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| Temporary Working group: TWG VTT Organisation / delegation: The Netherlands | CR number: 14 Version of the CR: 2.10 Version Date: 9.5.2025 |
| Affected document: Standard Inland ECDIS Name of the document (except for standards): Affected edition of the document: ES-RIS 2027/1 | Article / paragraph(s): VTT part of ES-RIS Annex(es): 11 Appendix(ces): |
| Title of change request: ASMs for intention sharing | |
| Description of change request: <u>Proposal:</u> <p>For the purpose of sharing route intentions for inland shipping, a hybrid approach has been devised where the information is made available both via AIS-ASM (in a limited form) and via a Central Hub reachable via the Internet.</p> <p>Existing ASM (e.g. the ASM defined in IMO SN1/Circ. 289) only partially cover the needs for intention sharing, notable the impossibility to identify the source of the intention, absence of a timestamp, non-existence of a central hub and/or aimed at seagoing vessels. Therefor this proposal adds an ASM that better fits the intended use for intention sharing. The ASM can be used to inform recipients that intentions are shared via the Central Hub with or without embedding a set of up to ten waypoints (latitude, longitude, heading & ETA). Additionally the ASM can be used to 'cancel' a previously shared intention. Furthermore, the ASM contains information regarding the source and reliability of the intention.</p> <p>The ASM takes up 1, 2 or 3 AIS slots, depending on the number of waypoints shared.</p> <p>The ASMs for intention sharing can be controlled by the ASM Control Message.</p> <u>Changes in Annex 11 :</u> ASM for sharing a route intention <p>The ASM for sharing a route intention offers room for up to 9 waypoints (lat/lon/heading/eta) and additional information regarding source and reliability. When completely filled, the ASM takes up 3 AIS slots</p> <u>Repetition:</u> <ul style="list-style-type: none"> • If the ASM is cancelling previously shared intentions (number of waypoints = 0) the message shall be broadcast immediately upon cancellation of the intention and repeated twice within the following minute. • If the ASM contains an (updated) intention, the message shall be broadcast immediately upon update and repeated once every minute. • If the ASM only serves to inform about the intentions being published via the Central Hub (number of waypoints = 15), the message shall be broadcast once every minute. <u>Notes:</u> <ul style="list-style-type: none"> • The difference between the time of broadcast and the update time shall not exceed 60 sec. • An intention renders all previously (i.e. with an earlier update time) broadcast intentions invalid. • To avoid excessive slot usage, the number of waypoints shall be kept to a minimum – only as many as needed to meet the functional requirements. • Sharing an intention with 0 waypoints implies that the ship has no intentions and cancels all previously broadcast intentions. • A message with the number of waypoints set to 15 implies that the intentions of this ship are made available (only) via the central hub. • Although the MMSI identifies the AIS equipment, it is considered an acceptable means of identifying the ship. | |

- The AIS message only contains the waypoints of the intention, a subscriber will take the current position of the vessel (broadcast via a different AIS message) as starting point and ignore all waypoints of which the ETA has passed.
- Although the intention sharing aims at short term intentions, the Update Time is a full timestamp (without a date) to facilitate calculation.
- The message shall be sent by vessels only.
- The control status of the message is default off.
- With a reporting rate of 1 minute, the timeout for the AIS message is 3 minutes – however, the information in the message is no longer valid if 2 minutes have passed since the embedded update time.

