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| From: ENAV Committee | ARM4-3.1.3 (ENAV18-14.1.22) |
| To: ARM Committee | 18 March 2016 |

LIAISON NOTE

**Portrayal of Sector Lights in S-201**

# INTRODUCTION

A liaison note from ARM (ENAV18-9.11) was reviewed during ENAV18. The liaison note forwarded an input paper from the Norwegian Coastal Administration (NCA) which described how sector lights are a vital part of visual aids to navigation in Norwegian waters and how inadequate portrayal of them in Electronic Navigational Charts (ENC) runs the risk of adversely affecting safety of navigation. The ENAV Committee considered this input paper and the National Authorities represented share the concerns expressed and note that this affects many AtoN Authorities.

# DISCUSSION

The ENAV Committee has dissected the topic into two principle issues which define the larger issue of what are the Roles and Responsibilities of IALA with regard to portrayal guidance provided to Hydrographic Offices.

* Issue 1: Charting of Complex Lights on ENCs is a concern for IALA because the desired information necessary for the mariner to use these AtoNs as intended, and in a safe manner, must be appropriately portrayed. Complex Lights comprise a wide range of AtoNs which include Sector, Directional, and leading lights where the arc of light is dissected into colours with varying intensities and characteristics. These AtoN types continue to evolve not only in their capability, but in their charting complexity as well. See example of a complex light in figure 1.

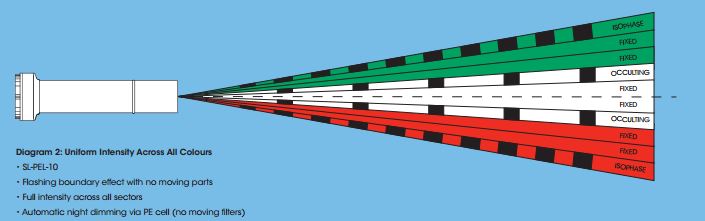


Figure 1 - Sealite Port Entry Light

* Issue 2: Prior to the widespread use of ENCs and the automation of AtoN data exchange between AtoN Authorities and their corresponding Hydrographic Offices (HOs) the waterway designer would directly communicate with the cartographer to express charting requirements yielding an appropriate portrayal of the AtoN on the paper chart. The advent of the ENC and digitised data exchange has removed this verbal exchange and a gap now exists.

