

RESPONSE FROM CSMWG TO CSPCWG LETTER 02/2006

M4 part B-430 to 439 Regulated Areas and Routeing Measures

COLOUR DISTINCTIONS

CSPCWG has identified the "arbitrary division between **black** and **magenta** " as "a big issue". CSMWG agrees that this colour distinction is important and from the start our convention for ECDIS has been:

Black is in fact restricted to physical (i.e. real-world) features critical to safe navigation, such as rocks, dangerous soundings less than the safety depth, etc. We use grey or magenta rather than black for non-physical features such as recommended tracks and routeing.

Magenta is used for physical features critical to safe navigation, and for mandatory IMO routeing and restricted areas (M4 - 432.2 and 439). Examples are isolated dangers, Traffic Lanes etc.

Grey is used for less critical physical objects, and for advisory traffic directions and 'non-restrictions' (M4 - 439). Examples are non-dangerous soundings, fairways, harbour areas and (following M4) Recommended Tracks.

(The attached Table 1 from S-52 App.2 C&S Specifications gives more details on colour assignment for ECDIS)

CSMWG would like to maintain the distinction between magenta for IMO approved mandatory Routeing Systems, compared with grey, showing a lower level of caution, for Fairways, recommended tracks etc. which are established by the HO or other local authority for guidance.

FAIRWAYS

We have been guided in this colour distinction by the definition of Fairway in the S-57 Object Catalogue:

"(A Fairway is) that part of a river, harbour and so on, where the main navigable channel for vessels of larger size lies. It is also the usual course followed by vessels entering or leaving harbours, called 'ship channel'. (International Maritime Dictionary, 2nd. ed.)

Your definition in B-432.1c. is similar:

"A Fairway, sometimes called Ship Channel, is the main navigable channel in the approaches to, or within, a river or harbour,"

In contrast a routeing system is defined by IMO, as quoted in your para B-435a:
" The purpose of Routeing is to improve the safety of navigation in converging areas and in areas where the density of traffic is great or where freedom of movement of shipping is inhibited by restricted sea-room - - -"

As CSPCWG points out in B-439, a Fairway may or may not also be a 'Restricted Area', i.e. a Routeing System as defined above. Under these uncertain circumstances CSMWG prefers to avoid the solution of representing **ALL** Fairways as Routeing Systems by colour-coding them in magenta, since that would raise the alarm level unnecessarily in the many cases where a fairway is not a Routeing System.

CSMWG would prefer that HOs whose Fairways are in fact Routeing Systems would encode them as such (perhaps as Precautionary Areas). An alternative suggestion would be that TSMAD introduce a new attribute 'category of fairway' to S-52 object catalogue, to specify whether the Fairway is also a routeing system or not. The advantage is that these possibilities represent solutions rather than work-arounds.

ECDIS does not display a label 'Fairway' or a minimum depth as proposed for the paper chart because of the general principle to minimise text which causes clutter on ECDIS. Instead, ECDIS offers the mariner to get additional information by cursor picking based on his individual needs and the current situation.

However ECDIS symbolises the 'designated outer limits' of a Fairway, but with a grey 'cold front' complex linestyle which identifies the inside of the area in the case that the display is enlarged to show only one boundary. This differs from the plain long-dash line which CSPCWG proposes by the diagram for B-435.

ECDIS presentation rules in place show grey traffic direction arrows in Fairway areas, as in B-435.1d.

BOUNDARY LINSTYLES IN GENERAL

For information of CSPCWG, the following list contains ECDIS symbolisation of the "Black" areas in B-439.1:

dredged area:	dashed grey boundary line plus faint dot pattern,
inadequately surveyed (quality of data):	dashed grey line plus pattern of stars,
unsurveyed area:	solid grey line then grey background fill,

foul ground:	grey 'cold front' line plus "#" symbol,
spoil ground:	grey 'cold front' line plus boxed magenta "i" symbol,
marine farm:	grey 'cold front' line plus fish in cage symbol
log pond:	dashed black line plus new floating hazard symbol

and here is how ECDIS symbolises areas proposed to be printed in "Magenta" according to CSPCWG suggestions:

- swept area:	grey 'cold front' line with swept depth in staple-shaped symbol,
harbour authority limit:	grey 'cold front' line,
anchorage area:	dashed magenta line with embedded anchor,
fairway channel:	grey 'cold front' line with grey traffic direction arrows,
routeing measure boundaries:	magenta, as in INT1 diagram IM,
customs zone:	faint grey dashed line,
shellfish beds:	grey 'cold front' line with appropriate symbol.
cargo transshipment area:	grey 'cold front' line with magenta boxed "i" symbol.

