

Improved UK Marine Weather Services

by Frank Singleton (*Anhinga*)

Marine Safety Information (MSI)

To most of us, MSI is all about weather forecasts and warnings. However, it should be remembered that MSI includes Navigation warnings; Ice reports; Search and rescue information; Pilot service messages; LORAN system messages; SATNAV (GPS etc.) system messages; Additional navigational warnings eg Gunfacts and Subfacts; etc.

The provision of MSI is one component of the Global Maritime Distress and Safety System. The other is the monitoring of distress messages and the taking of subsequent action.

The GMDSS comes under the Safety of Life at Sea convention that came into effect in the 1920s as a result of the Titanic disaster. Inter alia, SOLAS defines build and operating standards for ships. For many years this was primarily related to ships > 300 GRT. In 2002 the tentacles of SOLAS had spread to include, although still fairly marginally, leisure vessels. Now, we must carry a radar reflector if at all possible. We must make passage plans. And so on. It is all fairly sensible, with little to object to for all but the most pedantic.

Implementation of SOLAS

Within the UK, the implementation of SOLAS is overseen by the UK Safety of Navigation Committee. This is chaired by the Head of Safety of Navigation at the Maritime and Coastguard Agency (Joe Collins). This committee brings together those who go to sea and those responsible for implementation of the convention.

Early in 2005, a MSI Working Group was set up, under the auspices of the UKSON Committee, for the purposes of:

- Acting as the primary focal point between MCA, other government departments and external stakeholders to ensure that the range of MSI services provided meet stakeholder expectations.
- Formulating a UK "line to take" on MSI-related issues at IMO and other international forums through the UKSON Committee.
- Developing policies which take account of emerging technology which, potentially, impact upon efficient provision of MSI services.
- Promoting better understanding and appreciation of the underlying components needed to produce MSI services for a wide range of maritime users.
- Providing views of maritime users into the National Met Programme.

This Group, also chaired by Joe Collins, brings together the sea-going users of MSI with the providers (mainly the Met Office and the UKHO) and the conduits (HMCG, INMARSAT, OFCOM and the BBC). On the user side, there are representatives of the British Chamber of Shipping, the RNLI,

the Royal Institute of Navigation, the Royal Navy/Royal Fleet Auxiliary, the RYA and the CYCC. Unfortunately, despite being invited, no representatives of fishermen have yet attended meetings.

For those who may be unaware of its existence, the Conference of Yacht Cruising Clubs comprises those clubs and associations within the British Isles that write Sailing Directions. These are the Army Sailing Association, Bristol Channel Yachting Association, Clyde Cruising Club, Cruising Association, Forth Yacht Clubs Association, Irish Cruising Club, North West Venturers Yacht Club, Ocean Cruising Club,

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Royal Cruising Club, RCC Pilotage Foundation, Royal Naval Sailing Association, Royal Northumberland Yacht Club and Royal Yacht Squadron.

On the MSI group, the RYA is represented by the Cruising Manager, Stuart Carruthers and Basil D'Oliveira, the CYCC by its Hon Secretary, David Darbyshire and Frank Singleton.

Broadcasting Weather MSI

For GMDSS purposes, the world is divided into 16 areas. Certain countries have contracted to co-ordinate the provision of weather MSI in each area. For example, Areas I, II, III, IV are the responsibility of the UK, France, Spain and the USA respectively. For the purposes of defining relevant communications systems, the GMDSS uses 4 areas:- A1, A2, A3 and A4 to cover the sea areas of the world.

- Sea Area A1 is an area within VHF range of a coast station fitted with DSC (about 30 - 40 miles.)
- Sea Area A2 is an area within MF range of a coast station fitted with DSC (about 150 miles)
- Sea Area A3 is an area covered by the INMARSAT Satellite System (excluding A1 and A2 areas)
- Sea Area A4 is basically the polar regions which are not covered by the above

Within the GMDSS, contracting nations, in co-operation, undertake to

- Warn ships of gales, storms and tropical cyclones.
- Issue, at least twice daily, weather information suitable for shipping in text and, as far as practicable, graphic form.
- Arrange, if practicable, for the publication and making available of daily weather charts for the information of departing ships.

Co-ordination of all these activities is undertaken by the IMO and WMO through the Joint Commission for Oceanography and Marine Meteorology.