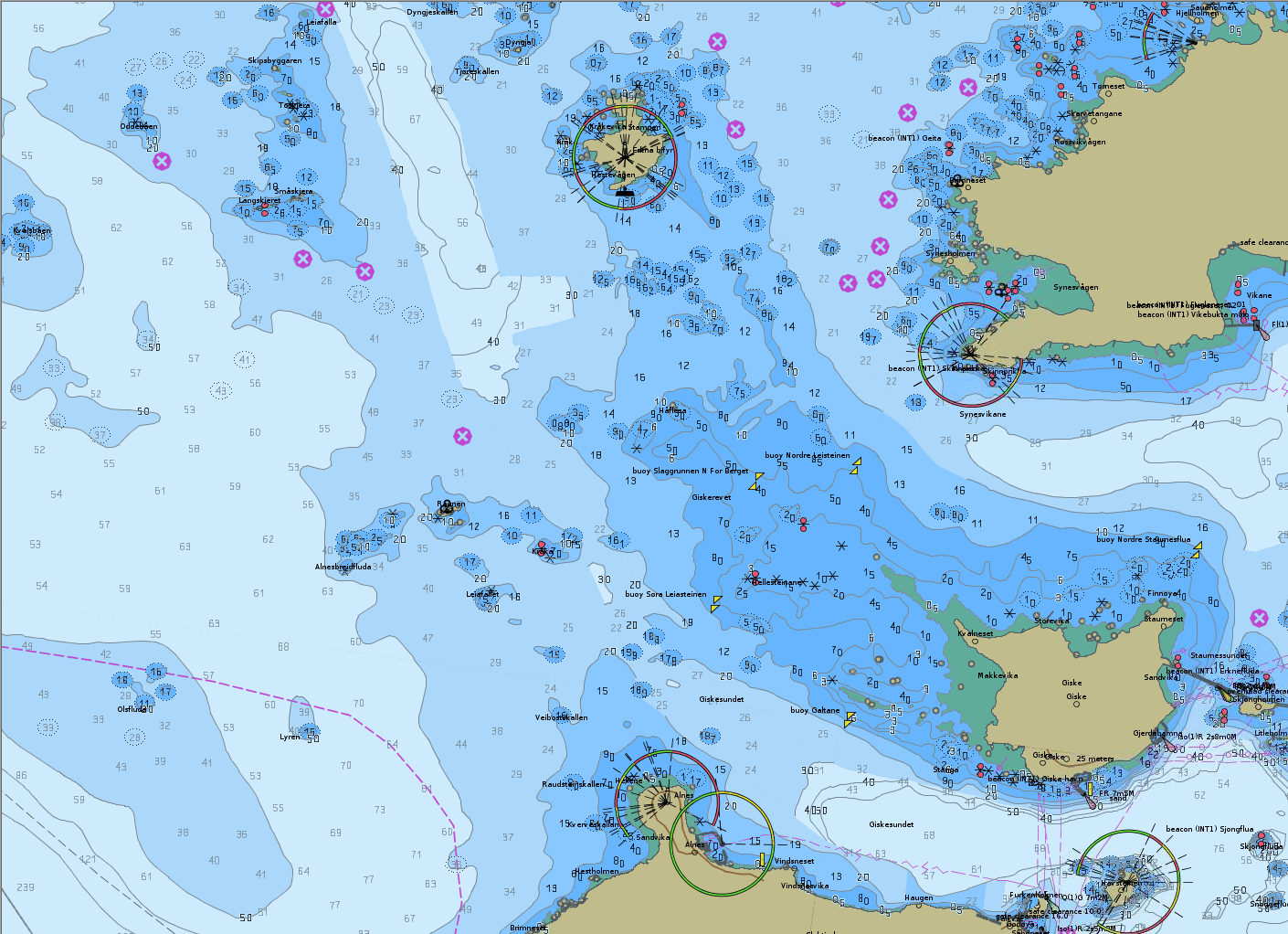


Figure 2 - Portrayal of light sectors in an ENC chart

The question for IALA that these two issues raise is: should IALA S-2xx Product Specifications include encoding/portrayal “advice” which will inform HO Cartographers as to the intended use of an AtoN or other AtoN Authority related services to ensure appropriate portrayal?

Proposed Solution: It is not the intention of the ENAV Committee to recommend that AtoN Authorities assume complete responsibility for portrayal of AtoN in an ENC, but rather provide encoding details which will assist the HO in appropriately portraying an AtoN so that the intention of the AtoN is clear to the mariner. Therefore, the recommend solution would encourage the AtoN Authority to provide encoding details consistent with the existing HOs encoding guidelines to inform rather than replace the cartographer. Examples of the encoding guidance include recommended SCAMIN values, lengths and placement of Nav Lines associated with an AtoN, etc. An example of this collaboration between an HO and an AtoN Authority can be found in the U.S. where the USCG is automating AtoN data exchange with the HO. The formats of these dataset files include the S-57 attributes necessary to encode the AtoN data on an ENC with minimal human interaction. These datasets adhere to IHO encoding guidelines and it is the intent to migrate these datasets to comply with the S-100 and S-201 standards when adopted.

The ENAV Committee drafted an input paper to the Policy Advisory Panel (PAP) using the text above and requested the Panel to:

1. Determine if further guidance to members is required in terms of providing encoding guidance to their respective HO. If further guidance is needed, assign development of an IALA Guideline for AtoN S-57 and S-100 Encoding to the appropriate committee.

# ACTION REQUESTED

The ARM is requested to:

1. Consider the input paper to PAP and comment as neccessary.