

MARITIME SAFETY INFORMATION
TRANSMISSION TO SHIPS IN THE FUTURE

Submitted by the International Mobile Satellite Organization (IMSO)

SUMMARY

Executive Summary: This document notes a review of the GMDSS to be undertaken by IMO and proposes that WWNWS conducts a review of MSI broadcasting requirements for the future as a contribution to the work in IMO.

Action to be taken: Establish a review process to prepare eventual input to IMO

Related documents: None

1. Background

1.1 The concept of Maritime Safety Information broadcasts to merchant shipping evolved from navigational and meteorological broadcast systems that had been put in place during the first half of the 20th century. During the period of evolution of the GMDSS, in the 1970's, first NAVTEX and latterly SafetyNET were developed to meet the requirement for more efficient and effective broadcast systems.

1.2 At the same time, the World Wide Navigational Warning Service was put in place, with all the necessary guidance documentation to ensure a reasonable degree of standardisation among different services around the world. In a similar time scale, the World Meteorological Organization developed its own services to match those being put in place by the Hydrographic services of the world.

1.3 All of these systems and services have undergone a degree of continuous development and ongoing maintenance since their first inception. However, the resulting operational broadcast services have not gone beyond the technologies that were available during the 1970's. The IMO Maritime Safety Committee has now included in the work programme for the COMSAR Sub Committee a scoping exercise on review of the GMDSS. This provides not just the opportunity, but a clear imperative for the WWNWS and its sister committee in WMO to consider how MSI should be provided to ships in the next generation of maritime communication services.

2. Discussion

2.1 The upcoming review of the GMDSS in IMO invites a complete re-evaluation of all core elements including MSI broadcasting. It is certain that the review process will ask a

number of fundamental questions, and it therefore makes sense for those who are actively involved in MSI production and broadcasting to pre-empt such questions by reviewing the full range of new possibilities so as to be fully prepared. This is especially so in view of the potential impact that decisions within IMO might have on the operations and costs of MSI providers.

2.2 Such questions could include:

- .1 why should specific frequencies be reserved exclusively for MSI broadcasts;
- .2 what can be done to arrange for more “equitable” use of maritime broadcast frequencies, and provide opportunities for sharing those frequencies with other (land) users;
- .3 NAVTEX is an old technology, why should ITU and IMO continue to support it in the face of new, more spectrum efficient communications developments such as email and the internet;
- .4 why should IMO and ITU continue to endorse the broadcast service provided via only one mobile satellite service provider (i.e. SafetyNET), especially when it is relatively inefficient by today’s standards;
- .5 isn’t MSI really an essential part of eNavigation and therefore the proper business of shore marine traffic authorities, rather than Hydrographic and Meteorological offices; and
- .6 why not do away with MSI broadcasting as such, and implement a new system of providing temporary navigational chart corrections via AIS?

2.3 These questions, and many others like them, are already being asked by administrators, academics and the marine electronics industry. It is therefore incumbent on the WNWNS to undertake its own comprehensive review and develop a coherent position in relation to these issues.

3. Some Fundamental Questions

3.1 There is very little opportunity today for MSI broadcasters to influence the development of new communication systems, as was possible during the 1970’s. However, it is likely that MSI broadcast authorities *will* be able to exercise some influence over the direction that existing system developments take. It is thus necessary for MSI broadcasters to consider again some core questions:

- .1 which vessels need to receive MSI – inshore, coastal and/or deep-sea craft; professional merchant mariners, fishing vessels, naval vessels, and/or leisure craft;
- .2 is there *one* system available today that could meet the needs of both coastal and deep-sea vessels for the receipt of MSI?

.3 should MSI be broadcast as a text message, as today, or as a data message that can be applied directly to electronic chart systems (and perhaps automatically interpreted into text in those vessels without electronic charts);

.4 must MSI be “pushed” to ships at sea via a broadcast system, or could it perhaps be left for a mariner to “pull” the messages needed from a web-based interface;

.5 is the present combination of NAVTEX and SafetyNET still relevant, and will it remain so for the foreseeable future;

.6 what potential new systems and services might the MSI community take into use with advantage?

4. **Conclusions and Action**

4.1 IMO is about to begin a scoping exercise to define the parameters for a complete review of the GMDSS. The subsequent review will undoubtedly take into account a total re-appraisal of the methods for delivering MSI to ships at sea.

4.2 As a result the review of the GMDSS has the potential to affect fundamentally the MSI broadcasts provided by Hydrographic and Meteorological Services, and therefore the budgets, staffing and professional information development processes provided by those Services, as well as the capabilities of ships and small craft to receive such information.

4.3 It is proposed that the WWNWS initiates a process to review the technologies and methods that might be used for MSI transfer to ships at sea in the future, and develops a formal position to be actively promoted during the upcoming review of the GMDSS.
