

**14<sup>th</sup> CHRIS MEETING**  
**Shanghai, China, 15-17 August 2002**

**USE OF ENC NAVIGATIONAL PURPOSE CODES**  
(relating to S-57 Editions 3.0 and 3.1)

submitted by Australia

**Introduction**

1. During discussion at the recent IHO - Stakeholders (“*industry*”) meeting, it was pointed out that an efficient and timely mechanism does not exist in ECDIS that enables port authorities and similar organisations to provide the latest and most detailed information to ships using their ports. Such information is particularly valuable for berthing and for manoeuvring in confined spaces in ports and harbours.

2. At the stakeholders meeting, Australia pointed out that it was aware of this shortcoming and had adopted a policy to overcome this problem. Australia’s information was greeted with enthusiasm by a number of those participants representing port authorities, ENC and ECDIS software developers, and mariners. Those participants asked that such arrangements might be formalised and made public. This proposal seeks to achieve this.

**Discussion**

3. Many port authorities wish to provide their pilots and ships with the latest survey information for their ports. This assists vessels and maximises the use of both the vessels and the ports that they frequent.

4. When port authorities provide the latest and usually highly detailed survey information to HO’s, such things as limitations of chart scale, production deadlines or limited resources mean that published charts often do not incorporate the information. Even when they do, it takes a considerable time to produce a new or updated chart product. In situations where the seafloor is dynamic, this turnaround time means that such information is of limited value by the time it is incorporated into official chart products. To overcome this, some port authorities wish to supply vessels with locally produced and up to date information in the form of a compatible S-57 dataset. However, unless this is carefully controlled, there is the potential for conflict between official ENC data in an ECDIS and data supplied by a port authority or similar agency. For this reason, the Australian Hydrographic Service (AHS) decided that it would leave Navigational Purpose code 6 (Berthing) for the exclusive use of port authorities and similar organisations.

5. The area of coverage, the quality and the amount of information provided, and to a lesser extent the scale of the source data, are all factors in selecting the appropriate navigational purpose code. Nevertheless, the practical effect of Navigational Purpose codes in ENC is similar to the arrangement of paper chart coverage at various scales. As increasing detail is required, so the scale (or in the case of ENC, the navigational purpose code) increases. The navigational purpose codes have been defined as follows:

Navigational Purpose	Definition for intended usage
1. Overview	For route planning and oceanic crossings
2. General	For navigating oceans, approaching coasts and route planning
3. Coastal	Navigation along the coastline, either inshore or offshore
4. Approach	Navigating the approaches to ports or major channels or through intricate or congested areas
5. Harbour	Navigation within ports, harbours, bays, rivers and canals and for anchorages etc
6. Berthing	Detailed data to aid a vessel to berth

6. **“Official” Chart Status.** In accordance with SOLAS V/2.2 chart databases used for marine navigation in ECDIS must be “*issued officially by or on the authority of a Government, authorized Hydrographic Office or other relevant government institution*”. Since many port authorities are privately owned, rather than government institutions this appears to present a problem at first. However, it is Australia’s view that it is not necessary for high definition navigation Purpose Code 6 berthing data in ports to be designated as an “official” chart. This is because the use of such data, by its nature, will be confined to ship manoeuvring rather than ship navigation. It is in fact no different to the situation that applies in many ports now, where the master or pilot refers to a paper copy of a port surveyor’s fair sheet in determining the precise manoeuvring of a vessel within the port. As such, this proposal does not compromise the requirements of SOLAS V with respect to the proper use of ECDIS for ship navigation.

### Conclusion and Recommendation

7. Australia has identified a practical mechanism to enable port authorities to provide up-to-date and useful hydrographic information to ships using ECDIS. In Australia’s view, it would now be useful for the IHO to provide guidance so that this arrangement can be applied more widely.

8. S-57 Appendix B.1, Product Specifications for ENC and its associated Annex A Use of the Object Catalogue, does not provide any specific details or encoding rules about navigational purpose 6 for berthing at the moment. Australia proposes that TSMAD be invited to investigate this topic and provide relevant guidance for port authorities and similar organisations within the proposed Edition 4.0 of S-57, now in preparation.

9. Meanwhile, advice by IHB CL appears to be the most suitable method of general promulgation together with the adoption of a new Technical Resolution. HOs would then be in the best position to consider their options as they apply in their countries and to advise port authorities and similar organisations within their nations as appropriate, including referring them to the relevant IHO publications. Some HOs may even be in a position to offer some basic training or advice on the encoding and quality assurance of such electronic charts for manoeuvring and berthing.

### Action Required

10. The CHRIS is requested to:

a. **endorse** the proposal that:

ENC producers are strongly recommended to consider reserving Navigational Purpose code 6 (Berthing) for the use of port authorities and

similar organisations to supply ships using ECDIS in their ports with compatible, high definition, up-to-date hydrographic data;

and if accepted,

- b. **endorse** the following new Technical Resolution:

B 1.18 BERTHING CHARTS for ECDIS

1. It is recommended that HOs encourage port authorities or similar organisations to provide or publish data for berthing and manoeuvring that is compatible with ECDIS, following as closely as possible the standards recommended by the IHO for the compilation of electronic charts (S-57).

2. HOs are recommended to reserve the use of ENC Navigational Purpose code 6 (Berthing) to such chart producers in order to avoid data conflicts with HO produced data.

3. There is no requirement for the issuing authority (if not a HO) to incorporate updates, but a warning should be embedded into the data if this is the case. HOs should encourage such authorities to keep any berthing charts up to date and where possible assist with quality assurance and distribution.

4. Such chart data provided by port authorities or similar organizations is intended for berthing and manoeuvring as opposed to navigation. As such, the authority of a Government, authorized Hydrographic Office or other relevant government institution may not be required.

and,

- c. invite the IHB to:

- (1) **seek** formal approval of draft TR B.1.18.
- (2) **issue** a Circular Letter encouraging HOs to advise port authorities and similar organisations within their nations of the possibility of compiling and releasing electronic data compatible with ECDIS for berthing and manoeuvring purposes.

- d. **Invite** TSMAD to investigate and prepare appropriate guidance for HOs, port authorities and similar organisations in the compilation of berthing and manoeuvring charts within the relevant section(s) of the proposed Edition 4.0 of S-57.