



Ref. T2-OSS/2.7

SN.1/Circ.207/Rev.1
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DIFFERENCES BETWEEN RCDS AND ECDIS

1 The Maritime Safety Committee, at its eighty-third session (3 to 12 October 2007), adopted revised performance standards for Electronic Chart Display and Information Systems (ECDIS) and accordingly agreed to the revision of SN/Circ.207 on difference between Raster Chart Display System (RCDS) and ECDIS.

2 ECDIS has the ability to operate in two modes:

- .1 the ECDIS mode when Electronic Navigational Charts (ENCs) are used; and
- .2 the RCDS mode when ENCs are not available and Raster Navigational Charts (RNCs) are used instead.

However, the RCDS mode does not have the full functionality of ECDIS, and can only be used together with an appropriate portfolio of up-to-date paper charts.

3 The mariners' attention is therefore drawn to the following limitations of the RCDS mode:

- .1 unlike ENC, where there are no displayed boundaries, RNCs are based on paper charts and as such have boundaries which are evident in ECDIS;
- .2 RNCs will not trigger automatic alarms (e.g., anti-grounding). However alarms and indications can be generated with the manual addition, during passage planning, e.g., of clearing lines, ship safety contour lines, isolated danger markers and danger areas to mitigate these limitations;
- .3 horizontal datums and chart projections may differ between RNCs. Mariners should understand how a chart's horizontal datum relates to the datum of the position fixing system in use. In some instances, this may appear as a shift in position. This difference may be most noticeable at grid intersections;
- .4 a number of RNCs cannot be referenced to either WGS-84 or PE 90 geodetic datums. Where this is the case, ECDIS should give a continuous indication;
- .5 the display of RNCs features cannot be simplified by the removal of features to suit a particular navigational circumstance or task at hand. This could affect the superimposition of radar/ARPA;
- .6 without selecting different scale charts the look-ahead capability may be limited. This may lead to inconvenience when determining range and bearing or the identity of distant objects;

- .7 orientation of the RCDS display to other than chart-up, may affect the readability of chart text and symbols (e.g., course-up, route-up);
 - .8 it is not possible to interrogate RNC features to gain additional information about charted objects. Whether using ENC or RNC, in the planning process a navigator should consult all relevant publications (such as sailing directions, etc.);
 - .9 with RNC it is not possible to display a ship's safety contour or safety depth and highlight it on the display, unless these features are manually entered during route planning;
 - .10 depending on the source of the RNC, different colours may be used to show similar chart information. There may also be differences in colours used during day and night time;
 - .11 an RNC is intended to be used at the scale of the equivalent paper chart. Excessive zooming in or zooming out can seriously degrade the displayed image. If the RNC is displayed at a larger scale than the equivalent paper chart, the ECDIS will provide an indication; and
 - .12 ECDIS provides an indication in the ENC which allows a determination of the quality of hydrographic the data. When using RNCs, mariners are invited to consult the source diagram or the zone of confidence diagram, if available.
- 4 Member Governments are requested to bring this information to the attention of the relevant authorities and all seafarers for guidance and action, as appropriate.