

## Paper for Consideration by HSSC4

### Magnetic Variation Product Specification

<b>Submitted by:</b>	USA (NOAA)
<b>Executive Summary:</b>	The USA proposes that additional investigations be performed to determine the appropriateness of a magnetic variation product and product specification.
<b>Related Documents:</b>	HSSC4-05.1E
<b>Related Projects:</b>	None

### Introduction / Background

Paper HSSC4\_05.1E proposes:

“... magnetic variation information is included on paper charts and within ENC cells. However in S-100 ECDIS magnetic variation information could be provided as a separate product which would provide more consistent and readably usable information for the user. Such an approach would also reduce the need for hydrographic offices to include and update this information within S-101 ENCs.”

### Analysis/Discussion

Paper HSSC4\_05.1E argues that:

- A separate, magnetic variation product could be produced in place of populating the ENC MAGVAR object.
- The inconsistent, although permitted, treatment of magnetic variation as a point, line or area feature would be eliminated by having a separate magnetic variation product.
- In some manner, the present method of distributing magnetic variation via MAGVAR inhibits the ability to “pick” for the value.
- Hydrographic offices would be freed of the work of populating MAGVAR by having a separate magnetic variation product.
- Global consistency would be achieved with a separate magnetic variation product.

While these points may be true, there are additional issues that should be considered before HSSC endorses a magnetic variation product and commits to writing a product specification. A partial list of such questions includes:

- Who will populate and physically distribute the new product? What role will the RENC's have?
- Do all nations accept the model?
- If this information is available, why not educate hydrographic offices to use that common data for their ENCs or provide an algorithm that reads ENC metadata, the model, and populates the MAGVAR object?
- Would the proposal in any way affect the attention given to magnetic anomalies information by mariners?
- Would use of the magnetic variation product be mandatory or could hydrographic offices opt out?
- Is it wise to split ENC data among multiple products that must be distributed, tracked, synchronized, and applied?
- Is there enough use of magnetic variation in an ECDIS to make this a worthwhile effort?

## **Conclusions**

There are broader implications related to the production, distribution and use of a separate S-100 based MAGVAR product. As with any other S-100 based product, there are also additional issues related to the need for ECDIS modifications and the deployment of software upgrades that should be considered.

## **Recommendations**

If HSSC determines that a separate magnetic variation product is desired, then the Work Plan should include expansion of the list of questions above and presentation of their answers at HSSC5 for reconsideration of its decision.

## **Justification and Impacts**

The impact of writing and adopting a magnetic variation product specification would be the additional labor needed to write the specification, to populate and distribute the product, and to modify ECDIS and train mariners to use it.

## **Action Required of HSSC**

Consider the unanswered questions above in deciding whether to write a magnetic variation product specification.