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1   Introduction

We have been asked as manufacturer to provide inside view how the end user experience – measured as speed of operation – could be improved when changing from S57 to S101. This document tries to give an answer for this question.

2   How to reduce loading and drawing time

Topic	What to do	Details	Proposal for improvement	Other benefit
Shorten load and drawing time	Make size of spatial data smaller by using point reduction relative to compilation scale to avoid over accurate spatial data	Rules specify that an ECDIS is not allowed to use point reduction. Therefore this can only be done at source, which is Hydrographic Office	Make rules how production system for Hydrographic Offices should operate	
Shorten load and drawing time	Remove need to loop all under laying depth areas for OBSTRN, UWTROC, WRECKS	Technically the loop is inside conditional symbology DEPVAL02 which is called by OSBTRN06 and WRECKS04	Add new attributes to inform "LEAST_DEPTH" and "SEABED_DEPTH" of under laying depth area	
Shorten load and drawing time	Remove need to loop all light sectors for LIGHTS	Technically in LIGHTS05 there is a loop to find any other co-located light sector	Add new attribute to inform about co-located light sector	
Shorten load and drawing time	Remove need to loop all light flares for LIGHTS	Technically in LIGHTS05 there is a loop to find any other co-located light flare	Add new attribute to inform about flare at 45°	
Shorten load and drawing time	Remove need to indirectly seek "on floating platform" information for TOPMAR	Technically in TOPMAR01 there is a loop to find any other co-located object	Add new attribute "floating" to inform about floating or fixed platform	TOPMAR could be coded within normal lookup table method without conditional symbology

3   Coding based on ISO 8211, HTML or XML

Benefit of using HTML or XML for coding is their popularity and ease of use. However HTML is ASCII text and popular version of XML is also ASCII text. This would mean bigger file size for same information compared to binary coding based on current ISO 8211.

We do not see change of coding as possible method to improve end user experience.