INTERNATIONAL TELECOMMUNICATION UNION

ITU-T U.8

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

TELEGRAPH SWITCHING

GENERAL

HYPOTHETICAL REFERENCE CONNECTIONS FOR TELEX AND GENTEX NETWORKS

ITU-T Recommendation U.8

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation U.8 was published in Fascicle VII.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.

Recommendation U.8

HYPOTHETICAL REFERENCE CONNECTIONS FOR TELEX AND GENTEX NETWORKS

(Malaga-Torremolinos, 1984)

The CCITT,

considering

(a) the operational provisions for the telex service and the gentex network indicated in Recommendations F.60 and F.20;

(b) the overall subscriber-to-subscriber performance objectives;

(c) the technical provisions in Recommendations R.57 and R.58 concerning standard limits of transmission quality;

(d) the need to standardize the signalling functions in international/intercontinental transit exchanges;

(e) the telex signalling specified in Recommendations U.1 (types A and B), U.11 (type C) and U.12 (type D);

(f) the level differences existing among the type A, B, C and D signalling functions,

unanimously recommends

the use of the hypothetical reference connections contained in this Recommendation.

1 General

1.1 The hypothetical reference connections set down in the present Recommendation (see Figure 1/U.8) are intended for assessing the overall subscriber-to-subscriber performance, for determining answerback return delay, signal transfer delay and other characteristics and setting-up delays related to the hypothetical reference circuit.

1.2 The hypothetical reference connections concerning signalling aspects set down in the present Recommendation(see Figure 2/U.8 and Tables 1/U.8 to 3/U.8) are intended for specifying the transit environment where the signalling functions should be considered.

2 Signalling levels

2.1 There will be two levels of signalling:

a) low level (type A or B);

b) high level (type C or D). High level in this case indicates the ability of the signalling system to signal additional customer facilities and/or additional network facilities, such as alternative routing.

2.2 Only high level signalling will be used in a transit connection where alternative routing is possible because of the need to indicate changes of routing for accounting purposes.

2.3 Routing may be on the basis of all high level, all low level or one transition from low to high and then back from high to low if required.

2.4 To restrict the call set-up delay to a reasonable period,

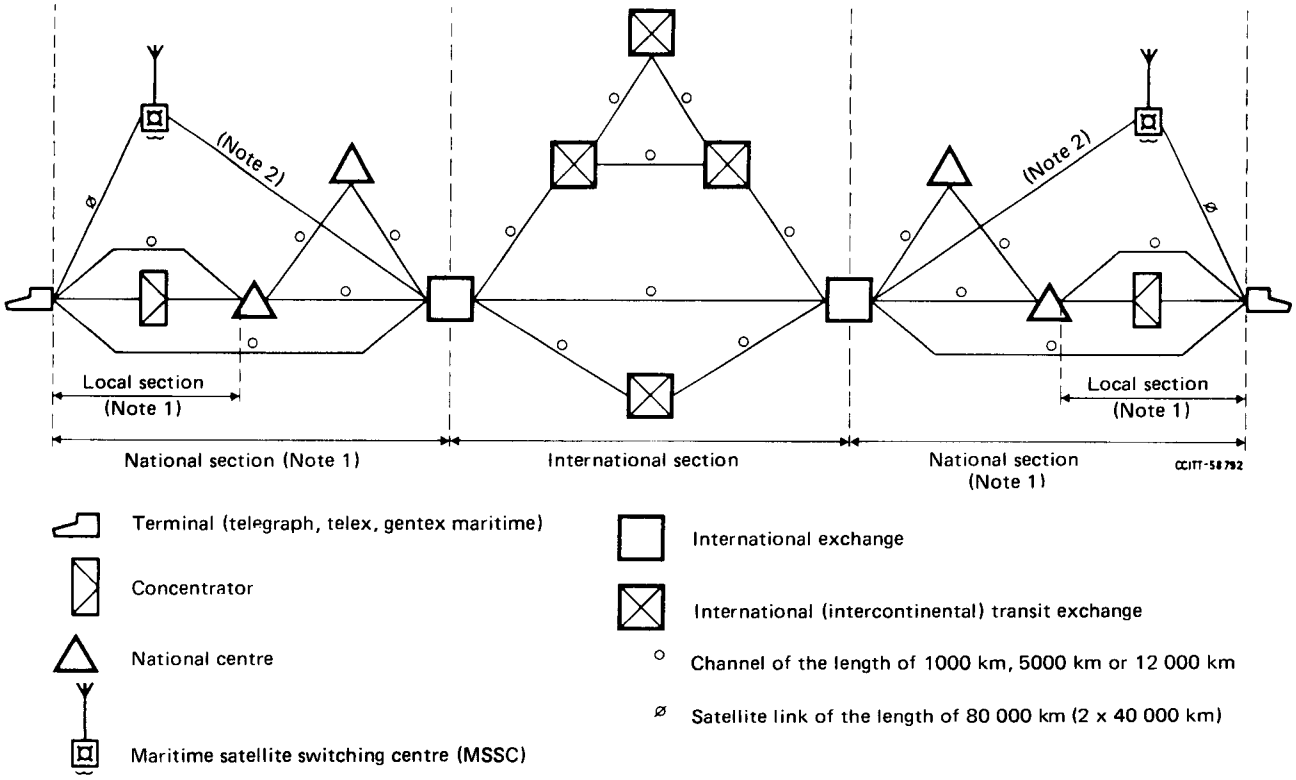
a) low level signalling types, because of their slower compelled nature, will not be used for transit switching on routes with long propagation delays, e.g., satellite links;

