



European Maritime Safety Agency

Med AIS Workshop no 4  
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STIRES 4/MED/3  
3 & 4 July 2007

## Definition of Real-time

### Submitted by EMSA

<i>Executive summary</i>	To provide a uniform definition of the term 'real-time' in the context of STIRES and development of the Mediterranean AIS Regional Server; closing out action 17.h in the report of Mediterranean Workshop no. 3.
<i>Action to be taken</i>	As per paragraph 6
<i>Related documents</i>	Report from MED AIS Workshop no.3 4/MED/5.

## 1. BACKGROUND

This paper is drafted in response to the action charged to EMSA in the report of the 3<sup>rd</sup> Mediterranean Workshop. The purpose was to achieve recognition of a uniform definition of the term real-time for the Mediterranean AIS Region and probably for the whole of the EU. The action was:

### "17. Meeting Follow-up Actions

h. EMSA will draft a paper presenting what is the actual meaning of the term 'real-time' and present it to the MED AIS EWG 4."

## 2. DISCUSSIONS AT MED AIS WORKSHOP NO.3

The 3<sup>rd</sup> workshop recognised that there was some misunderstanding of the term real-time, as it has different meanings in the context of other related subject areas. It was necessary to agree a common definition in the context of STIRES and development of the regional servers in the EU in order to properly understand the STIRES concept and to promote recognition of how data would be exchanged in a different way as compared to data exchanged in the current SafeSeaNet (which is by notification, request and response). The reported discussions at the 3<sup>rd</sup> MED Workshop was as follows:

### "10. Definition of the "real time" term

In view of comments made by France, the group recognised a need to better define what was meant by "real-time" in the context of STIRES. It was agreed that for "realtime" the following is meant:

"Data is delivered end-to-end, non-stop, one vessel report after the other. The data is not sent in blocks but in real-time promptly when they are received and without any delay. However, this does not mean that all messages received by the national centre are relayed / forwarded to the regional level in real-time. Only messages with a time interval are sent which are received with no delay".

The group agreed for EMSA to draft a paper presenting what is the actual meaning of the term "real time" and to present it to the MED AIS EWG 4 meeting."

### **3. PROPOSED DEFINITION CONTAINED IN THE STIRES FINAL REPORT**

The following text is contained in the STIRES report with the associated footnote definition:

#### **"4. Central EU server**

To enable the "exchange and relay" of information as required by Article 9 of the Directive 2002/59, one technical solution is to create an EU server that would collect "shore-based installations' information" at a low rate of data receipt (every one or two hours). One benefit from this is that this data can be correlated with other data already stored at EU level. The information will be exchanged in real time<sup>1</sup> mode and distributed to the authorised maritime Administrations of the MS in accordance with a predefined table of "access rights".

The information that would be relayed to and stored at the EU server should be reduced to the necessary minimum (ship name, IMO number, position and time stamp). Considering that the information in the EU server is based on the existing short range traffic monitoring infrastructures of the MS (AIS), the term SRIT (Short Range Identification and Tracking) is the proposed acronym, striking an analogy with LRIT (Long Range Identification and Tracking), the detailed implementation of which is currently being discussed.

<sup>1</sup> "Real time" exchange should be understood in the context of data delivered end-to-end, non-stop, one vessel report after another. The data originated by the on board AIS, is picked up by the MS shore based AIS network and is relayed to the regional or EU network, at a sampled rate, continuously, without any delay."

### **4. AN IMPORTANT CLARIFICATION OF THE RULE**

As an important exception to the above (in paragraph 2), "without delay" is intended to permit short intervals or time-lags due to system delays, in particular the interval necessary for transfer of data through the internet.

### **5. DEFINITION OF 'REAL-TIME' IN THE IALA VTS MANUAL – A DIFFERENT CONTEXT**

From the following definitions it is clear that the term real-time has a different meaning in the context of the VTS Manual and this is not relevant for the purposes of STIRES and development of the Mediterranean AIS Regional Server:

"4.2.3.5 Real time manoeuvring data.

Radar based VTS systems will typically provide details of a vessel's course and speed over the ground. Of necessity, this information is historical in that it is calculated from the track made good by a vessel. However, AIS in addition to course and speed information can provide elements of real time manoeuvring data such as Ships Heading and Rate of Turn. These are derived directly from the vessel navigation systems and are included automatically in the Dynamic Message broadcast by the AIS.

And

4.2.3 7 Provision of more precise navigational advice.

Where a VTS centre is able to receive AIS information from vessels within or adjacent to its area, it is expected that the quality, accuracy and reliability of vessel tracking will be improved markedly. The VTS centre would therefore be able to provide more precise navigational advice, as and when required, or when deemed necessary. In addition, the availability of certain real time manoeuvring data within the VTS centre is expected to enable VTS operators to appreciate more rapidly, and in greater detail, actual vessel movement."

## **6. ACTION REQUESTED**

The participants are requested note, consider and identify a common definition in the context of STIRES for development of the Mediterranean AIS Regional Server as appropriate.