Table 1 Route intention (broadcast)

| Parameter | # bits | Description | Values (bold = fixed) |
|------------------------|---|---|---|
| Message ID | 6 | AIS message identifier | 8 (=binary broadcast msg) |
| Repeat Indicator | 2 | Used to determine if message must be repeated: - 3 = do not repeat any more | 3 |
| Source ID | 30 | MMSI number of ship | |
| (spare) | 2 | (not used) | 0 |
| Application Identifier | 16 | | |
| DAC | 10 | Designated Area Code | 200 |
| FI | 6 | Function Identifier | tbd |
| Version | 3 | Version of message format | 0 <i>1-7 reserved for future versions</i> |
| Intention Source | 3 | Source of the intention | 0 – Track Pilot 1 – Navigation Guidance 2 – Proj. Shipping Lane <i>3-7 reserved for future use</i> |
| Intention Reliability | 2 | Reliability of intention | 0 – Low 1 – Medium 2 – High 3 – Very High |
| Testmessage | 1 | Message is sent as test | 0 – Real message 1 – Test message |
| Update Time | 17 | Time of update (UTC) | |
| Hours | 5 | | 0 – 23 |
| Minutes | 6 | | 0 – 59 |
| Seconds | 6 | | 0 – 59 |
| Number of Waypoints | 4 | 0 = no intentions, cancel previous 15 = intention published only via central hub | 0 – 9, 15 <i>10 -14 not used</i> |
| Waypoint 1 | 0 or 74 | Empty if no waypoints See table 2 for details | |
| Waypoints 2 – 9 delta | 0 - 344 | Empty if no or one waypoints See table 3 for details | |
| Total bits | 86 160 201 365 406 529 | with 0 waypoints (1 slot) with 1 waypoint (2 slots) with 2 waypoints (2 slots) with 6 waypoints (2 slots) with 7 waypoints (3 slots) with 10 waypoints (3 slots) | |

Table 2 – “Waypoint 1 section” in case one or more waypoints are broadcast

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|-------------------|-----------|--------------------------------|-----------------------|
| Waypoint 1 | 74 | First (and only) waypoint | |
| WP 1 Longitude | 28 | in 1/10000 min, per 2's compl. | -180 – 180 (+ = East) |
| WP 1 Latitude | 27 | in 1/10000 min, per 2's compl. | -90 – 90 (+ = North) |
| WP 1 Heading | 9 | in degree | 0 – 360 (0 = North) |
| WP 1 ETA | 10 | in seconds past Update Time | 0 - 1023 |
| Total bits | 74 | | |

Table 3 – “Waypoints 2 – 9 delta section” in case of more than 1 waypoints broadcast

| | | | |
|----------------------|----------------------------------|--|---------------------|
| Waypoints 2 - 10 | 41 - 369 | | |
| Waypoint i | 41 | (for each WP) | |
| WP i Longitude delta | 11 | longitude delta between previous and this WP in 1/10,000 min, per 2's compl. | |
| WP i Latitude delta | 11 | latitude delta between previous and this WP in 1/10,000 min, per 2's compl. | |
| WP i Heading | 9 | in degree | 0 – 360 (0 = North) |
| WP i ETA delta | 10 | in sec. past previous WP | 0 - 1023 |
| Total bits | 41 82 164 369 | for 1 additional waypoint for 2 ... for 4 ... for 9 ... | |

Reasons for change request:

To properly address the messages foreseen within the context of intention sharing, in the context of the task “Develop an information exchange standard for intention sharing, to be used between vessels or between a vessel and VTS”

Estimated / anticipated impact of change request:

%

Issue date: 09.05.2025**Name of the author:**

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Task of the work programme of CESNI:

Develop an information exchange standard for intention sharing, to be used between vessels or between a vessel and VTS

Decision date:**Decision:**

- ☐ Approved (CR will be integrated in the Standard)
- ☐ Rejected (CR will not be integrated in the Standard)
- ☐ Withdrawn by the author

Decision made by: CESNI/TI/VT

Decision motives (if applicable):

Information on change requests (CRs):

- Annex 1 of document CESNI/TI (20) 14 describes the change request procedure
- Initiating a change request form does not commit to implement the change. First, submit the filled change request form to the Chair of your temporary working group (cc: ti_cesni@cesni.eu) for review. The title of the document can make a reference to the number of the change request.
- The detailed list of tasks is available in the work programme available under [resolution 2019-II-10](#).

DRAFT - FOR REVIEW