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Telegraph and Mobile Services: Operations and Quality of Service – Maritime mobile and mobile satellite service

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OPERATIONAL PROCEDURES FOR INTERWORKING BETWEEN THE TELEX SERVICE AND THE SERVICE OFFERED BY INMARSAT STANDARD-C SYSTEM

Reedition of CCITT Recommendation F.127 published in the Blue Book, Fascicle II.4 (1988)

NOTES

1 CCITT Recommendation F.127 was published in Fascicle II.4 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 F.127

OPERATIONAL PROCEDURES FOR INTERWORKING BETWEEN THE TELEX SERVICE AND THE SERVICE OFFERED BY INMARSAT STANDARD-C SYSTEM

The CCITT,

considering

(a) that INMARSAT has introduced various maritime services based on their Standard-A, Standard-B and Standard-C systems;

(b) that Recommendation F.120 specifies ship station identification for the Maritime Mobile-Satellite Service;

(c) that Recommendation F.125 specifies the numbering plan for the Maritime Mobile-Satellite Telex Service;

(d) that Recommendation F.126 specifies the selection procedures for Maritime-Satellite Telex Service;

(e) that the provision of interworking with the telex service is a mandatory requirement of the INMARSAT Standard-C system;

unanimously recommends

that operational procedures for interworking between the telex service and the service provided by the INMARSAT Standard-C system should be in accordance with this Recommendation.

1 Definitions

1.1 Ship earth station is defined in Article 1, Section 4.16 of the *Radio Regulations*, ITU, Geneva 1982.

1.2 Coast earth station is defined in Article 1, Section 4.14 of the *Radio Regulations*, ITU, Geneva 1982.

1.3 **maritime-satellite store-and-forward unit (MSSFU)** is the functional interface between the maritime-satellite message transmission system and a public telex network.

2 Scope

2.1 The purpose of this Recommendation is:

a) to standardise procedures for the subscribers to a public telex network calling ship earth stations in the maritime satellite Standard-C system;

b) to standardise procedures for ship earth stations calling subscribers in the public telex network;

c) to standardise procedures for ship-to-ship calls that transit the public telex network.

3 Introduction

3.1 The characteristics of the maritime satellite circuit provided by the INMARSAT Standard-C System are such that only store-to-store operation is supported.

3.2 The present limitation means that the maritime-satellite network provided by the INMARSAT Standard-C system must be viewed as conceptually different from that provided by the INMARSAT Standard-A system. As expressed in Recommendation F.126 for the Standard-A system the terminals on-board ships may be viewed as belonging to the subscribers of a national (telephone, telex or packet) network, because normal international working is supported and is so percieved by the users. However the network provided by Standard-C system cannot be viewed in this way because, in this case, the basic concept is that of interworking between different networks (where the MSSFU functions as an interworking unit).

3.3 A general description of the INMARSAT Standard-C system and the services it may support is given in a Supplement to the F-Series Recommendations.

4 Service outline

4.1 Communication between subscribers of the telex service and a ship-earth station is on a store-and-forward basis. Thus, conversational mode interworking between terminals is not provided.

4.2 In the shore-to-ship direction two modes of operation are considered by this Recommendation. These are designated as one-stage and two-stage selection. Administration/RPOAs may provide either or both modes of operation.

These services may be extended across international borders on a bilateral basis. Where no such bilateral agreement exists the Administration operating the system may clear the call and return the service signal (NA).

4.3 In ship-to-shore direction subscribers to the Maritime-Satellite Service provided by the Standard-C system may send single messages to the subscribers to the public telex network and to the appropriate Applications (from the list shown in Table A-1/F.126). The messages are forwarded by the MSSFU via the public telex network.

4.4 In the ship-to-ship direction calls between different ocean regions may be established via the international telex network and will follow the procedures for ship-to-shore calls.

The procedures for calls between ships within the same ocean region are not a matter for this Recommendation. See the Supplement No. 3 to the F-Series Recommendations.

5 Operational procedures

5.1 *Shore-to-ship calls*

5.1.1 *One-stage selection*

5.1.1.1 A terrestrial subscriber may place a call to the desired ship earth station using normal telex selection procedures with the designated telex destination code and the ship earth station number. Because it is an essential feature of this service that the called address is automatically passed forward by the telex network to the MSSFU, the subscriber achieves access to the unit and addresses the ship by a single stage of selection.

5.1.1.2 A telex subscriber calling a ship earth station will select a numbering sequence as follows:

58S	Telex destination code
4 $M_1I_2D_3X_4 \ldots X_8$	INMARSAT, mobile number

where 4 corresponds to the T-digit and where at least the digits $M_1I_2D_3X_4X_5X_6$ are part of the ship station identity in accordance with Recommendation F.125.