TECHNICAL

There is considerable freedom of action for countries to provide what they deem necessary within the broad framework of recommended minimum standards outlined above. Formal co-ordination between nations is most evident through the IMO NAVTEX Co-ordination Panel which works (not always successfully) to encourage nations to adhere to a common standard of output and presentation.

Leisure Sailors and MSI

The majority of leisure sailors operate mainly within areas A1 and A2. Thus, around Europe, and many other areas worldwide, the primary methods of receiving weather information, when at sea, are marine VHF radio, National Radio (LW and MW) and NAVTEX. A sizeable minority also use MF/HF/SSB radio broadcasts in voice, radio-facsimile or radio-teletype. When ashore, or at anchor, then increasingly use is also being made of the Internet to complement and supplement these radio broadcast systems.

It is a characteristic of the GMDSS that the information is broadcast. The recipient tunes his radio and the information arrives, usually at scheduled times. The Internet differs in concept because the user has to take positive action to retrieve the information at a time of his choosing. Essentially, it is a request/reply system. Unlike the GMDSS, there are no amendment or warning procedures. Importantly, the Internet is not an operational system. Websites, even official ones, can and do change without notice. Web page addresses (URLs) change. Information Service Providers have outages.

UK HMCG Revised procedures.

In December 2005, HMCG proposed some very significant changes to the broadcasting of MSI on VHF and MF. These have been discussed in depth by the RYA and CYCC largely, but by no means entirely, with representatives of CYCC member clubs and associations. Wider discussion was not feasible in view of the need to keep up the momentum and because we believed that the HMCG should be encouraged in its initiatives to give a substantially improved service. The CYCC members represent a broad spectrum of UK leisure sailors with much valuable collective experience.

In summary form, the HMCG agreed changes are that -

- VHF (and MF) weather information will be broadcast every three hours instead of every four hours, i.e. eight instead of six times daily.
- The daily forecast cycle will start at 0710 LT with updates or repeats three hourly until the start of the following daily cycle.
- Full new inshore waters 24 hour forecasts plus 24 hour outlooks will be issued for the 0710 and 1910 cycles.
- Updated 24 hour forecasts will be issued for the 0110 and 1310 cycles. At 1010, 1610, 2210 and 0410 there will be a repeat of the previous broadcast..
- Inshore waters forecasts and the extended (3 to 5 day) national outlook will continue on NAVTEX 490 kHz. As also, will the once a day 3 to 5 day Sea Area outlooks on NAVTEX 518 kHz.
- Broadcasts will be grouped around the coast so that all HMCG transmitters, apart from Clyde, will have completed their broadcast within about 1 hour of the start of the cycle.

Revised schedules can be found on the RYA and my websites.

There will be some small but significant improvements such as a shorter call on Ch 16, greater attention to delivery of forecasts, alignment of Inshore Waters areas and strong wind warning areas and a separate forecast for the Isle of Man (already implemented). Additionally, it is hoped to provide a new service whereby the Inshore Forecasts can be accessed by telephone at local rates. Greater use of NAVTEX 490 kHz (the National frequency) will be investigated, possibly to provide actual reports from a greater number of locations than is possible on BBC Radio 4, LW.

Met Office Website

Following discussions involving the Met Office Public Weather Service and the MCA, the Met Office website has been revamped to include pages under a marine safety umbrella. This removes such anomalies as the Shipping and Inshore waters Forecasts being on "Leisure" pages. These pages include

- Shipping forecasts
- High Seas forecasts
- Inshore waters forecasts
- Gale and storm warnings

In time, it is hoped that they will include other information such as actual reports from locations around UK coasts and some marine sites, updated hourly, as well as actual and forecast synoptic charts.

These marine pages are large downloads. This is not important when at home or in an Internet café. However, there are Text Only (Printable) versions that are considerably smaller. These will make access via mobile phone and on-board laptop computer an economic proposition. Even faster downloads are available on the BBC Marine weather pages, again using the Text Only versions. These include VHF/MF and NAVTEX texts as well as the extended outlooks for Sea Areas, 3 to 5 days ahead.

