

Meeting Report

2nd EMSA/ Italy/ Norway meeting on AIS Regional servers

Held in Rome on

10 August 2017

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Introduction

The Italian Coast Guard (ICG) invited representatives of the Norwegian Coastal Administration (NCA) and European Maritime Safety Agency (EMSA) to a technical meeting in Rome, to discuss the terms of the new SLAs, in order to finalise them before October 2017, when the current SLA with the ICG terminates.

The meetings took place at the Italian Coast Guard Headquarters (Viale dell' Arte16, Rome, Italy) on the 10th August, from 09.30 to 17:00 (local time), according to the attached agenda (**Annex 1**).

The objectives of the meeting were to: discuss and agree at technical level the terms of the new SLAs, and continue the discussion on the issues identified at the 1st EMSA/ICG/NCA meeting which took place in Lisbon on 7 February 2017. The list of participants is attached as **Annex 2**.

Meeting Programme

Agenda Item 1: Opening

Lazaros Aichmalotidis opened the meeting and introduced the meeting's specific objectives, as follows:

- Discuss and agree at technical level the terms of the new SLAs,
- Continue the discussion on the "open issues" identified at the 1st EMSA/ICG/NCA meeting,
- ICG/NCA to present the current status of the existing SLA's implementation,
- EMSA to inform the status of the SSN Streaming Interface,
- Exchange views on the traffic density maps issue.

The participants approved the proposed agenda.

Agenda Item 2: Improvements and encountered problems

EMSA informed that all the actions identified at the 1st EMSA/ICG/NCA meeting are addressed by the draft SLA or indicated as open issues.

The NCA mentioned that the issue of merging the North Atlantic and North Sea regional servers in one regional server and the naming of this regional server will be discussed at the next joint meeting of the North Sea and North Atlantic Expert Working Groups (EWG) that will take place in Brussels on the 11th of September 2017. Following that, the new name of the regional server shall be reflected in the new SLA.

NCA and ICG highlighted the importance of the AIS data quality and **agreed** on the need to work together, with the support of their contractors and under the coordination of EMSA to address the quality issues (**Action Point 1**).

The Participants discussed the status of actions agreed at the 1st EMSA/NCA/ICG meeting. The current status of these actions is presented in **Annex 3**.

Agenda Items 3 and 4: Amendments to the Service Level Agreements

EMSA presented the proposed amendments to the current SLAs and informed the participants about the administrative procedures related to the signing of the SLAs (which needs to be approved by the EMSA Administrative Board). EMSA proposed the 15th of September 2017 as the date of agreeing the draft SLAs (at experts and coordinators level) in order to allow the presentation of the SLAs at the next EMSA Administrative Board. EMSA will amend the draft SLAs, and submit them to the ICG and NCA for their final validation by the 15th September (**Action point 2**).

EMSA will check with the legal department the correctness of the formula used to calculate the liquidation damages (**Action Point 3**). The participants **agreed** with the proposed amendments, with slight changes.

Considering the dates of termination of the existing SLAs (24 October for the SLA with ICG and 19 December for the SLA with NCA) the meeting agreed on the need to align the periods of both SLAs, by extending the existing SLAs until the end of January 2018 (under the same conditions) (**Action point 4**) with a fee proportional to the extension period and a payment of balance at the end of the period.

EMSA will send formal letters to the NCA and ICG proposing to renew the existing SLAs for the period between the SLAs' terminations till the 31st January 2018. After that, the new SLAs (including the agreed amendments) will be signed, following the prior approval of the EMSA Administrative Board (**Action point 5**).

Agenda Item 5: The AIS Regional Servers' status

The meeting discussed the current status of the AIS Regional servers and ICG/NCA presented their latest implementations. EMSA presented statistic on the incidents occurred and highlighted the need of receiving from the ICG/NCA full feedback on the incidents, the cause of the incident and the solutions followed. To make possible such reporting from the ICG/NCA it would be necessary to ensure the feedback of the Member States and their commitment to report to the ICG/NCA when problems occur.

The ICG presented the latest implementations regarding the ships traffic density mapping. EMSA informed about the status of the task the HLSG mandated the Agency to create the Traffic Density Maps service. EMSA agreed to share the current version of the relevant document describing the methodology with ICG/NCA seeking for their comments (**Action Point 6**).

The ICG briefly explained the factors related to the "AIS time stamp" issue which affects the quality of AIS data. According to the ICG, the AIS Base Stations of the MSs have to provide the time stamp using their internal GNSS receiver. If the AIS Base Stations are not fitted with a GNSS receiver then the time stamp should be provided at the national server which has to be time synchronised (i.e. using a GNSS receiver or a Network Time Provider). If no time stamp is allocated by the national server then it is added by the proxy using the time reference provided by the hosting environment. A very common cause of time synchronization loss is the change of the firewalls configuration, which does not take into account the need to access to NTP servers. The ICG noted that the "AIS time stamp" issue will be discussed at the next MARES EWG meeting that is planned for November/December 2017.

