

GUIDANCE TO PROSPECTIVE GMDSS SATELLITE SERVICE PROVIDERS

Submitted by IHB

SUMMARY

Executive Summary: This document provides details of the criteria for the provision of mobile satellite communication systems in the GMDSS.

Action to be taken: Paragraph 2.

Related documents: IMO Resolution A.1001(25)

1. See attached document.
2. The Sub-Committee is invited to note the information provided and take action as appropriate.

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MSC.1/Circ.1414
25 May 2012

GUIDANCE TO PROSPECTIVE GMDSS SATELLITE SERVICE PROVIDERS

1 The Maritime Safety Committee, at its ninetieth session (16 to 25 May 2012), approved the attached Guidance to prospective GMDSS satellite service providers, prepared by the Sub-Committee on Radiocommunications and Search and Rescue, at its sixteenth session.

2 The purpose of this circular is to provide guidance with respect to the provisions of resolution A.1001(25) on *Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS)*.

3 Member Governments are invited to bring this Guidance to the attention of all parties concerned.

ANNEX

GUIDANCE TO PROSPECTIVE GMDSS SATELLITE SERVICE PROVIDERS

INTRODUCTION

1 Assembly resolution A.1001(25) provides the adopted *Criteria for the provision of mobile satellite communication systems in the Global Maritime Distress and Safety System (GMDSS)* and requests the Maritime Safety Committee to:

- (a) apply the criteria set out in the annex to the present resolution, through the procedure set out in section 2 of the annex, to evaluate satellite systems notified by Governments for possible recognition for use in the GMDSS, within the context of the relevant regulations of SOLAS chapter IV; and
- (b) ensure that mobile satellite communication systems recognized by the Organization for use in the GMDSS are compatible with all appropriate SOLAS requirements, and also that such recognition takes into account existing operational procedures and equipment performance standards.

2 The Maritime Safety Committee, at its eighty-eighth session agreed on the need to further study the implementation of the concept of regional satellite systems in the GMDSS and instructed the COMSAR Sub-Committee to consider the matter under its agenda item "Scoping exercise to establish the need for a review of the elements and procedures of the GMDSS". As a result, the COMSAR Sub-Committee developed this Guidance to prospective GMDSS satellite service providers with respect to the provisions of resolution A.1001(25).

BACKGROUND

3 Section 2 of Assembly resolution A.1001(25) provides information and guidance on the recognition for mobile satellite communications systems for use in the GMDSS. It includes some key provisions, as follows:

- .1 the evaluation and recognition of satellite systems participating, or wishing to participate in the GMDSS are undertaken by the Organization;
- .2 satellite system providers wishing to participate in the GMDSS should apply to the Organization, through a Member State;
- .3 such applications should be notified to the Organization by Governments;
- .4 the application will be reviewed by the Maritime Safety Committee (the Committee);
- .5 if the Committee decides that there are no objections in principle to the application, it will forward the application to the COMSAR Sub-Committee for evaluation;
- .6 recognition of the satellite provider to operate in the GMDSS will be undertaken by the Committee on the basis of the evaluation report;
- .7 the Governments concerned should make available to the Organization all necessary information to enable it to evaluate the satellite system in relation to the criteria;

- .8 Governments proposing such satellite systems for possible recognition and use in the GMDSS should provide evidence to show that:
 - .1 the satellite system conforms with all the criteria specified in resolution A.1001(25);
 - .2 the charging policies and provisions of resolution A.707(17), as amended, on *Charges for distress, urgency and safety messages through the Inmarsat system*, are complied with;
 - .3 there is a well-founded confidence that the company concerned will remain viable for the foreseeable future, that the company has a well-organized quality and risk management programme, and that the company will remain in a position to deliver the required services over an extended period; and
 - .4 the provider of the satellite system is ready to submit any recognized services to oversight by IMSO and sign the required Public Services Agreement (PSA) with that organization; and
 - .9 the COMSAR Sub-Committee should verify and evaluate the information, seeking clarification as required direct from the service provider concerned, and decide whether the satellite system meets the criteria established by resolution A.1001(25).
- 4 The main questions which arise on these provisions of resolution A.1001(25) which require additional guidance are:
- .1 what constitutes: "... all necessary information ...";
 - .2 must a satellite system offer full global coverage in order to be considered for participation in the GMDSS;
 - .3 should the proposing Government(s) accept responsibility for the accuracy and completeness of the information provided;
 - .4 on what basis can the proposing Government(s) and the Organization establish "... a well-founded confidence that the company concerned will remain viable for the foreseeable future ...";
 - .5 how does the COMSAR Sub-Committee undertake its evaluation and produce an evaluation report; and
 - .6 how can the evaluation and recognition process be accomplished within a timescale that coincides with the commercial realities of successful and proper company administration and management?

