



U.S. Coast Guard Supports Computer-Based Electronic Chart Systems

03 FEB 2016 - The United States Coast Guard has issued NVIC 01-16 as guidance to its inspectors and to vessel operators that it now considers ECS (Electronic Chart Systems) to be the equivalent of paper charts, and can completely satisfy the navigational carriage requirements of CFR 33 and CFR 46.

This brings the US merchant marine industry into the 21st century by allowing the use of electronic charts voluntarily in lieu of or in addition to certified paper charts.

To quote Rear Admiral Paul F. Thomas, author of this document, "Due to the current state of the technology, the Coast Guard believes that official electronic charts provide substantially more information to the mariner, and therefore enhance navigation safety beyond that of official paper charts." (See NVIC 01-16, Paragraph 5.c)

Key to successful implementation is the integration of GPS, AIS, radar and any other situational information. Also, for vessels using ECS for primary navigation, a second redundant system and independence from the primary ECS must be used. In practical terms, this would suggest that the primary would be a marine grade computer or MFD, and a backup consisting of a current folio of paper charts, or a second computer or MFD, would satisfy the requirement.

Integration with all installed navigational equipment is required. An open architecture marine grade computer offers the most flexibility and lowest overall installed cost of any approach. In particular, many legacy devices still use RS-232 serial ports, most radars today use ethernet, and the easiest way to update charts is via a wi-fi connection to the internet. Having Windows gives the ability to add more functionality and integration without adding hardware and improves the overall system dramatically. The ability to send and receive e-mails, run vessel management software or tie into NMEA2000 networked sensors go beyond the old dedicated proprietary "chart plotter" devices. A purpose-built Marine grade Windows PC such as those offered by Marine PC can provide that interoperability and connectivity. Using a cheap home or office computer product won't provide the improved reliability and functionality needed to fully achieve that enhanced navigational safety.

The best software today comes from vendors who support open Windows-based platforms. Two of the leading ECS vendors, Rosepoint and Nobeltec, along with many other fine programs, are fully supported by Marine PC computers. Any Windows-based product will work fine, which gives the user choices now and in the future.

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