Agenda Item 6: SSN SI

EMSA presented the implementations (planned and completed) to the SSN SIs and the EMSA MSS monitoring tools. EMSA noted that the enhancement to the MSS monitoring tool (checking the AIS data volumes) is fully operational since 16 May 2017.

Agenda Item 7: Open issues

The meeting discussed the following open issues:

a. **M2M interface between the central SSN and the regional servers:**

Italy stated that a direct M2M connection between the regional server and the central SSN should allow a stable connection and easier maintenance. EMSA agreed that the proposal of maintaining a M2M interface between the central SSN and the regional servers looks practical; however it requires further evaluation to determine the impact to both the regional servers and the central SSN. The participants agreed that the issue requires detailed evaluation of the impacts to the systems and agreed to collect the necessary material in order to discuss this issue again at the next meetings (**Action point 7**).

b. **The role of the RS administrators and their 24/7 services in the IFCD**

EMSA informed that the role of the RS administrators will be presented at the next SSN/LRIT Group meeting (October 2017). Following that, the draft SLAs will be amended (**Action point 8**).

c. **Utilization of the “data quality indicator”**

EMSA informed that the issue is reflected in the amended new SLAs. Any practical implementation needs further evaluation, and could be assessed as part of the SSN SI further upgrades.

d. **Publication of the RS technical documentation**

EMSA stated that the obligation to maintain the technical documentation of the RSs and procedure on how to update it is reflected in the SLAs proposal. The meeting agreed that EMSA, Italy and Norway will agree a common template to be used for the RS documentation's publication (**Action point 9**). EMSA will distribute the summary of the RS technical status for further revision by the RSs (**Action point 10**).

e. **Defining standardised requirements for the NPRs**

EMSA reminded the need to work further for defining standardised requirements for the NPRs maintenance (e.g. configuration parameters, data buffering/archiving, down sampling, data age filtering and data storage) as reflected in the minutes of the first meeting report of 7th February 2017 (action point 9). EMSA reminded that this task is reflected in the SLA to be performed on the best effort basis.

f. **AIS “time stamp”**

The issue regarding the AIS “time stamp” was discussed, following the ICG presentation. This type of data quality issue start now to be better understood by comparing the vessels' positions detected by the AIS networks of more than one MSs (the same position data associated to different time stamps). Operationally this finding means that the vessel position was correctly determined by the AIS base networks of the MSs at a certain position at different time instances. There is a quality issue related to the time stamp associated to the vessel position indicated by the AIS network. This issue deserves further analysis to better understand the root cause and consequences of the time stamp issue and to develop guidance on how to improve the situation or to reduce the consequences to the extent possible. The meeting **agreed** to work further on this issue, involving also the ICG and NCA contractors, and prepare the working paper to be presented to the Member States (**Action Point 11**). EMSA will prepare a short document with the problem definition and a draft action plan to address the AIS “time stamp” issue that will be shared with the ICG/NCA by the 31st August (**Action Point 12**).

The participants **agreed** to work on the point [a], [e] and [f] above and prepare the necessary material in order to discuss and possibly agree on the way forward. If enough progress will be made by November/December 2017, the participants will meet to discuss on these points at a meeting that will take place in Rome next to the MARES EWG meeting which is planned to take place in November/December 2017 (**Action Point 13**). Otherwise the meeting will take place at a later stage (when enough progress will be made).

Agenda Item 8: Conclusions and the follow up actions

Lazaros Aichmalotidis thanked the participants for attending the meeting, and presented the agreed actions.

EMSA will prepare a draft meeting report which will be shared with the ICG and NCA for their feedback (**Action point 14**). The list of follow-up actions is attached as **Annex 4**.

Annexes

Annex 1 – Agenda

Annex 2 – List of participants

Annex 3 – The status of Actions agreed at the 1st EMSA/ICG/ NCA meeting (7 February 2017)

Annex 4 – Actions agreed

Annex 1: Agenda

The Italian Coast Guard Headquarters, Viale dell' Arte 16, Rome, Italy, 10 August 2017



Italian Coast Guard Headquarters
EMSA/Italy/Norway meeting on AIS Regional servers
Draft agenda (Rome, 10 August 2017)

1. Introduction (09:30 - 09:40)

EMSA will present the objectives of the meeting:

- to summarise the current status of the execution of the SLA,
- to discuss between the experts of EMSA, NCA and ICG on the better implementation of the operational and technical requirements.

2. Improvements and encountered problems (09:40 - 10:00)

The Participants will discuss the status of actions agreed at the first EMSA/ Italy/ Norway meeting on AIS Regional servers (Lisbon, 7 February 2017).

