INTERNATIONAL TELECOMMUNICATION UNION

ITU-T Q.14

TELECOMMUNICATION
STANDARDIZATION SECTOR
OF ITU

GENERAL RECOMMENDATIONS ON TELEPHONE SWITCHING AND SIGNALLING

INTERNATIONAL AUTOMATIC AND SEMI-AUTOMATIC WORKING

MEANS TO CONTROL THE NUMBER OF SATELLITE LINKS IN AN INTERNATIONAL TELEPHONE CONNECTION

ITU-T Recommendation Q.14

(Extract from the *Blue Book*)

NOTES

1 ITU-T Recommendation Q.14 was published in Fascicle VI.1 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.14

MEANS TO CONTROL THE NUMBER OF SATELLITE LINKS IN AN INTERNATIONAL TELEPHONE CONNECTION

Recommendation Q.41 states that connections with a mean one-way propagation time in excess of 400 ms should be avoided apart from exceptional circumstances. Means should therefore be provided in international switching centres to prevent the multiple connection of satellite links whenever possible.

The following principles should apply in controlling such connections:

a) If an exchange can determine the prior connection of a satellite link in a connection by:

- information relating to the incoming circuit,
- receipt of the Nature of Circuit Indicator: "satellite included",

the exchange should forward the call on a terrestrial circuit. A satellite circuit may be used in the following exceptional circumstances:

- where no terrestrial circuits are provided to the required destination,
- where only a few terrestrial circuits are provided on a final route and the loss of quality of service of a double satellite connection (echo problems and "double-talk") is preferable to the degradation of grade of service that would be caused by the exclusion of the satellite circuits.

A Nature of Circuit Indicator "satellite included" should be forwarded on the outgoing circuit where possible.

b) If an exchange can determine by an analysis of the call destination that a satellite link will definitely or most probably be included at a later point in the call connection, it should give priority to terrestrial links in its outgoing circuit selection. Special attention is drawn to the analysis of country code 87S which may indicate that the call will include a maritime satellite link. (For the use of the S digit, see Recommendations E.210 [1] and E.211 [2].).

The above principles apply to all international exchanges and to all national exchanges which may connect to circuits via domestic satellite systems.

References

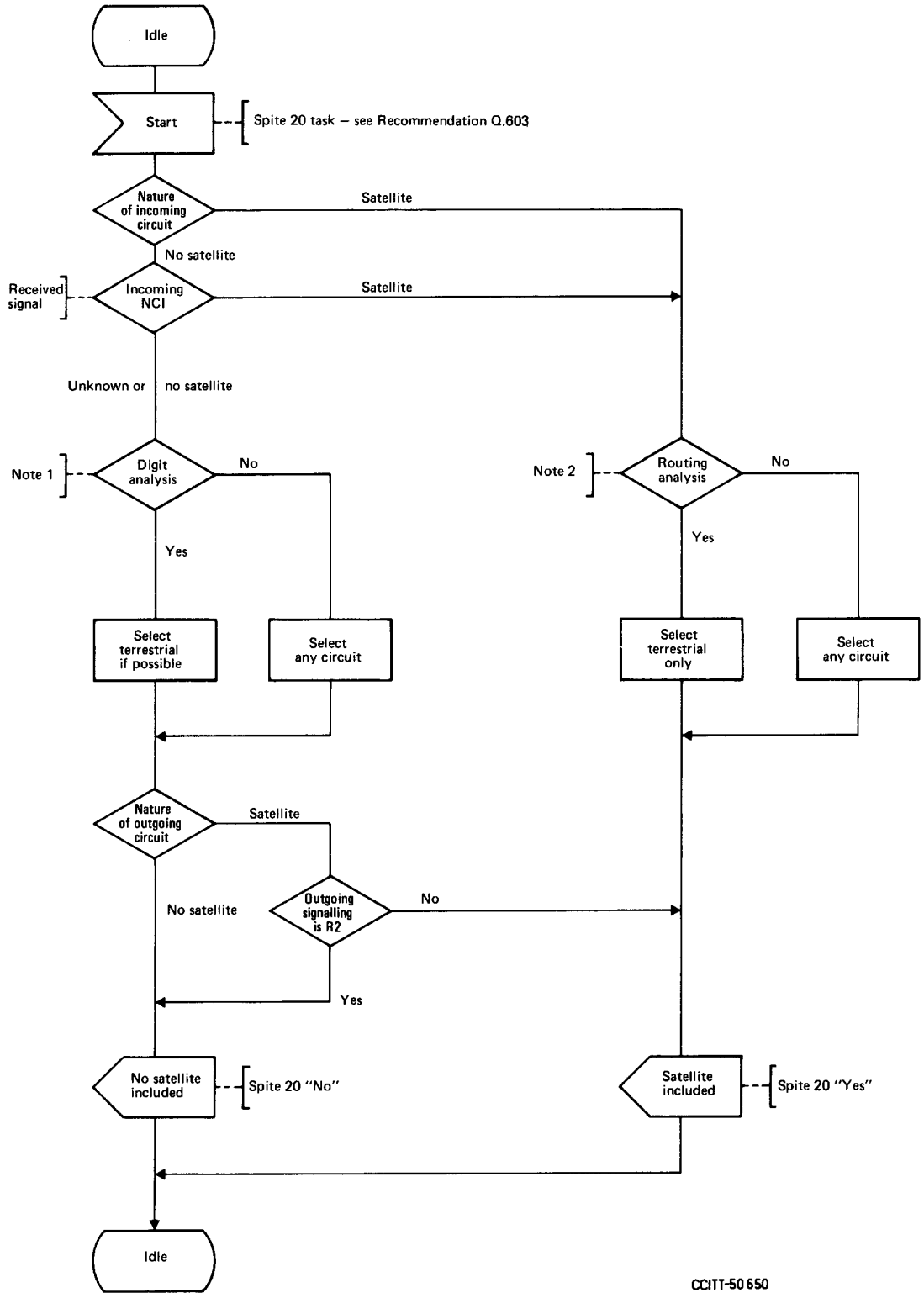
[1] CCITT Recommendation *Ship station identification for VHF/UHF and maritime mobile-satellite services*, Vol. II, Rec. E.210.

[2] CCITT Recommendation *Selection procedures for VHF/UHF maritime mobile services*, Vol. II, Rec. E.211.

ANNEX A

(to Recommendation Q.14)

Call processing logic – Nature of circuit indications



Note 1 – Digit analysis indicates that satellite link will, or may be included at later point.

Note 2 – Are terrestrial circuit groups provided? The answer "no" should be given if the size of the terrestrial circuit group is very small in comparison with the satellite group(s). This can be achieved by giving the terrestrial circuit group the path of entry indication "satellite" for outgoing calls.