5.1.1.3 On receipt of this address, the MSSFU should check that the required ship is logged into the ocean region and should accept or reject the call accordingly. No call connect should be returned to the originating telex network until this check has been completed. The time period for the return of call connect and the subsequent answerback must be in accordance with the relevant U-Series Recommendations.

If this check fails, the appropriate service signal should be returned to the originator in accordance with Recommendation F.131.

5.1.1.4 The MSSFU shall return the answerback associated with the called ship earth station. The format of this answerback should be in accordance with Recommendation F.74.

5.1.1.5 The answerback associated with the called ship earth station shall always be returned in response to a WRU signal.

5.1.1.6 The answerback of the calling telex subscriber should be determined at the establishment of the call using procedures in accordance with § 9 of Recommendation F.72.

5.1.1.7 Where the calling answerback is not obtained at the beginning of the call, or if obtained but the determination of the calling address is not possible, the call should be cleared.

The call may be accepted where, in the event of non-delivery of a message, alternative arrangements for delivery are provided. The alternative arrangements, for example, may be the provision of a manual operator position.

5.1.1.8 At the completion of text transmission the connection should be cleared in accordance with normal telex procedures.

5.1.1.9 After the complete message has been received, the MSSFU shall attempt to deliver it at the earliest opportunity. However, the message should not be held for longer than 24 hours in accordance with § 3.3 of Recommendation F.72.

5.1.1.10 In the event of non-delivery of the message to the ship earth station, a non-delivery advice should be returned to the originating telex subscriber. The content of the non-delivery advice and procedures for its transmission should be in accordance with §§ 12, 13 and 14 of Recommendation F.72.

5.1.1.11 Telex selection information should be extracted from the calling telex answerback in accordance with Recommendation U.74.

5.1.1.12 The action to be taken when the MSSFU is unable to notify the originator of the non-delivery of their message is for further study.

5.1.2 *Two-stage selection*

5.1.2.1 The subscribers should use normal telex call establishment procedures to access the MSSFU, which is allocated a national number for this purpose.

5.1.2.2 Principles and procedures for access to the MSSFU shall be in accordance with §§ 6 and 7 of Recommendation F.72.

5.1.2.3 The information field content for the address line should be in accordance with § 8 of Recommendation F.72.

5.1.2.4 Enhanced Group Call facilities of the INMARSAT Standard-C system enable authorised users to send a message simultaneously to a number of ship earth stations which have been specially equipped. Where Enhanced Group Call facilities are provided, by the MSSFU, an additional five address attributes will be contained in the address line. These attributes (abbreviated addresses) are known as C-codes and will follow immediately after the end of address delimiter, Combination No. 26, with each C-code being delimited by a Combination No. 3. The address line will be terminated by the End of Address (EOA) signal in accordance with Recommendation F.72.

The general structure of the C-codes is defined in Supplement No. 3 to the F-Series Recommendations.

5.1.2.5 MSSFU access protocols shall be in accordance with Recommendation U.80. However, where the MSSFU acts only as an interface between the maritime message transmission system and a public telex network, only the INMARSAT mobile number need be input in the address field.

5.1.2.6 If the calling address cannot be determined from the calling subscriber's answerback for the purpose of delivering a non-delivery advice, the call should be cleared.

The call may be accepted where, in the event of non-delivery of a message, alternative arrangements for delivery are provided. The alternative arrangements, for example, may be the provision of an operator position.

5.1.3 *Abnormal conditions*

5.1.3.1 The action to be taken when abnormal conditions are encountered during message input shall be in accordance with § 10 of Recommendation F.72 where applicable.

5.2 *Ship-to-shore calls*

5.2.1 Shipboard subscribers to the Maritime-Satellite Service provided by the Standard-C system may send messages to the subscribers to public telex networks.

5.2.2 The messages are forwarded by the MSSFU to the addressed telex subscriber via the public telex network.

5.2.3 Upon delivery of the message to the telex destination, a delivery notification should be sent to the ship. In the event of non-delivery of the message to the telex destination, the action to be taken is not the subject for international standardisation.

5.2.4 The procedures for call establishment and delivery to the telex destination should be in accordance with §§ 12, 13 and 14 of Recommendation F.72.

5.3 *Ship-to-ship calls*

5.3.1 A shipboard subscriber to the Maritime-Satellite Service provided by the Standard-C system may send a message to a subscriber aboard another ship.

5.3.2 Where the call is to a ship in a different ocean region and the call transits the public telex network, the call procedures shall be in accordance with the ship-to-shore procedures set out in § 5.2 above.

In cases where the call is to a Standard-C ship earth station in the destination ocean region and the destination MSSFU does not support one-stage selection, the procedures to be used are for further study.

5.3.3 The procedures for calls between shipboard subscribers in the same ocean region are not a subject for this Recommendation. See Supplement No. 3 to the F-Series Recommendations.

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