Guidance in response to these questions is provided in the following paragraphs:

WHAT CONSTITUTES: "... ALL NECESSARY INFORMATION ..."?

5 The information and evidence that will be necessary for a full and comprehensive evaluation of any submission to be carried out is very wide-ranging and quite detailed. Experience of designing, implementing and operating the present satellite-based elements of the GMDSS, and evaluating their initial and continuing operational and other capabilities, has shown that it will not be sufficient, for example, to accept a plain statement such as: "the system can deliver a distress alert to an RCC within 60 seconds of it being originated". In such a case, in order to provide an assurance to the Committee that the candidate system will meet this target reliably on a high percentage of occasions, the evaluation would need to take into account such diverse factors as:

- .1 spectrum: frequency band; type of allocation; reliability of signalling in this band, etc.;
- .2 constellation: number and arrangement of satellites; link budget; number of on-orbit spares required and provided; inter-satellite hand-offs, etc.;
- .3 ground segment: number and geographical disposition of ground stations, satellite and communication network control arrangements; contingency arrangements in the event of satellite or network failures; availability; time of contingency service restoration; communication links to RCCs; distress alert distribution arrangements; message prioritization; personnel availability, shift patterns, training, etc.;
- .4 mobile terminals: design, manufacture and market availability; test procedures and type approval, IEC compliance; capabilities; signalling modes and protocols; ship installation guidelines and arrangements, etc.;
- .5 live end-to-end system and contingency tests; and
- .6 availability, performance and arrangement comparable to existing GMDSS satellite services, including Maritime Safety Information.

This list is not fully comprehensive. However, it serves to illustrate the complexity of the consideration when evaluating submissions from potential additional satellite system providers for participation in the GMDSS under the requirements of resolution A.1001(25).

MUST A SATELLITE SYSTEM OFFER FULL GLOBAL COVERAGE IN ORDER TO BE CONSIDERED FOR PARTICIPATION IN THE GMDSS?

6 According to section 1.3 of resolution A.1001(25), the Coverage Area of the satellite system is the geographical area within which the satellite system provides an availability in accordance with the criteria stated in section 3.5 in the ship-to-shore and shore-to-ship directions, and within which continuous alerting is available. Section 3.5, dealing with availability, states among others that the satellite system should provide continuous availability for maritime distress and safety communications in the ship-to-shore and shore-to-ship directions.

If the system(s) which a ship is licensed to use does not offer full global coverage, Administrations will need to devise a means of matching the ship's distress and safety radio capabilities with the regions of the world in which she is permitted to operate.

In this context, it is important to note that satellite systems forming part of the GMDSS should provide capabilities for all the nine maritime distress and safety communications functions specified by chapter IV, regulation 4.

SHOULD THE PROPOSING GOVERNMENT(S) ACCEPT RESPONSIBILITY FOR THE ACCURACY AND COMPLETENESS OF THE INFORMATION PROVIDED?

7 Individual proposing Member States are unlikely to be able to endorse technical, operational and financial statements made by a potential satellite system provider for the GMDSS, as required by paragraph 2.2.2 of the annex to resolution A.1001(25), to the breadth and depth necessary for the Committee to reach an informed decision on an application.

