



Multidimensional radar picture

Mariusz Waz

Naval Academy, Gdynia, Poland

In marine navigation systems, the three-dimensional (3D) visualization is often and often used. Echosonders and sonars working in hydroacoustic systems can present pictures in three dimensions. Currently, vector maps also offer 3D presentation. This presentation is used in aviation and underwater navigation. In the nearest future three-dimensional presentation may be obligatory presentation in displays of navigation systems. A part of these systems work with radar and communicates with it transmitting data in a digital form. 3D presentation of radar picture require a new technology to develop. In the first step it is necessary to compile digital form of radar signal.

The modern navigation radar do not present data in three-dimensional form. Progress in technology of digital signal processing make it possible to create multidimensional radar pictures. For instance, the RSC (Radar Scan Converter) – digital radar picture recording and transforming tool can be used to create new picture online. Using RSC and techniques of modern computer graphics multidimensional radar pictures can be generated. The radar pictures mentioned should be readable for ECDIS. The paper presents a method for generating multidimensional radar picture from original signal coming from radar receiver.