[1]CCITT Recommendation wLogic procedures for incoming Signalling System No. 5,w Vol. VI. Rec. Q.612.

[2]CCITT Recommendation wAnalysis of digital information for routing,w Vol. VI, Rec. Q.155, § 3.4.5.

[3]CCITT Recommendation wEnd-of-pulsing conditions - Register arrangements concerning ST (end–of–pulsing) signal,w Vol. VI, Rec. Q.152, § 3.2.1, b), (2).

[4]CCITT Recommendation wLogic procedure for outgoing Signalling System No. 5,w Vol. VI, Rec. Q.622.

) For definition, see Recommendation Q.1101.

FIGURE B-3/Q.1103 (sheet 2 of 2)

Interworking of the INMARSAT Standard A signalling system to Signalling system No. 5

FIGURE B-3/Q.1103 (sheet 1 of 2)

Interworking of the INMARSAT Standard A signalling system to Signalling system No. 5

Notes to interworking of the INMARSAT Standard A signalling system to Signalling System No. 5

(to Recommendation Q.1103)

Logic procedures for interworking of the INMARSAT Standard A signalling system to the Signalling System No. 5

FIGURE B-1/Q.1103

State overview diagram for interworking of the INMARSAT Standard A signalling system to Signalling System No. 5

FIGURE B-2/Q.1103

FIGURE A-3/Q.1103

Interworking of Signalling System No. 5 to the INMARSAT Standard A signalling system

FIGURE A-1/Q.1103

State overview diagram for interworking of Signalling System No. 5 to the INMARSAT Standard A signalling system

FIGURE A-2/Q.1103

(Reserved for future notes)

a) KP1 if the call is terminated in the MSSC country (in this case the country code is suppressed) or in another country having direct connection to the MSSC;

b) KP2 if the call is transit connected to another country.

3.3The discriminating digit should be inserted according to [2].
3.4The ST signal should be sent according to [3].

3.5The congestion tone should be sent to the ship earth station when the busy-flash signal is received.

3.6Time-out supervision of the answer signal at the MSSC should comply with the provisions of Recommendation Q.118, § 4.3.1.

3.7If the MSSC receives a clear-back signal from the terrestrial network, the time-out ofRecommendation Q.118, § 4.3.2 shall be started. The satellite and terrestrial links will be cleared either by the ship earth station or by expiry of the 1-2 minutes time-out.

3.8When the MSSC detects a release condition on the satellite link, the terrestrial connection should be cleared forward as soon as possible.

3.9For the SDL description of outgoing System No. 5, see Recommendation Q.622 [4].

3.10The SDL description of interworking between incoming INMARSAT Standard A signalling system and outgoing System No. 5 is given in Annex B.

3.11For the SDL description of incoming INMARSAT signalling system, see Annex B to Recommendation Q.1101.

ANNEX A

(to Recommendation Q.1103)

Logic procedures for interworking of Signalling System No. 5 to the INMARSAT Standard A signalling system

2.3The answer signal should be sent in the backward direction as soon as the answer signal over the satellite link has been detected.

2.4The busy-flash signal should be sent if the call cannot be completed for any of the following reasons:

a) congestion at the MSSC or in the maritime satellite system;

b) the satellite channel has not been assigned within 20 seconds of the receipt of the ST signal;

c) the NCS/MSSC is out of service.

2.5If the called ship earth station is busy, then the MSSC may either return the busy tone or the busy-flash signal.

2.6The special information tone should be sent if the call cannot be completed for any of the following reasons:

a) the ship earth station does not respond to the call;
b) the called ship earth station is excluded from participating in the service;
c) the received number does not belong to any ship earth station;
d) the received number is an unauthorized group call;
e) the called ship earth station is faulty;
f) continuity of the satellite link is not established.

2.7When a clear-back signal is detected on the satellite link, this signal shall result in sending of the clear-back signal on the terrestrial connection. The satellite link should be released so that the provisions of Recommendation Q.118 do not apply for this part of the connection.

2.8When the MSSC detects the clear-forward from the terrestrial network, the terrestrial and satellite links will clear down according to their respective specification. If, however, switching at the MSSC is achieved by direct frequency selection, then it will be necessary to delay the release guard on the terrestrial link until the satellite link is idle.

2.9For the SDL description of incoming System No. 5, see Recommendation Q.612 [1].

2.10The SDL description of interworking between incoming System No. 5 and outgoing INMARSAT signalling system is given in annex A.

2.11For the SDL description of outgoing INMARSAT signalling system, see Annex C to Recommendation Q.1101.

3Calls from the maritime satellite system to Signalling System No. 5 (see figure 2/Q.1103)

FIGURE 2/Q.1103

3.1The terrestrial circuit should not be seized before a satellite channel has been allocated, the continuity of the channel has been verified, and all digits have been received.

INTERWORKING BETWEEN SIGNALLING SYSTEM No. 5 AND INMARSAT STANDARD A SYSTEM

1Introduction

It is necessary to specify the interworking of Signalling System No. 5 and the signalling system used in the INMARSAT Standard A system. This is because:

a) it may be desirable that a Maritime Satellite Switching Centre (MSSC) 1) be connected to an international switching centre (ISC) by employing System No. 5 on circuits between the MSSC and the ISC;

b) the signalling systems used in the Maritime Mobile-Satellite Service will be different from System No. 5. Therefore it would be necessary to establish rules by which signalling events in one system may be related to corresponding events in the other system.

It is desirable that the interworking be such that the full capability of both System No. 5 and the maritime satellite signalling system can be utilized.

This Recommendation considers only automatic interworking between the MSSC and an ISC utilizing System No. 5.

For description of the INMARSAT Standard A signalling system, see Annex A to Recommendation Q.1101.

2Calls from Signalling System No. 5 to the maritime system (see figure 1/Q.1103)

FIGURE 1/Q.1103

2.1The ISC sends the seizing signal followed by either of the following sequences of address signals:

2.1.1Signal KP1 followed by the discriminating (or language) digit and the number of the wanted ship earth station when the country code 87S is not required for routing in the MSSC.

2.1.2Signal KP2 followed by 87S, discriminating (or language) digit and the number of the wanted ship earth station when the country code is required for routing in the MSSC.

2.2The MSSC register should ignore further digits when either:

a) the ST signal has been received by the MSSC, or

b) the busy-flash signal has been sent by the MSSC.