

MEDIA RELEASE

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MARITIME GEOSPACE OFFICER (MGO) – A NEW SEAMAN CATEGORY SPECIALISATION

(by CMDR Matthew Houston, RAN)

Chief of Navy recently announced the Maritime Geospace Officer (MGO) category stream. This new seaman officer category redesignates the hydrographic and meteorological/oceanographic specialisations and now sits alongside the Submarine, PWO and MCDO warfare specialisations. The MGO stream has two sub-specialisations: Hydrographic MGO(H) and METOC MGO(M).

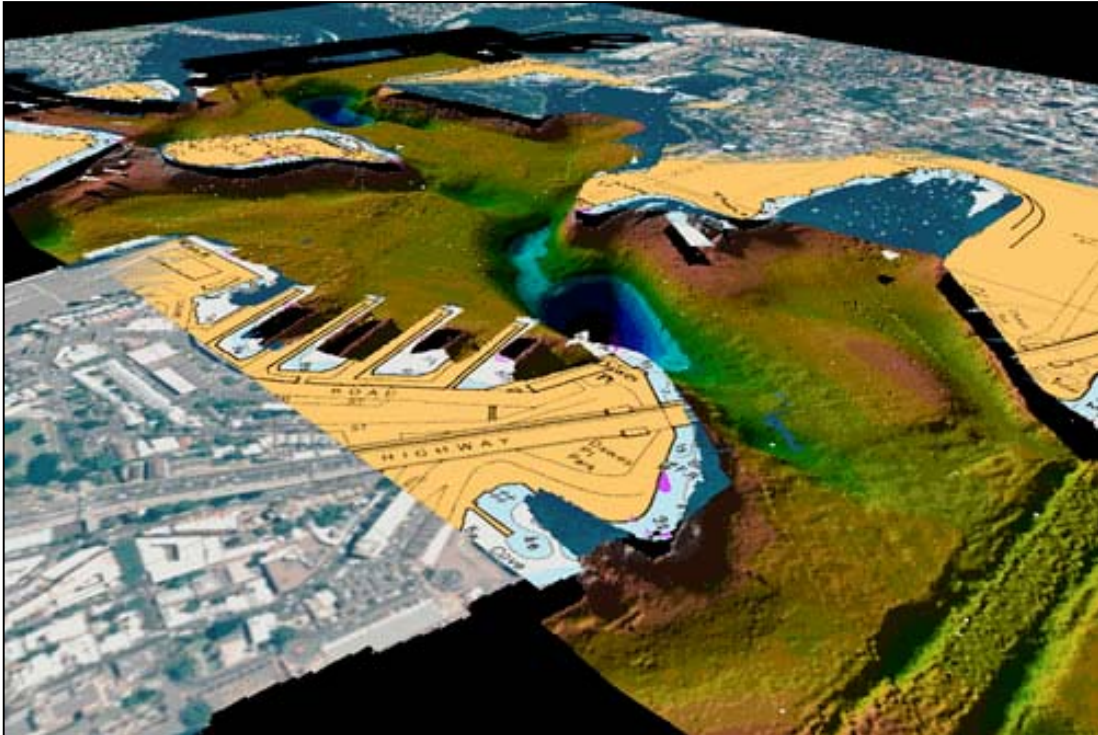
The MGO name reflects the latest developments in the concept of Geospatial Information & Services (GI&S). GI&S is the enhanced delivery of geospatial information that defines the battlespace. Maritime GI&S ensures navigation safety and provides the necessary freedom of manoeuvre for ships to seize and maintain tactical advantage.

The MGO category provides commanders and their staff with better "battlespace awareness" by providing up to date environmental data and information for the planning and execution of maritime operations. MGO's are drawn from the seaman officer category because they require a level of understanding of maritime operations to best interpret the maritime environment and advise the Commander. As well as providing traditional maps, charts and environmental forecasts, MGO specialists are the Commanders' direct support in providing advice and mission specific products. Increasingly, MGO's form part of Headquarters staff and during operations may also be deployed remote from survey ships. Personnel in Mobile METOC Teams (MMT) and the Deployable Survey Unit (HODSU) are able to integrate into HQ staff or embark in naval units.

Hydrographers and METOCs have always played a key role in maritime operations – history shows that the Normandy landings owed their success to covert hydrographic surveying prior to the D-Day landings, which were postponed by one day because of an accurate forecast of bad weather and sea conditions. During World War II, Task Group 70.5 consisted of numerous surveying units, which operated ahead of the main force in the Pacific theatre. More recent operations have continued to demonstrate the need to deploy maritime forces to areas where there is little or no environmental information. ADF operations in Bougainville, East Timor and the Solomon Islands, as well as the Persian Gulf deployments required rapid collection, analysis and dissemination of environmental data. This resulted in surveys, forecasts and observations being made before and during operations and led to new charts, and environmental briefs being produced in near real-time. HODSU in particular received commendations from the Commander Australian Theatre for operations in East Timor and from the Maritime Commander for the fundamental contribution they made to successful operations in The Solomon Islands.

