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Agenda item [[2]](#footnote-2) 5.1

Technical Domain / Task Number 2 …………………………………

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Work on a technical service for provisioning of AtoN information  
(ENAV/ARM TG2.1.1)

# Summary

The joint ARM/ENAV TG2.1.1 has continued its work inter-sessionally, with a focus on developing use-cases. Annex A of this paper contains the use-cases so far developed by the group.

The purpose of the use-cases are to ensure that the technical service specification(s) that are being developed (a first draft was submitted to the previous committee meeting) - will meet the requirements of all identified use-cases.

The group will meet physically during ARM16, and at this meeting the focus will be both on the draft technical service specification and experience from implementing this - as well as further work on the use-cases.

# Action requested of the Committee

To take note of the information. And any interested parties are encouraged to join the task group and contribute to the work.

Annex A

# AtoN Service Use Cases - DRAFT

**Use-case:** Retrieve information on the status of AtoN.

**Description**: Information AtoN's status along the planned route is requested by the user from the service. Including navigation safety information such as ATON casualties or changes which may impact navigational safety; notification of temporary changes, advanced notice of changes, and proposed changes to ATON.

**Actors**: Mariner, ECDIS/ECS or other route planning system, AtoN information service

**Frequency of Use:** Typically triggered once when a route is being planned by a mariner.

**Pre-conditions:** The service instance is known to the ECDIS, or the ECDIS has access to a service registry in which the service instance can be discovered

**Ordinary Sequence:**

1. The route is planned in ECDIS by the mariner
2. The ECDIS requests AtoN status information from the service based on geometry of the route
3. The service directly answers the request with the appropriate data.
4. The data is rendered and displayed to the user.

**Post-conditions:** The correct AtoN status information is displayed on the ECDIS.

**Use-case:** Retrieve updates on the AtoN status information through subscription service.

**Description**: Changes in the AtoN's status along the planned route is requested by the user. Including navigation safety information such as ATON casualties or changes which may impact navigational safety; notification of temporary changes, advanced notice of changes, and proposed changes to ATON.

**Actors**: Mariner, ECDIS/ECS or other route planning system, AtoN information service

**Frequency of Use**: Typically triggered once when a route is being planned by a mariner.

**Pre-conditions**: The service instance is known to the ECDIS, or the ECDIS has access to a service registry in which the service instance can be discovered.

**Ordinary Sequence:**

1. The route is planned in ECDIS/ECS by the mariner
2. The ECDIS/ECS subscribes to receive information on changes to AtoN status along the planned route.
3. The service answers the request with the appropriate data when there is changes in the status of one or several of the AtoNs
4. The data is rendered and displayed to the user.
5. Indication of the changes is highlighted to the user

**Post-conditions:** The correct AtoN status information is displayed on the ECDIS.

**Use-case:** Retrieve complete S-125 AtoN information from a service provider.

**Description**: All AtoN information from a S-125 service provider is requested by the user.

**Actors**: Shore-based user (e.g. VTS), AtoN information service, Mariner, ECDIS/ECS

**Frequency of Use**: Typically triggered once when a user request information

**Pre-conditions**: The service instance is known to the user, or the ECDIS has access to a service registry in which the service instance can be discovered.

**Ordinary Sequence:**

1. User sends request to the service
2. The service directly answers the request with all of the AtoN data in the service
3. The data is rendered and displayed to the user.

**Post-conditions:** The correct AtoN information is received by the user

**Use-case:** Retrieve AtoN information for a specific area, geographically defined waterway, or pre-defined route.

**Description**: A complete set of AtoNs that are located in the area covered by the chart defined by the user is requested by ECDIS/ECS, Including information such as ATON casualties or changes which may impact navigational safety; notification of temporary changes, advanced notice of changes, and proposed changes to ATON.

**Actors**: Mariner, ECDIS/ECS, AtoN information service

**Frequency of Use**: Typically triggered once when new updates to the chart are available or when user uses the chart for first time.

**Pre-conditions**: The service instance is known to the user, or the ECDIS has access to a service registry in which the service instance can be discovered.

**Ordinary Sequence:**

1. The end user software sends request to get information of all areas covered by the service
2. The end user software receives information of all areas covered by the service
3. The user selects the desired area, waterway or route.
4. The end user software sends request to receive information on all AtoNs that are located inside the coverage area
5. The data is rendered and displayed to the user.

**Post-conditions:** The correct AtoN information is received by the user

**Use-case (name):** Retrieve AtoN information for a specific geographical area (spatial geometry).

**Description:** A complete set of AtoNs, that are located inside a user-defined geographical area or route (in the form of a spatial geometry), is requested by an ECDIS on a ship bridge from the service.

**Actors:** Mariner,ECDIS, AtoN information service.

**Frequency of Use:**Typically triggered once when a route is being planned by a mariner.

**Pre-conditions:**The service instance is known to the ECDIS, or the ECDIS has access to a service registry in which the service instance can be discovered.

**Ordinary Sequence:**

1. The geographic area is defined by the mariner in the form of a point geometry with a search radius or a polygon.
2. The geographic area is provided to the ECDIS.
3. The ECDIS requests all available AtoN information in the specified from the service.
4. The service directly answers the request with the appropriate data.
5. The data is rendered and displayed to the user.

**Post-conditions:**The correct AtoN information is displayed on the ECDIS.

A subscription service of a particular area for a stated duration. (Not necessarily “ECDIS centric”)

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