b) dial selection will not be used for transit switching.

2.5 Only Recommendation F.69 codes will be used for routing purposes in transit switching,

2.6 It is noted that as an interim solution, transit traffic is at present being switched on a fixed routing basis using only low level signalling.

2.7 Connections using ARQ radio circuits and signalling according to Recommendation U.20 have been excluded.



Note 1 – The terms *local section* and *national section* do not apply in the Maritime Satellite Service.

Note 2 – The use of satellite links between the MSSC and the international exchange is not recommended.

FIGURE 1/U.8

Hypothetical reference connection for telegraph, telex and gentex networks

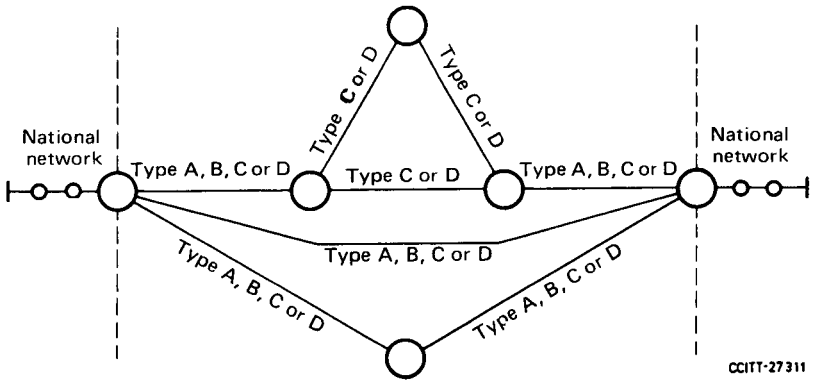


FIGURE 2/U.8

Hypothetical reference connections concerning signalling aspects

TABLE 1/U.8

Signalling combinations for two transit links

Combination No.	Link		Excluded
	1	2	
0 1 2 3	A	A B C D	
4 5 6 7	B	A B C D	
8 9 10 11	C	A B C D	
12 13 14 15	D	A B C D	

TABLE 2/U.8

Signalling combinations for three transit links

Combination No.	Link			Excluded	Combination No.	Link			Excluded
	1	2	3			1	2	3	
0 1 2 3	A	C	A B C D		16 17 18 19	C	C	A B C D	
4 5 6 7		D	A B C D		20 21 22 23		D	A B C D	
8 9 10 11	B	C	A B C D		24 25 26 27	D	C	A B C D	X
12 13 14 15		D	A B C D		28 29 30 31		D	A B C D	

TABLE 3/U.8

Signalling combinations for four transit links

Combination No.	Link 1	Link 2	Link 3	Link 4	Excluded
0	A	C	C	A	
1				B	
2				C	
3				D	
4			D	A	
5				B	
6				C	
7				D	
8		D	C	A	
9				B	
10				C	
11				D	X
12			D	A	
13				B	
14				C	
15				D	
16	B	C	C	A	
17				B	
18				C	
19				D	
20			D	A	
21				B	
22				C	
23				D	
24		D	C	A	
25				B	
26				C	
27				D	X
28			D	A	
29				B	
30				C	
31				D	
32	C	C	C	A	
33				B	
34				C	
35				D	
36			D	A	
37				B	
38				C	
39				D	
40		D	C	A	
41				B	
42				C	
43				D	X
44			D	A	
45				B	
46				C	
47				D	
48	D	C	C	A	
49				B	
50				C	
51				D	X
52			D	A	X
53				B	X
54				C	X
55				D	X
56		D	C	A	
57				B	
58				C	
59				D	X
60			D	A	
61				B	
62				C	
63				D	