

**WORLD METEOROLOGICAL ORGANIZATION**

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JOINT WMO / IOC TECHNICAL COMMISSION FOR  
OCEANOGRAPHY AND MARINE METEOROLOGY  
(JCOMM)

SHIP OBSERVATIONS TEAM

FIFTH SESSION

GENEVA, SWITZERLAND, 18-22 MAY 2009

**INTERGOVERNMENTAL OCEANOGRAPHIC  
COMMISSION (OF UNESCO)**

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SOT-V/Doc. III-4.3  
(30.03.2009)

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ITEM III-4.3

Original: ENGLISH

**PROPOSED SHIP IDENTIFICATION NUMBER FOR VOS**

*(Submitted by Graeme Ball, SOT Chairperson)*

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**Summary and purpose of the document**

This document proposed the introduction of a unified Ship ID to replace the ship's ITU call sign in real-time and delayed-mode observations.

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**ACTION PROPOSED**

The Team will review the information contained in this report, and comment and make decisions or recommendations as appropriate.

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**Appendix:** None

**- A - DRAFT TEXT FOR INCLUSION IN THE FINAL REPORT**

III.4.3.1 Mr. G. Ball, Chairperson of the SOT, presented a proposal for a universal VOS ship identification number.

III.4.3.2 Mr Ball advised the Team that the VOS has traditionally used the ITU call sign of the ship in weather reports. For most of the history of the VOS, once a call sign was issued to a ship it would remain for the lifetime of the ship. In recent years there had an increasing trend for ships to be re-registered following a change of ownership with a resultant change of call sign. If the ship happens to be a VOS, the responsible NMS does not always learn of the change in an expedient manner, if at all. This has many implications for network management, quality monitoring and performance monitoring and data availability:

- (i) The responsible NMS fails to count the observations received with the new call sign, hence any performance report for the affected ship will be erroneous.
- (ii) Monitoring centres cannot correlate the new call sign with an entry in WMO No. 47, hence any suspect data will go unchecked. The monitoring centres must also develop new biases for the apparent new call sign.
- (iii) DACs, researchers and other users do not know to combine the observations from the original call sign with the new call sign.

III.4.3.3 Mr Ball discussed the possibility of MASK<sup>1</sup> as one option to eliminate the problems associated with a changed call sign, but concluded that a global MASK scheme would involve too many overheads and recurring obligations. Mr Ball then proposed the IMO Number, where one exists, to substitute for the ITU call sign.

III.4.3.4 Mr Ball discussed the advantages and disadvantages of the proposal as well as the implications of this scheme on: (i) an NMS implementing a call sign masking scheme, and (i) an NMS submitting metadata for WMO No. 47. Mr. Ball also informed the Team that this proposal would satisfy a META-T requirement to report IMO Number as real-time metadata.

III.4.3.5 Mr Ball noted that using of the IMO Number in the manner proposed might require IMO approval, and would be discussed by WMO and IMO prior to SOT-V.

III.4.3.6 The Team made the following recommendations:

- (i) That a vessel issued with an IMO Number shall substitute the IMO Number for the ITU call sign in unmasked ship's weather reports.
- (ii) If a vessel does not have an IMO Number, it shall continue to use the ITU call sign in unmasked ship's weather reports.
- (iii) That WMO sets a date for introducing the scheme, having first consulted with NMSs, monitoring centres, DACs and other processing centres to ensure their ability to handle a seven-digit identifier as the call sign (**action, WMO Secretariat, end 2009**).
- (iv) That WMO advises PRs that existing practices and procedure for (1) WMO No. 47, and (2) call sign masking, are unaffected by the introduction of the scheme (**action, WMO Secretariat, end 2009**).

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1: MASK - Unique, repeating identifier. The masking identifier is assigned by the NMS that recruited the ship.

## **- B - BACKGROUND INFORMATION**

### **1. Background**

1.1 The VOS has traditionally used the ITU call sign of the ship in weather reports sent from ship to shore. For most of the history of the VOS, once a call sign was issued to a ship it would remain for the lifetime of the ship. In recent years however, there has been a growing trend for ships to be re-registered following a change of ownership with a resultant change of call sign.