8 With this in mind, the COMSAR Sub-Committee should be provided with an in-depth Technical and Operational Assessment report, on which to base its evaluation and any recommendation to the Committee.

9 The universal credibility of the Technical and Operational Assessment will require that any applicant satellite communications system operator provides hard, incontrovertible evidence, including suitable metrics wherever appropriate, in support of its application. Although the sufficiency and accuracy of the evidence provided should be assured by the submitting Member State(s) before any such application is forwarded for consideration by the Committee, it is likely that both the Company and Member State representatives will need to discuss the evidence and liaise with those conducting the Assessment before the evidential submission is completed.

ON WHAT BASIS CAN THE PROPOSING GOVERNMENT(S) AND THE ORGANIZATION ESTABLISH "... A WELL-FOUNDED CONFIDENCE THAT THE COMPANY CONCERNED WILL REMAIN VIABLE FOR THE FORESEEABLE FUTURE ..."?

10 The evaluation of a potential applicant company in relation to the requirement that "there is a well-founded confidence that the company concerned will remain viable for the foreseeable future and will remain in a position to deliver the required services over an extended period" poses particular difficulties. Financial regulations and laws in many countries prevent companies from making the kind of forward-looking statements that could assist the Committee in this regard, and any publicly owned company is entirely subject to the vagaries of the stock markets. Therefore, it is recommended that the proposing government(s) should be the only entity(ies) that should make a statement to the Committee in relation to this requirement, and such a statement might probably only be phrased in terms of the requirement itself. For instance, it could be stated that the provider has been providing services for [...] years, is a going concern, and that there is no reason to believe that the provider would not be able to continue to do so.

HOW DOES THE COMSAR SUB-COMMITTEE UNDERTAKE ITS EVALUATION AND PRODUCE AN EVALUATION REPORT?

11 Given the complexity of the Technical and Operational Assessment, the technical and operational experience required, the probable need for a dialogue between the assessors and the company concerned, and the time required to achieve a sufficient understanding of all the factors affecting the probable performance of an applicant satellite system, the Technical and Operational Assessment report used to inform COMSAR's evaluation could be produced by an independent body which can report directly to the COMSAR Sub-Committee. IMSO would need to undertake that work in any case, in order for it to acquire the system-specific knowledge necessary for it to be able to oversee the performance of any successful applicant satellite system, once it is approved for participation in the GMDSS. It is, therefore, expected that the Committee would request IMSO to undertake the Technical and Operational Assessment and produce the report.

HOW CAN THE EVALUATION AND RECOGNITION PROCESS BE ACCOMPLISHED WITHIN A TIMESCALE THAT COINCIDES WITH THE COMMERCIAL REALITIES OF SUCCESSFUL AND PROPER COMPANY ADMINISTRATION AND MANAGEMENT?

12 Given that resolution A.1001(25) establishes that the application and decision are matters for the Committee, and evaluation is to be done by the COMSAR Sub-Committee, the procedure cannot be accomplished in less than one year. Some specimen processes are summarized in the following table:

YEAR			Worst Case	Fast Track A	Fast Track B
1	Mar	COMSAR			
	May	MSC	Application		
	Nov	MSC		Application	
2	Mar	COMSAR	Evaluation	Evaluation + Report	
	May	MSC		Decision + MSC resolution	Application
	Nov	ASSEMBLY			
3	Mar	COMSAR	Report		Evaluation + Report
	May	MSC	Decision		Decision + MSC resolution
	Nov	MSC			

The table shows that, in the Worst Case, it could be possible for the review, evaluation and decision procedure to take up to two and a half years, even without any need to revert to the applicant with a request for further detail or explanation. This would be extremely likely to deter potential commercial satellite system operators from applying to become involved in the GMDSS. The Fast Track requires that the COMSAR Sub-Committee undertake the evaluation and complete its report in one session, and that the evaluation report and recommendation are sent to the next session of the Committee for consideration as an Urgent Matter. The Fast Track takes either 12 or six months depending on whether the application is made in an Assembly year or not. It may be concluded that Fast Track A is unlikely to be achieved.