BBC Radio 4

In April 2006, the BBC moved the time of the early morning shipping forecast to 0520 LT, but said that they would use a 16 area inshore waters forecast instead of their old 9 area version. The RYA and CYCC members of the MSI Group agreed to these changes on the basis that

- For vessels at sea, the actual time of broadcast is not of great relevance as there should always be someone on watch.
- For those onshore who find this (or the previous time of 0535) too early, there are alternate ways of receiving the forecast, possibly to include the recorded telephone loop
- There would be a positive gain in the adoption of the 16 area inshore forecast.

When implementing these changes, the BBC found that they could not accommodate sea state forecasts nor an outlook for the next 24 hours within the allotted time. The

omission of sea state should not be too important. Following discussion with the MCA, Met Office and BBC, the format of the 16 area forecast will probably be amended to be similar to that of the shipping forecast. That should allow the inclusion of the outlook and a 17th area for the Isle of Man.

Use of the Internet for Weather MSI

Many, possibly most, leisure sailors make some use of the Internet to obtain weather forecasts. My website, www.franksingleton.clara.net, provides many links for this purpose and there are many more that I do not list. Some words of caution and advice may help beginners.

- For day to day decision making, most reliance should be placed on those forecasts produced by National Met Services (UK Met Office, Météo France, Met Éireann etc). These will be based on the most complete data available, the best numerical weather prediction models, tuned to the area, and will have the important benefit of human interpretation and vetting.
- Sailors should compare successive forecasts from the same source eg UK shipping forecasts on the BBC. This is not in order to choose the one that you like best, but to look for consistency. As a general rule, inconsistency from one forecast to the next, again, implies uncertainty.
- Sailors should compare, also, forecasts from different Met Services. Again, inconsistency implies uncertainty.
- Forecasts produced completely automatically should be used with care. In part this applies to some forecasts produced both by private and National Met Services. In particular, it applies to GRIB coded forecasts obtained by various means eg SailDocs, MaxSea, MovingWeather, MailASail, NobelTec, Raytec, XCWeather, Météo France, Theyr.net. There is never any guarantee that the latest forecasts are being provided or that the computer has not had a hiccup. These forecasts are very useful for planning over the next few days. For short term use they should only be used in the light of forecasts with human, intelligent, input.
- Remember that no broadcast or routinely issued forecast is capable of describing the weather on a space/time resolution that we sailors observe. This applies equally to National and private Met services.

Increasingly, there are those who use mobile phones to access the Internet when in harbour or at anchor. For the unwary, this can be costly. For the canny, it can be cost effective. Beginners might like to look at the page on my website, written largely by CA and HROA member Ivan Andrews. I have modified this a little in the light of my own experience. This deals with setting up the mobile phone to laptop links.

(www.franksingleton.clara.net/mobile_setting.html)

The revised Met Office website Text only facility has been designed with a view to small download sizes but this is not always the case. Météo France pages can be very heavy to download.

The links on my GMDSS page (www.franksingleton.clara.net/gmdss_links.html) are a useful starter to quick downloads. Experiment at home and look carefully at file sizes. What comes quickly on broadband or even a dial-up land-line may take minutes over a mobile phone if you use GSM.

Consider using the document retrieval services provided by MailASail (send a blank email to weather@mailasail.com) and by SailDocs (send a blank email to info@saildocs.com). These services enable the sailor to obtain text off a web page without all the graphics.

Look at data compression services such as those offered by ONSPEED and MailASail. These can greatly reduce email costs. ONSPEED can make looking at web pages that are largely text based reasonably cost effective once you know the relevant URLs.

Summary

Following discussion with users, HMCG is to implement a substantially improved MSI weather service. The implementation date will be 1 Feb 2007. It is hoped, also, that there will be improvements to the NAVTEX 490 kHz (National) service. In parallel, the Met Office is making significant improvements to its website. Between them, it should become easier for the sailor, leisure and professional, to obtain MSI weather information when at sea, on land or at anchor.

Acknowledgements

The improvements to the UK MSI service owe much to Les Snaith, SAR Operations and Publications Manager, HMCG. He developed the initial proposals and has been ever willing to discuss with users and to consider alternatives. Steve Huxley, Head of Falmouth MRCC is actively studying improvements to the NAVTEX 490 kHz broadcasts. Nick Ashton, Business Manager, Marine at the Met Office is driving the improvements to the Met Office web site.

Thanks are also due to David Darbyshire, Hon Sec of the CYCC who put in a vast amount of work drawing together the many and various inputs from yachtsmen concerning the proposals from the MCA.