1.2 If the ship happens to be a VOS, the responsible NMS does not always learn of the change in an expedient manner, if at all. This has many implications for network management, quality monitoring and performance monitoring and data availability:

- (i) The responsible NMS fails to count the observations received with the new call sign, hence any performance report for the affected ship will be erroneous.
- (ii) Monitoring centres cannot correlate the new call sign with an entry in WMO No. 47; hence any suspect data will go unchecked. The monitoring centres must also develop new biases for the apparent new call sign.
- (iii) DACs, researchers and other users do not know to combine the observations with the original call sign and the new call sign.

1.3 Whilst WMO No. 306, Manual on Codes, describes **D....D** in FM13 as the ship's call sign, it does not refer to this as the official ITU call sign of the ship. In practice any unique identifier can be used for **D....D** in FM13.

### **2. Discussion**

2.1 As described at SOT-IV, a benefit of the MASK call sign masking scheme was that the call sign allocated by the responsible NMS would remain fixed, despite any changes to the ITU call sign, whilst the ship participated in a SOT observing programme. This would then alleviate the problems described above, conditional on the allocated MASK following the ship if it transferred to another national VOF.

2.2 A national MASK scheme involves many overheads and recurring obligations, which would increase many times if a global MASK scheme was enforced.

2.3 A simpler solution is therefore required involving few if any overheads.

### **3. Proposal**

3.1 The UK Met Office has successfully experimented with using the IMO Number as a substitute for the call sign in BBXX messages from some ships. The IMO Number offers many advantages, but equally some disadvantages, as an alternative global identification scheme for the VOS.

3.2 Advantages:

- (i) The IMO Number of the ship is usually clearly visible on the bridge.
- (ii) The IMO Number is unique for every ship.
- (iii) The seven-digit IMO Number equals the current maximum number of characters in an ITU call sign.

3.3 Disadvantages:

- (i) Not every ship is issued with an IMO Number, e.g.: Naval ship, wooden hull ship, yacht.
- (ii) In rare cases, the IMO Number is known to have transferred to another ship.
- (iii) Some NMS and processing centres might be unable to process a seven-digit identifier.

- (iv) The inability of a PMO to instantly recognise a ship from its BBXX.
- (v) Families must be re-educated to track the IMO Number of a ship instead of the call sign.

3.4 With the exception of the third disadvantage, the advantages of substituting the IMO Number for the ITU call sign outweighs the remaining disadvantages, particularly, noting that ships not issued with an IMO Number will rarely, if ever, change a call sign.

3.5 At the informal workshop of the META-T Pilot Project Steering Team, Geneva, September 2008, the Team classified the IMO Number as category 1 metadata, meaning that this information should be distributed in real-time with the data. For real-time distribution, the BUFR code permits encoding the IMO Number as a discrete element. However, the character-based FM13 does not permit it unless the IMO Number replaces another unique element from the later code. The only unique element in the FM13 is **D....D**.

3.6 It is the intention of this document to propose that the ship's IMO Number substitutes that of the ship's ITU call sign in ship's weather reports.

3.7 If the IMO Number substitutes that of the ITU call sign on VOS, this does not prevent an NMS from using a MASK for real-time messages. In such cases, the real-time messages would use MASK, whilst the delayed-mode data would use the IMO Number. An NMS implementing a MASK scheme would continue to provide quarterly advices to JCOMMPS using the existing prescribed format as this already contains both the IMO Number and the ITU call sign.

3.8 The IMO Number and ITU call sign are both required metadata elements in WMO No. 47. No changes are required or suggested to the current reporting practices involving WMO No. 47.

3.9 With respect to the third disadvantage described above, it will be necessary to ensure that each NMS and processing centre can handle a seven-digit identifier as the call sign prior to an advertised implementation date of the scheme.

#### **4. Caveat**

4.1 This proposal might be subject to approval from IMO to use the IMO Number as proposed. WMO and IMO will discuss this prior to SOT-V.

#### **5. Recommendations**

5.1 The team is invited to consider the following recommendations:

- (v) That a vessel issued with an IMO Number shall substitute the IMO Number for the ITU call sign in unmasked ship's weather reports.
- (vi) If a vessel does not have an IMO Number, it shall continue to use the ITU call sign in unmasked ship's weather reports.
- (vii) That WMO sets a date for introducing the scheme, having first consulted with NMSs, monitoring centres, DACs and other processing centres to ensure their ability to handle a seven-digit identifier as the call sign.
- (viii) That WMO advises the PRs, that existing practices and procedure for (1) WMO No. 47, and (2) call sign masking, are unaffected by the introduction of the scheme.