TMR Transmission medium requirement

TABLE 2/Q.656

BITE X analysis – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received BITE X			BITE n to be sent
CH	ST	CAT	
00	00	00	BITE 2 + BITE 27
00	00	01	BITE 2 + BITE 27
00	00	10	BITE 4
00	01	00	BITE 5
00	01	01	BITE 5
00	01	10	BITE 7
01	00	00	BITE 3
01	00	01	BITE 3
01	00	10	BITE 4
01	01	00	BITE 6
01	01	01	BITE 6
01	01	10	BITE 7
10	00	00	BITE 2 + BITE 27
10	00	01	BITE 2 + BITE 27
10	00	10	BITE 4
10	01	00	BITE 5
10	01	01	BITE 5
10	01	10	BITE 7

CH Charge indicator
ST Called party's status indicator
CAT Called party's category indicator

TABLE 3/Q.656

BITE Y analysis – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received BITE Y CH	BITE n to be sent
–	BITE 22
00	BITE 22
01	BITE 23
10	BITE 22

NOTE – With this proposal, BITE 22 (answer, charge) may be sent for a call where an address complete no charge message was previously sent. It is assumed that it does result in charging the call.

TABLE 4/Q.656

CONNECT analysis – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received CONNECT fields			BITE J	BITE K
CH	ST	CAT		
00	00	00	BITE 2 + BITE 27	BITE 22
00	00	01	BITE 2 + BITE 27	BITE 22
00	00	10	BITE 4	BITE 22
00	01	00	BITE 5	BITE 22
00	01	01	BITE 5	BITE 22
00	01	10	BITE 7	BITE 22
01	00	00	BITE 3	BITE 23
01	00	01	BITE 3	BITE 23
01	00	10	BITE 4	BITE 23
01	01	00	BITE 6	BITE 23
01	01	01	BITE 6	BITE 23
01	01	10	BITE 7	BITE 23
10	00	00	BITE 2 + BITE 27	BITE 22
10	00	01	BITE 2 + BITE 27	BITE 22
10	00	10	BITE 4	BITE 22
10	01	00	BITE 5	BITE 22
10	01	01	BITE 5	BITE 22
10	01	10	BITE 7	BITE 22

NOTE – In this proposal, an answer, no charge BITE is generated when a no charge information is carried through the connect message.

TABLE 5/Q.656

Received RELEASE analysis before ACM – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received BITE Z Cause	Sent BITE n
42	9
34	10
28	14
1	15
17	16
27	17
31	19
4	20
Other	19

TABLE 6/Q.656

Received RELEASE analysis, after ACM and before ANM – Interworking of Signalling System No. 6 to Signalling System No. 7 (ISUP)

Received BITE Z Cause	Sent BITE n	
Any	19	if ST = subscriber free
34	10	if ST ≠ subscriber free
31	19	
Other	19	