European Maritime Safety Agency

8.2.2 Automated Behaviour Monitoring (ABM) related updates

Lukasz Bibik- Senior Project Officer

Digitalisation and Application Development, Unit C.4

Lisbon, 20.10.2016

Content

- Status
- ABM admin concept
- Current ABMs
- New ABMs
- Future plans

Automated Behaviour Monitoring (ABM) algorithms – Status

ABM is a part of Integrated Maritime Services.

It analyses real time vessel position reports provided for a specific time period and area of interest (AOI), as defined by the users.

The system focuses on the detection of specific events, and therefore may be categorized as 'event'/ 'rule' based.

ABMs figures

4 MS and 3 EU Bodies

3 Admins at MS level (FR, NL, MT)

2 Admins at EU Bodies (Frontex, MAOC-N)

Over 59 Running - Active ABMs

178 other ABMs used so far – terminated now

15 Distribution lists with multiple emails

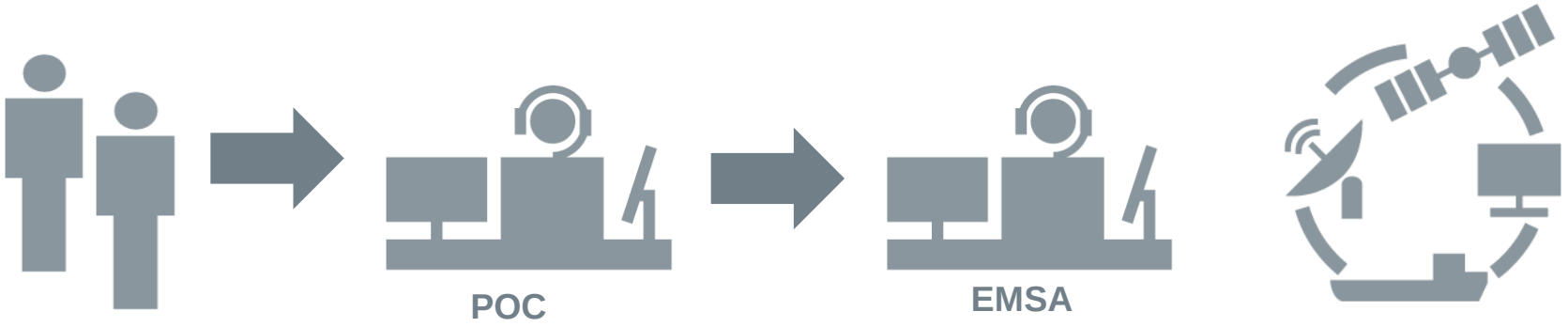
11 ABM types operational

8 New ABM types under development

BPM- LBI, TPM- APE

Admin concept

At EMSA level



At National level

How does it work?

ABM types, current

ABM Type – description which events are automatically detected	ABM name
Presence of a particular vessel(s) in an area of interest	*InArea*
Passage of a vessel close to the shore	*DistanceToShore*
Vessels entering or leaving ports	*AtPortAtSea*
Anchored vessels	*Anchorage*
Frequency of vessels' position reports higher or lower than expected	*UnderOverReporting*
Vessels approaching one another closer than an indicated distance, with a speed below defined threshold	*AtSeaEncounter*
Change of heading higher than a threshold (e.g. more than 20 deg.)	*SuddenChangeOfHeading*
Sudden change of speed	*SuddenChangeOfSpeed*
Change of speed above or below a limit set	*SpeedAnomallyOverPeriod*

ABM types, new

ABM Type – description which events are automatically detected	ABM name
Passage of a vessel close to an area of interest	*DistancetoArea*
Vessels entering a closed area at a specific time	*TimeAndPeriodOfDay*

ABM types, planned

ABM Type – description which events are automatically detected
Vessel leaves Area of interest X and enters Area of Interest Y
Vessel reports position outside an Area X
Vessel is switching off transponder
Port of Departure is X
Port of Arrival is X
Vessel is probably drifting
Vessel departs from or heads towards coastline
Change of position

Other developments

- Admin functions
- Safeguarding the system – ‘blocked’ ABMs
- Introduction new policy ‘at end’- when last event is detected + grouping of all the alerts
- User shall be able to select if he want’s to be alerted on the filtered vessel types or flags when position reports does not provide the selected data
- Upload a list of Vessels Of Interest (VOI)
- Negative selection criteria

ABM WS1 figures

5 MS

1 EU Body

19 Participants

(MS, EU Bodies, EMSA)

26 Requirements

(26 analysed, 4 completed, 7 under development)

8 Action points

(6 already completed)

ABM WS 2 figures and topics (1)

28 New Requirements

Priorities:

(1) OVR – vessel reference database improvement

(2) Distribution list creation by the ABM admins at MS level

(3) Use of the VDS data in ABMs

(4) Use of the SafeSeaNet EIS data

(5) Extended use of the AIS position reports data (e.g. navigational status change)

ABM WS 2 figures and ‘hot’ topics (2)

- How the confidentiality of the information in ABMs is ensured – FR, PL, MAOC-N? (e.g. list of vessels not to be disseminated/ visible)
- Dictionary of the terminology and a less ambiguous naming convention
- Operational guidelines and the manual on the ABMs- how to set the parameters
- S2S provision of data via XML, JSON via HTTPS (requirement from one MS)

twitter.com/emsa_lisbon
facebook.com/emsa.lisbon

EMSA
European Maritime Safety Agency