

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

**RASTER NAVIGATIONAL CHART UPDATE SERVICE**  
*(August 2002)*

United States (NOAA)

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The United States (NOAA) reported at the 13<sup>th</sup> CHRIS meeting on its efforts to make and distribute raster navigational charts (RNCs). This report describes progress made over the last year.

1. Raster nautical charts (RNCs) of the United States are produced under the authority of NOAA by Maptech, Inc. NOAA provides raster chart files that it certifies for navigation use. Maptech then uses jointly-developed and Maptech-developed technology to make RNCs. The resulting product is available commercially from Maptech.
2. NOAA and Maptech developed and began offering a weekly update service for the RNCs in 2001. This was done in order to provide an S-61 compliant RNC that may be used by an ECDIS when operating in the RCDS mode. For this update service, NOAA updates the raster files of its charts each week for all Notice to Mariners corrections. The corrected files are transmitted to Maptech who extracts a file of the changes, and prepares an update patch file. Subscribers receive an e-mail with an embedded .ftp link. Clicking on the link initiates transmission of the update patch file.
3. Each update patch file contains the accumulation of all corrections to all charts on a CD-ROM of RNCs. In order to reduce the amount of information being transmitted each week, Maptech has developed and is testing an incremental update capability. This lets Maptech query a subscriber's computer and determine exactly which updates are needed. Then, only those needed updates are transmitted. The incremental updates are expected to be available in 2002.
4. The weekly update service costs \$300 per year per region (60 RNCs). The service has several hundred subscribers, most all of whom are professional mariners. The largely automated process is stable and reliable. Mariners have been receptive to RNCs and the update service, and are using them with ease and confidence.
5. The attention of the CHRIS is drawn to three facts. First, RNCs and weekly updates now exist for the entire United States. Second, the product and service have proven to be reliable, accurate, safe, and easy to use. Third, RNCs and updates are being readily accepted and used by professional mariners and recreational boaters alike.
6. In light of these facts, the CHRIS is invited to reconsider the restrictions on the use of RNCs and the RCDS mode of operation of ECDIS; and to initiate action to remove those restrictions. Those restrictions permit use of RNCs and the RCDS mode of operation only when ENC's are not available; and mariners must carry an appropriate folio of up-to-date paper charts as a supplement to RCDS. The RCDS mode of operation has proven to be an enhancement to the safety of navigation in its own right, and mariners should be permitted to elect to use it based on their own situation, preferences and ability.