3. Amendments to the Service Level Agreements (10:00 - 12:30)

EMSA will inform participants about the planned procedure and the proposed amendments to the current SLAs. Based on the minutes of the first meeting the amendments will refer to the following points:

- The new template of the SLA with the ICG
- RS technical documentation;
- General presentation of the AIS Regional Servers in the SLA with the NCA;
- RS configuration, data buffering, archiving and storing capabilities;
- The buffered and archived data exchange;
- The data retransmission/uploading;
- Standardised requirements for the NPRs;
- Types of incidents to be reported by RSs;
- The availability of MSs 24/7 contacts;
- The systems synchronisation.

4. Amendments to the Service Level Agreements (continue) (13:30 - 14:30)

The meeting will continue the discussion on the above matters.

5. The AIS Regional Servers' status (14:30 - 15:00)

Italy and Norway will provide an update on the current status of the RS. EMSA will present statistics on the incidents occurred.

6. SSN SI (15:00 – 15:30)

EMSA will present the planned implementations to the SSN SIs and the monitoring tools.

7. Open issues (15:30 - 16:30)

The meeting will discuss the following open issues:

- M2M interface between the central SSN and the regional servers;
- The role of the RS administrator or its 24/7 service in the IFCD;
- Statistics collected by the RS;
- "Data quality" indicator

8. Conclusions and follow up actions (16:30 - 17:00)

The meeting will discuss and agree the conclusions and the follow up actions.

Annex 2: Participants

1.	Giuseppe Aulicino	giuseppe.aulicino@mit.gov.it	ICG
2.	Antonio Vollero	antonio.vollero@mit.gov.it	ICG
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4.	Jon Leon Ervik	jon.leon.ervik@kystverket.no	NCA
5.	Harald Åsheim	harald.aasheim@kystverket.no	NCA
6.	Lazaros Aichmalotidis	Lazaros.AICHMALOTIDIS@emsa.europa.eu	EMSA
7.	Edmunds Belinskis	Edmunds.Belinskis@emsa.europa.eu	EMSA

Annex 3: The status of Actions agreed at the 1st EMSA/ ICG/ NCA meeting (7 February 2017)

Action point 1: The obligation to share the technical documentation of the RSs and procedure on how to maintain and update it will be reflected in the SLAs.

A relevant clause regarding the technical documentation of the Regional Server hardware and software is included in the SLAs proposal (as amendments to the Preamble, Article 3.2 and Annex 6 of the SLAs).

Action point 2: EMSA and Norway will discuss amending the SLA during its next revision to reflect the applied technical solution.

Relevant amendments to the SLA, in order to reflect the NCA's applied technical solution are included in the SLA proposal (as amendments to the Title, Art. 1.2 and Art. 3.2 of the SLA).

Action point 3: The NCA will assess and propose the possibility of integrating of the North Atlantic and North Sea Experts Working Groups and propose merging the two groups at the next meeting of the EWGs.

Open issue. The possibility of integrating the North Atlantic and North Sea Experts Working Groups (EWG) was assessed and will be discussed at the next EWG meeting on September. Following that, some amendments to the draft SLA might be proposed by the NCA (i.e. regarding the name of the Regional server).

Action point 4: EMSA will gather information from ICG to understand if it is possible to pass on to the SSN-SI the special mark indicating the buffered data.

A communication between EMSA (C.4) and the ICG took place during March – April 2017, and solution to sort messages on bases of the time stamp was selected by EMSA C.4

Action point 5: The NCA will request the historical AIS database of the HELCOM and North Sea region from Denmark through the HELCOM Secretariat.

Open issue. The NCA was in contact with DMA, but the database has not yet been delivered.

Action point 6: Italy and Norway will maintain the automatic data retransmission approach as the basic option, and the manual retransmission as an alternative option utilised for specific cases. This will be reflected in the next SLA proposal.

A relevant requirement is included in the SLAs proposal (as amendments to Art. 3.6 of Annex 2 of the SLAs).

Action point 7: EMSA will further evaluate and propose if any additional method and procedures for the data retransmission/uploading needs to be introduced.

The issue is opened for further working. Following the 1st EMSA/ ICG/ NCA meeting on AIS Regional servers (07.02.2017) several solutions for a mechanism to process the historical data, were evaluated including:

- reading the special mark indicating that the data is historical;
- reading the data by the timestamp of the message;
- exchanging data via a “secondary” channel (i.e. “archived data stream”) – as an alternative solution.

Sorting of messages on the basis of the time stamp was selected by EMSA C.4, as the most appropriate method. As a planned output would be a capability to use the incoming message timestamp for comparison with latest received message (for the specific vessel) and a time window threshold to decide if it is a backlog message.

