**Display and Management of Navigational Warnings**

S-124 Navigational Warnings (NAVWARN) portrayal is provided by a portrayal catalogue that includes a symbol set and symbol instructions for the feature and attribute combinations.

**Additional Portrayal requirements of the Graphical User Interface**

A dedicated interface must be provided to allow users to interact with NAVWARN messages. This interface must, at a minimum, provide functionality for;

1. The user must be able to tag individual messages according to the filtering requirements in section 12.3.
2. A Capability for an on demand listing of all (S-124) NAVWARN messages in the system, and sorting these according to: received date and time, issue date and time, warning type, producer and series, must be provided. Additionally, a means to list according to user classification should be provided.
3. Provide an indication when a new NAVWARN message is received until it has been displayed or 24 hours have passed. This indication may be suppressed if the NAVWARN message does not meet filtering criteria set by the mariner (see 12.3).
4. Means must be provided for the operator to enter criteria for filtering of indication of new NAVWARN messages based on time and maximum distance from own ship, monitored route or planned route (see 12.3). Default setting must be no filtering.
5. Details of the filtering options that have been enabled by user must be readily available for inspection and modification.
6. Means must be provided to view the most recent message, past messages, and to view messages associated with selection of NAVWARN symbols in the graphical display area.
7. Listing of all NAVWARN must include means for viewing an abbreviated view of any **NAVWARNPart**, **warningInformation** attributes present.

***NOTE: It may be possible to create some of this functionality via portrayal context parameters,***

**Filtering Navigational Warning information**

S-124 navigational warning (NAVWARN) datasets are intended for use in S-100 ECDIS as elements of an “always on” layer ~~conforming to S-98 Level 1 interleaving when interoperability is enabled.~~

There is a risk of clutter ~~with this level of interoperability~~ and it is therefore necessary to include filtering functionality for the user, to aid the removal of non-relevant information from the portrayal.

NOTE: Even though the full extent of a navigational warning may not portrayed, it must still be available and discoverable in a list of NAVWARNs that can be recalled by user action at any time.

User systems must therefore provide filtering mechanisms for the Navigational Warning information.

At a minimum, filtering functionality must be included that allows the user to classify the relevance of a NAVWARN against the intended route as:

* on chart (relevant for the route, must always be visualized), or;
* off chart (not relevant for the route, and need not be visualized), or;
* information (relevant for the route, but for information and need not be visualized).

On chart should be the default classification for all NAVWARNs.

Additional filtering functions may include options such as;

* Filtering on route with a buffer;
* Navigational warning topic;
* Date range of the hazard;
* Valid time of the navigational warning.

These filters may then be used to assist the navigator in classifying a NAVWARN according to its relevance for the route.

**Example 1:** A self-cancelling dataset :

**NAVWARNPreamble**

**publicationTime** of 20230704T010000Z

**cancellationDate** of 20230711T000000Z

**NAVWARNPart fixedDateRange** of 20230706T010000Z to 20230710T010000Z

is visible on navigation screen during 20230706T010000Z to 20230710T010000Z, unless removed by a filter set by user, and optionally visible during 20230704T010000Z to 20230706T005959Z.

Note: It is still be possible for user to recall cancelled messages for review purposes.

**Example 2:** Any dangers that are in waters too shallow for the ship get classified as off chart warnings, but are discoverable in the on demand listing of active NAVWARNs.

**Cancelled datasets**

When a S-124 dataset is cancelled it must not be displayed on the navigation screen, but must be available for review in the on demand listing of NAVWARNs in the navigation system and marked as cancelled.

**Portrayal of feature classes**

The **NAVWARNAreaAffected** class does not have a portrayal defined to avoid causing significant cluttering on the navigation screen. Rather, the feature must be highlighted by the system if selected from a pick report or by other means for interrogation by user.

When a **NAVWARNPart** is not portrayed, such as when user selections mark it not to be visualized, any associated **TextPlacement** features must also not be portrayed.