Traditionally, situational awareness has been derived from charts, weather forecasts and other reference publications. However, rapid advances in technology now provide a greater range of product options. Technology permits the tailoring of products for the specific needs of an operation. Datasets such as satellite imagery, seabed images, nautical charts and topographic maps can be merged to provide graphic 2D and 3D images that offer superior situational awareness. MGO's can provide 3D fly-throughs for mission rehearsal that use real data, and tools that enable the dynamic display of environmental factors such as wind, tide, sea conditions, current and salinity.

The establishment of the MGO branch is a major milestone in the history of the Australian Hydrographic Service and Directorate of Meteorology. Members of this new warfare category have traditionally played a key combat support role during major and minor conflicts. The synergies gained by merging the hydrographic and METOC branches will ensure that the RAN receive the best possible maritime GI&S in future exercises and operations.



Merging of chart, aerial and satellite photography and seabed data in Sydney Harbour provide many alternate methods of viewing the geospatial environment.

The following series of visualisations of Cowley Beach (with exaguration of the vertical scale to heightlight detail) provides insight into the flexibility of the tools available to the MGO.

The first picture is a 3D view of the nautical chart. The second is a 3D view of aerial photography and finally the third is a colour-banded view of the water depths and land feature heights. These graphics emphasise a sample of the variety of data sets and the different ways in which they can be used to view a battlespace.

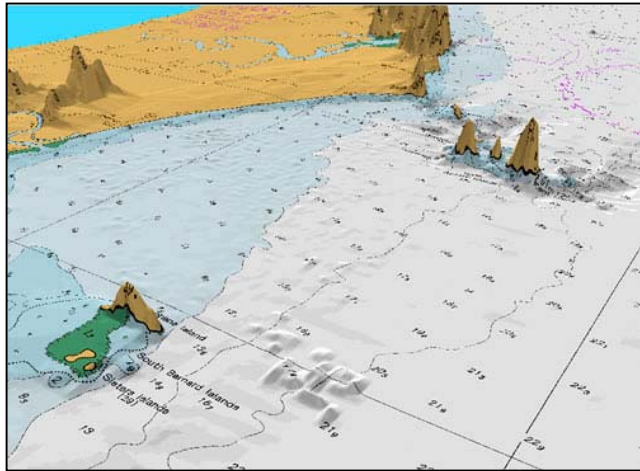
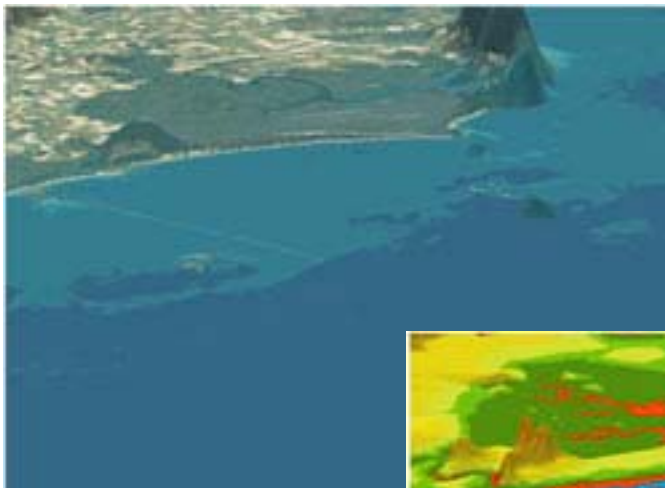
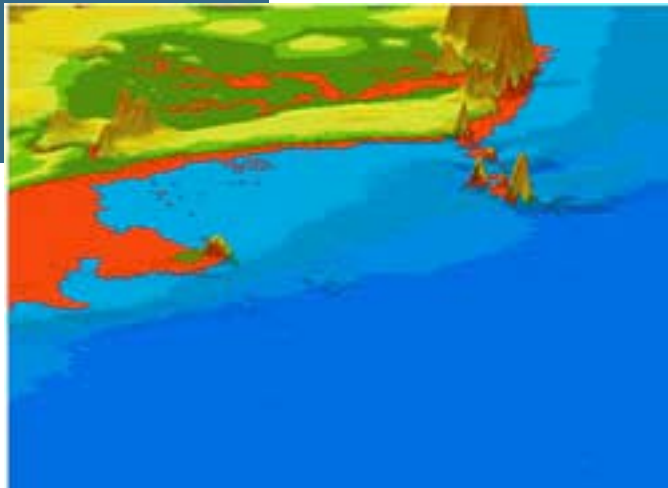


Figure 1: 3D Nautical chart



← Figure 2: 3D Aerial photography

Figure 3: Colour Banded seabed and land →



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