Paper for Consideration by S-100WG TSM

Proposals to improve machine readability in S-100

Submitted by:	S-124 Navigational Warning Project Team chair
Executive Summary:	This paper seeks highlight some of the challenges encountered in the development of S-124 that may impact all stakeholders and may have encountered a gap in the S-100 framework.
Related Documents:	S-100
Related Projects:	S-124 Product Specification

Introduction / Background

S-124 development is close to finishing a draft candidate for edition 1.0.0. Within the IHO S-100 strategic implementation plan, S-124 is among the phase 1 products, and should therefore be ready in time for national authorities to establish operational services by 1st of January 2026.

The vision for s-124 is as an always on layer during route monitoring and this approach has some risks due to potential screen clutter, however, it does represent reality that some areas are more data dense than others, and its intended use reflects the view of all mariners consulted (i.e. that there is no safe time during route monitoring to turn off navigational warnings).

The consultations with mariners have however confirmed that there is a desire among mariners to be able to mark and filter navigational warning information based on what is relevant to the particular ship and voyage.

Analysis/Discussion

Noting the user requirement for functionality to mark and filter navigational warning information based on user criteria, and noting that such aligns well with the functionalities prescribed in IEC 61774 requirements for NAVTXT, S-124 includes similar requirements for the Graphical User Interface. This includes a requirement for a listing of received NAVWARNs along with sorting functionality, as well as data filter requirements which would permit a user to mark NAVWARNs as on chart, off chart and for information.

S-100 does not currently provide means to introduce these types of requirements as machine readable requirements. This means that systems that aim to utilize data filtering as intended by S-124 will require bespoke implementation outside of current S-100 guidance. However, should there be a desire to adjust some of these requirements in the future, further software modifications may be necessary. Such software modifications have presented challenges in the past given the regulatory environment imposed by various IMO instruments.

Is there a need to consider adding additional guidance within the S-100 framework for such functionality as what S-124 requires?

Additionally, what are the implications between versions of S-124 on the usability of S-124 data services? For example, does there need to be some form of version control by the user system before accessing a service? Is there a potential requirement placed on service providers to provide multiple versions of S-124 services to account for user system grandfathering?

Conclusions

The nature of S-124 services justify additional functionality in the user system beyond those naturally included because of ENCs. These additional functionalities comes with some uncertainty around how to best define, implement and maintain. Discussion on these items is needed to give S-124 NW PT clarity in how to proceed with S-124 development.

Action Required of S-100 WG TSM

The S-100 WG TSM is invited to:

      a.   Note this paper

      b.   Discuss the questions raised and provide feedback to S-124