European Maritime Safety Agency

Meeting: 1st SSN / LRIT Group Meeting

Place and date: Lisbon, 17 May 2017

Agenda item: Additional proposals for SSN v4.0

Document number: SSN/LRIT 1.4.5

Submitted by EMSA

Summary	Presents additional proposals to be implemented in SSN v4.0 to resolve longstanding issues remaining from previous versions.
Action to be taken	As per paragraph 3.
Related documents	Workshop 25 minutes SSN/LRIT 1.4.2 - SSN version 4 progress report

1. Background

The technical specifications for SSN v4 (see agenda item 1.4.2) address the improvements requested by the HLSG (e.g. revised waste business rules, reporting of bunkers and amendments to the reporting of exemptions).

In addition to the improvements requested by the HLSG, solutions to other longstanding issues remaining from previous versions of a more technical nature are also proposed in this document. SSN v4 is the opportunity to address them.

2. Proposals

It is proposed that the following changes and improvements should be implemented in SSN v4, along with the improvements requested by the HLSG.

2.1. Phase out of version 2 messages

The great majority of MSs have phased out v2 messages (PortPlus and MRS notifications), and the two remaining MSs that are using v2 messages (Portugal and Greece) are in the process of moving to version 3. As a new version 4 for messages is to be added to SSN, it is proposed that the v2 messages should be decommissioned, along with the corresponding end-point. As, from a technical point of view, it is difficult to maintain backward compatibility from SSN v4 to v2, once SSN v4 goes live, it is planned that there will only be backward compatibility to v3.

Impact: Portugal and Greece need to phase out v2 messages before SSN v4 is deployed in production (planned for April 2018).

2.2. Phase out of Alert notifications

Incident Report notifications were introduced in SSN v2.07 in 2012 with the intention of replacing Alert notifications in order to offer additional services. The Incident Report framework is a more evolved mechanism for the exchange of incident information which offers the possibility of automatic distribution of notifications to the authorities involved in the incident. In addition, the Incident Report notifications include the ability to update notifications and send feedback information.

Five years have passed since the change was implemented, and it is therefore proposed that Alert messages are decommissioned (MS2SSN_Alert_Not message and Alert request messages from section 3.7 of the XML Messaging Reference Guide).

Impact: MSs that are still using Alert messages either need to switch to Incident Report messages or to use the SSN web user interface before SSN v4 is deployed in production. The affected MSs are Cyprus, Romania, Slovenia (all three are currently using both Alerts and the web interface for sending notifications on incidents), Lithuania (currently using both Alerts and Incident reports) and Iceland (currently only using Alerts).

2.3. Phase out of Ship AIS Notifications

The streaming interface is used by all MSs to provide AIS information to the central SSN system, while some MSs also use the XML message-based mechanism (Ship AIS Notifications) to provide the same information. Maintaining the XML message-based mechanism in addition to the streaming interface adds no operational value and causes unnecessary data flows. Furthermore, it requires both MS and EMSA resources to maintain and monitor the message flow.

In addition, AIS information sent via XML does not provide redundancy against failures in the transmission of AIS information via the Streaming interface because AIS data is not shared between these two interfaces.

At the 25th meeting of the SSN Group in May 2016, EMSA invited all MSs to stop using the XML message-based mechanism for the provision of AIS information to the central SSN system, and to only use the streaming interface for that purpose. It is therefore proposed that Ship AIS Notifications are phased out.

Impact: All MSs need to stop sending Ship AIS Notifications, and to use the streaming interface to provide AIS information to SSN before SSN v4 is deployed in production. The MSs that are still sending AIS notifications are Germany, Ireland, Lithuania and Slovenia.

2.4. Phase out of the “proprietary” XML interface

The SSN “proprietary” XML interface was initially set-up in 2004 when SSN v1 was developed. Following the upgrade to SSN v2 in 2009, the SSN system was aligned with industry best practices and offers a SOAP interface while maintaining the “proprietary” XML interface in parallel.

Although the content of messages exchanged between the national and the central SSN systems via the SOAP interface and via the “proprietary” SSN XML interface is identical, the use of the “proprietary” XML interface is undesirable for the following reasons:

- The “proprietary” XML interface does not follow industry best practices and is considered outdated.
- The obsolescence of the of the “proprietary” XML interface could lead to the loss of certain related functionalities if the interface is not updated accordingly.
- The processing of incoming and outgoing messages is made more complex due to the requirement for specific processing rules for both interfaces.

- Transformation mechanisms are required in order to ensure that each national system sends or receives messages in the correct protocol, and this has a negative impact on system performance.
- A more cumbersome and complex configuration of SSN accounts is required.

The effective implementation of SSN v4 requires a number of additional developments. In order to avoid stressing the system even further, and in order to apply the current industry best practices and international standards, it is proposed that the proprietary XML interface is phased out, and that only the SOAP interface between the central and national SSN systems is maintained.

Impact: All MSs need to use the SOAP interface before SSN v4 is deployed in production. The MSs that are currently using the XML proprietary interface are:

- For PortPlus notifications: Belgium, Bulgaria, Cyprus, Denmark, Estonia, Finland, France, Iceland, Ireland, Italy, Lithuania, Malta, Poland, Romania and the United Kingdom (and Gibraltar).
- For MRS notifications: Belgium, Denmark, Estonia, Finland, France, Iceland, Italy and Poland.

EMSA considers that the technical impact of changing from the XML proprietary interface to the SOAP interface is minimal, while the improvements on the performance of SSN are considerable.

2.5. Minor correction on the SOAP interface to align with industry standards

Although SSN technical documentation states that the exchange of SOAP-based messages is aligned with the international standards (WS-Addressing rules version 1.0), a deviation from the rules was detected in the SSN2MS_ShipCall_Res message more than 18 months ago.

For the more technical readers, the requirement for the property “MustUnderstand” to include SOAP actor information (wsa:To) was not enforced, and no correction was applied at that time because of the impact it would have on some national SSN systems.

It is proposed that this deviation is addressed in SSN v4 in order to ensure that the implementation of the SOAP interface is aligned with international standards and industry best practice.

Impact: Following the analysis done by EMSA, no impact is foreseen on the national SSN systems. However this should be confirmed by the technical managers of the national systems.

3. Actions required

Member States are invited to review and consider the above five proposals. The feedback from the SSN group will be submitted to the HLSG for final approval. If approved, the MSS will be available to provide the necessary technical support and guidance to the MSs concerned during the implementation of the changes.

The SSN documentation will be updated accordingly (i.e. the IFCD and the XML messaging reference guide).