COINCIDENT BOUNDARIES (B-439.6)

ECDIS S-52 PresLib uses a number of double-coded complex linestyles for area boundaries (e.g. anchorage area, anchorage restricted, submarine cable area etc.) but do not attempt to apply multiple coding for coincident boundaries because to do so would introduce too much complexity for the resolution of a computer monitor which is still considerably lower than printing. Consequently, on ECDIS all coinciding boundary lines except the boundary of the object with the highest display priority are suppressed.

Finally, like the CSPCWG the CSMWG prefers to avoid non-essential changes, because of the expense and real difficulty of changing manufacturers' software and the near-impossibility of changing the software of ECDIS at sea.

I appreciate your including of CSMWG in your distribution, and apologise that this reply is late. I have attached the questionnaire which accompanied your letter.

Mathias Jonas,
Chairman, IHO CSMWG.

QUESTIONS ARISING FROM DRAFT REVISION OF B-400 TO B-429

Response form

(please return to CSPCWG Secretary by 19 April 2006)

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	Specification	Question	COMMENT	
1	B-432.1	Do you agree to remove the reference to B-481.2 (directional radio-beacons)? (It is believed that directional radio-beacons are no longer used.)	Yes	
2	B-432.1 & B432.2	Is there a good reason to include the French translations in the English version? (eg does this help English speakers?)	Occasionally	
3	B-432.3	Are M5.1 and M5.2 symbols used? If YES, please explain the difference between the arrows in the two versions of M5.1. Also, why is 'SEE NOTE' in capitals?	We have to decode S-57	
4	B-434.5	Do you agree with the draft specification for Fairways? It is hoped that the definition and available options provide sufficient variation to cover Finland's need for a symbol for their 'Fairway Areas' and other types of recommended fairways with designated outer limits. Your comments on this would be welcome – see text of letter for summary.	See C&SMWG response above	
5		Do you agree with the proposed method of showing a maximum authorized (or recommended) draught within a fairway? Please comment if you wish to suggest some other method.	We only show min. depth for swept area	
6a	B-435.1d	Do you agree to a wider use of the 'Established Direction of Traffic' arrow, other than in TSS Traffic Lanes – for example in Fairways established by port authorities?	See C&SMWG response above	
6b		If YES at 6a, should the paragraph be moved to B-435.5?		
7	B-439.6k	Do you agree with the draft proposals for portraying multi-feature lines?	Please see C&S	

		If NO, please provide alternative proposals.	comments on CSPCWG letter 15/2005	
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Comments:

The cross-references, and also the quotations from IMO sources including "*Ships' Routing*" are helpful.

Please also see accompanying note
"RESPONSE FROM CSMWG TO CSPCWG LETTER 02/2006"

Name: CSMWG

Member State IHO

TABLE 1: GENERAL COLOUR ASSIGNMENT FOR ECDIS FEATURES

<u>black/white</u>	(black by day / white by night) is used for critical navigation features which need highlighting by contrast against their background to give them adequate prominence. Examples are the own-ship symbol, dangerous soundings less than the safety depth, buoys, conspicuous objects on land etc. It is also used for text, which is less clear in any other colour.
<u>white/black</u>	(white by day / black by night) as a background area shade is used for deep, safe, water.
<u>magenta</u>	is used to highlight critically important features such as isolated dangers, traffic routes, anchorages; and for restricted areas, submarine cables, gas pipelines etc. It is also used for aids to navigation and services such as daymarks, racons, and pilot stations.
<u>grey</u>	is used for many features which are black on the paper chart. It is used with thick lines for critical physical objects such as bridges and overhead cables, and with thin lines for important but less critical physical features such as non-dangerous soundings, sandwaves, overfalls, water pipelines and fish farms. It is similarly used for chart features such as fairways, harbour areas, tidal information and for information about the chart such as quality of chart data, overscale areas, etc.
<u>grey</u>	as a background area shade is used with a prominent pattern for no-data areas.
<u>blue</u> <u>blue</u>	as a background area shade is used to distinguish depth zones. is also reserved as a foreground colour for future requirements, possibly AIS or VTS information.
<u>green</u>	is used for the radar image and synthetics, and for buoy and lights colours.
<u>blue-green</u>	is used for transferred ARPA.
<u>yellow-green</u>	('moss-green') as a background area shade is used for the intertidal area between high and low waterlines,
<u>yellow</u>	is used as the manufacturer's colour; for the mariner's transparent colour fill; and for buoy and lights colours.
<u>red</u>	is used for the important planned route, for the mariner's danger highlight, and for buoy and lights colours.
<u>orange</u>	is the mariner's colour, for notes, chartwork, chart corrections. The scale bar, north arrow, and mariner's navigation objects such as EBLs and VRMs are also orange.

brown

as a **background area shade** is used for the land, and dark brown is used for features on land and in the intertidal area that do not have any strong significance for navigation.