

**IHO Colours & Symbols Maintenance Working Group (C&SMWG)
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C&SMWG Contribution to “Entry Prohibited”

Mathias Jonas
Chairman of C&SMWG

Hamburg, 27. April 2004

Comments on Circular Letter 04/2004 distributed by CSPCWG in 2004

Dear Andrew,

Based on comments I received from various members of the C&SMWG and with my own opinions added, I would like to reply to the Circular Letter CL 04/200 (in blue wording).

1. New symbol “ Entry Prohibited“

Three options are in discussion:



[Magenta] Danish proposal



[Magenta] S-52 symbol “area where entry is prohibited or restricted or to be avoided”, already in use for the display of ENC’s. In night vision mode it appears very similar to the Danish proposal.



[Magenta] International “Keep out” symbol

The Danish proposal is the photographic negative of the S-52 daylight symbol and is more prominent, but too prominent for ECDIS. It would obviously preferable to have the same symbol for both media, but C&SMWG would prefer not to change its own one. C&SMWG agrees on avoiding text legends; S-52 avoids them at any cost as being more cluttering than symbols.

2. New symbol “Diving prohibited”



[Magenta] Meaning: *Diving Prohibited*

The diving symbol is definitely too detailed for monitor display. For ECDIS an equivalent symbol should be simpler in shape.

3. New symbol “ Seabed Operations Prohibited“



[Magenta] Meaning: *Seabed Operations Prohibited*

The claw symbol is more appropriate to get displayed on monitors, but would perhaps be better-looking if it were an outline, not colour-filled. CSPCWG Chairman’s comments about

ambiguity are shared. Apart from this it is unclear to what kind of operation this prohibition belongs to: anchoring, fishing, exploration of seabed like dredging, oil drilling? In the latter those activities should not start/prohibited on the basis of a chart symbol. Before the meaning of this symbol is not clarified its introduction is questionable in general.

4. New symbol class “ **Activities not advisable** “



The difference is that instead of a **prohibition** being indicated by the activity symbol being “crossed out” X, the activity is “**inadvisable**” or “**dangerous**”, indicated by a single / through the symbol.

C&SMWG originally decided on a single stroke rather than an X as in INT 1 IN 20 as a simpler symbol, to reduce clutter. The direction of the blue stroke (NE/SW) is the more common / righthanded slash.

The significance of "X" versus "/" might be lost on most mariners, although they might get used to it if they saw it all the time.

The "not advisable" constraint was not among the restrictions for which the ECDIS symbol was intended. ECDIS currently distinguishes only between outright "prohibited" and the more general "restricted". It appears doubtful if the distinction between "restricted" and "not advisable" is strong enough to build a difference in symbolisation on it. Presumably "restricted" means it is illegal to do it, whereas "inadvisable" means it may be bad for someone's health to do it. Is it appropriate to make so many subtle distinctions? If the "not advisables" are needed, why not call them another type of restriction? It is expected that this would be the way this advice will be incorporated into S-57 object catalogue as a further set of values for attribute RESTRN to those ENC objects which are affected, and then the applying Conditional Symbology Procedure (CSP) of S-52 would be adapted to process and display this feature.

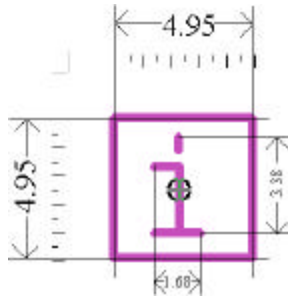
The general impression is that the proposed symbols are too prominent. Another general principle of ECDIS is to make the symbol prominence proportional to the danger to safety of navigation. The fact that an area is inadvisable for diving or digging up the seabed is hardly a danger to navigation and so it is not strong argument for any new symbol on ECDIS.

The introduction of the new symbol class could be of course managed for the purpose of ECDIS, however it should be generally considered that there is a fundamental difference between ECDIS and paper charts: ECDIS is above all a real-time ship-handling system, which means the mariner must understand everything on the display at a glance. This is in contrast to the paper chart which is a general archive of navigation information and a voyage planning tool, and which is used for actual navigation only in a situation where there is plenty of time for plotting fixes and taking avoiding action. To provide instant understanding we must always be on the guard against information overload. Following this it has always been a guiding principle of ECDIS display design to keep the number of different symbols to a minimum. Although the mariner can de-select info he does not want on ECDIS, I still think we need to be selective as well and avoid information overload, even to the extent of limiting what goes in the ENC.

The proposed introduction of this new category of information like the diver and the dredging claw plus the “inadvisable” attribution raises a general point for CHRIS to discuss: This 'inadvisable' category may well be important knowledge about the sea area (and the PSSA/ESSA information is much more so). But neither of them directly affect safety of

navigation, which should be our prime concern. I think it is necessary to maintain some priority in the importance attached to various types of info, based on their importance to the safety of navigation, and carried through to the prominence with which the information is shown on charts.

However, if this type of info does end up in the ENC and S-52/PresLib has to symbolise it, one way of handling it on ECDIS might be to use the "HO information note" SY(CHINFO07).



Then the mariner uses his cursor (ideally during route planning) to find out what the "other information" is.

5. consistency with international signage conventions

Standardisation in general is always desirable. However, C&SMWG in particular gained less encouraging experience with the introduction of radically new symbology. The invention of the so called "simplified symbology" for fixed and floating aids to navigation consisting of simple geometric primitives like colour filled triangles, circles and rhomboids was not very well received by the mariners. Instead, the imitation of the paper chart symbology on the ECDIS screen - although less useful for monitor display – is still much more popular. It appears to be an immense amount of work to convert the existing INT symbology and to get wide acceptance for this by usually conservative mariners. If any, the adaptation to international signage conventions should only be a long term activity commonly pushed forward in both worlds, paper charts and ECDIS.

Mathias Jonas
Chairman of C&SMWG