A relevant requirement is also included in the SLAs proposal (as amendments to Art. 3.7 of Annex 2 of the SLAs).

Action point 8: Italy will present the systems synchronisation issue at the MARES EWG and will request MSs to use a commonly agreed method for time-synchronisation of their systems.

Open issue. Is planned to be presented at the next MARES EWG (November-December 2017).

Action point 9: EMSA, Italy and Norway will work further in order to define standardised requirements for the NPRs maintenance (e.g. the configuration parameters, data buffering/archiving, down sampling, data age filtering and data storage etc.) and also requirements for the RSs allowing their further harmonisation (e.g. data buffering / archiving policies, the methods for exchanging information, the monitoring procedures etc.). The agreed solutions will then be reflected in the future amendments of SLAs.

The issue is open for further work. A relevant requirement is included in the SLAs proposal (as amendments to Art. 6 of Annex 4 of the SLAs).

Action point 10: Italy will present the data coverage maps distribution service at the next EWG.

Open issue. Is planned to be presented at the next MARES EWG (November-December 2017)

Action point 11: EMSA, Italy and Norway will assess further the need of making available a quality indicator in the comment block (as well any other indicator).

A relevant requirement is included in the SLAs proposal (as amendments to Art. 1.2 of Annex 2 of the SLAs).

Action point 12: EMSA, Italy and Norway will assess the possible implementations in order to improve and harmonise the systems' monitoring functionalities. EMSA will provide the MSS monitoring procedures to RSs for their assessment and possible implementation.

The EMSA MSS Operational procedures were submitted to the ICG and NCA (03/04/2017). EMSA's planned enhancement to the MSS monitoring tool is fully operational since 16 May 2017. The NCA has implemented some improvements to their web monitoring tools.

Action point 13: All types of incidents to be reported by RS will be included in the SLAs amendments during their next revision.

A relevant requirement is included in the SLAs proposal (as amendments to Art. 6.5 of Annex 2 of the SLAs).

Action point 14: EMSA will present the 24/7 contact availability issue at the next SSN group and invite the MSs to coordinate their operational 24/7 contacts.

Open issue. Will be presented to 2nd SSN/LRIT WG (October 2017). Following that, the draft SLAs will be amended. A relevant requirement is included in the SLAs proposal (as amendments to Art. 3 of Annex 5 of the SLAs).

Action point 15: EMSA will propose the necessary amendments to reflect the role of the RS administrator in the IFCD.

Open issue. Will be presented to 2nd SSN/LRIT WG (October 2017).

Annex 4: Actions agreed

The agreed actions of the meeting are provided in the list below.

Action point 1: Italy and Norway will work further to address the quality issues, with the support of their contractors and under the coordination of EMSA.

Action point 2: EMSA will amend the draft SLAs, and submit them to the ICG and NCA, for their final validation (on experts and coordinators level) by 15 September 2017.

Action point 3: EMSA will check with the legal department the correctness of the formula used to calculate the liquidation damages.

Action point 4: The validity periods of both SLAs will be aligned by extending the existing SLAs until the end of January 2017 (under the same conditions), and with a fee proportional to the extension period and a payment of balance at the end of the period.

Action point 5: EMSA will send formal letters to the NCA and ICG proposing to renew the existing SLAs for the agreed period. After that, the new SLAs (including the agreed amendments) will be signed, following the prior approval of the EMSA Administrative Board.

Action point 6: EMSA will share the current version of the document describing the TDM methodology, for the ICG and NCA comments.

Action point 7: EMSA, Italy and Norway will evaluate further M2M connection's impacts to the systems and continue discussion on this issue at the next meetings.

Action point 8: EMSA will present the issue regarding the role of the RS administrators and their 24/7 services to the next SSN/LRIT Group meeting (October 2017). Following that, the SLAs will be amended.

Action point 9: EMSA, Italy and Norway will agree a common template to be used for the RS technical documentation's publication.

Action point 10: EMSA will distribute the summary of the RS technical status for further revision by the RSs.

Action point 11: EMSA, Italy and Norway will work further, involving also the ICG and NCA contractors, to identify the causes of the "time stamp" issue and to develop guidance on how to improve the situation or to reduce the consequences to the possible extent. A working paper will be prepared to be presented to the Member States.

Action point 12: EMSA will prepare a short document with the problem definition and a draft action plan to address the AIS "time stamp" issue that will be shared with the ICG/NCA by the 31st August.

Action point 13: EMSA, ICG and NCA will discuss the points [a], [e], [f] of Agenda item 7 at the next meeting that will take place in Rome (possibly in November/December 2017), if enough progress will be made by that date. Otherwise the meeting will take place at a later stage.

Action point 14: EMSA will prepare a draft meeting report which will be shared and finalised with the ICG and NCA.

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