Navigation Safety Advisory Council (NAVSAC)

Resolution 16-03

(Introduced as Task Statement 15-05 not to supersede the recommendations provided within Task Statement 15-05 as developed in the September 2015 NAVSAC meeting)

Electronic Chart Systems

Whereas, the Coast Guard has received periodic inquiries from the U.S. marine industry about the use of electronic charts on non-SOLAS commercial vessels. The Coast Guard Maritime Transportation Act of 2004 directed the Coast Guard to implement regulations (i.e., revisions to 33 CFR 164) that will require electronic charts on some domestic vessels making domestic voyages.

(a) In general - The Radio Technical Commission for Maritime Services (RTCM) recently updated their performance standard for Electronic Chart Systems (RTCM 10900.6 ECS standard), which was published in July 2015. The Coast Guard intends to use this performance standard as a basis for possible future regulations. In the meantime, the Coast Guard developed interim policy that allowed the use of official Electronic Nautical Charts in lieu of paper charts. This policy will be re-opened for content change due to an administrative error regarding training. The Coast Guard is taking that opportunity to reconsider some of the components of the policy (specifically applicability, integration and redundancy).

(b) Requirement - The Coast Guard requests NAVSAC’s resolution regarding the following task. Given NVIC 01-16 and MERPAC’s resolutions:

TASK:
1- What are the necessary inputs for an ECS to be equivalent to paper charts (e.g. position, gyro, AIS, radar, others)?
2- Provide feedback regarding our redundancy requirement as outlined in NVIC 01-16.
3- Provide response to MERPAC’s training recommendations outlined in MERPAC Task Statement 92.
4- Should we allow vessels required to carry the Navigation Rules to do so electronically?
5- Look ahead to possible regulations, what should the waiver parameters be for required carriage?
Whereas, the Coast Guard requested NAVSAC input to provide guidance for the aforementioned task, in response to Task 15-05 and NVIC 01-16, NAVSAC recognizes that electronic navigation equipment can fail. To this, NAVSAC recommends the Coast Guard use a risk based approach to determine which, if any, components of electronic navigation equipment must be provided with redundancy or backup. NAVSAC understands that redundant systems are nearly exact duplication of requirements, whereas backup systems are less than the requirements.

NAVSAC:

1- Recommends position fixing be required and accomplished via a GPS or other approved device which has position fixing capability input to all ECS systems. NAVSAC does not consider it necessary to require an ECS to receive input from radar, AIS, or stabilized heading input (Gyro, Satellite Compass) in order to be equivalent to a paper chart. However, NAVSAC encourages, if so equipped, the interface of radar, AIS, or stabilized heading input (Gyro, Satellite Compass) or any other available electronic inputs to enhance safe navigation.

2- Recommends, for vessels choosing to use ECS in lieu of paper charts, a secondary system be carried in accordance with RTCM classification standards as follows:
   a. Class (A) ECS users shall carry a redundant system.
   b. Class (B) and (C) ECS users shall carry at least a Class (C) capable system.

3- Endorses the familiarization training recommendations in accordance with MERPAC acceptance of Task Statement 92.

4- Recommends vessels required to carry Navigation Rules may carry electronic copies in lieu of paper copies in accordance with guidance found in Electronic Publications Carriage Sec (F) within NVIC 01-16.

5- Recommends the Coast Guard review current AIS carriage exceptions for guidance toward foreseeable ECS carriage waivers or exemptions and utilize the appropriate local Coast Guard authority for determination of waiver or exemption applicability.