

Paper for Consideration by WENDWG
Experiences with regular grid ENC Schema- case study Finland

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| Submitted by: | Finland |
| Executive Summary: | Experiences of using regular grid in ENC production |
| Related Documents: | |
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Introduction / Background

When Finnish Hydrographic Office started making ENC's in 1999, we started scheming with a strict regular grid. We have never schemed our ENC's based on paper charts. Within few years working with the regular grid, we started to see the disadvantages of a too strict grid. Here are some of our experience.

Analysis/Discussion

With regular grid, we had some cells with very little information in the open sea or near the coastline. When the cell has no navigational aids or just a few soundings, there is no reason to have them as separate cells. To get rid of this issue we started merging these small cells into some of the neighboring cells.

Having a strict regular grid therefor means more ENC cells. We have counted that if we would still use that regular grid we had in the past, we would have 335 approach ENC with current coverage. Instead, we now only have 131 approach ENC. More ENC cells mean increased workload. Certain part of the ENC production and updating require certain amount of work per ENC cell. For example, updating, validating and uploading has to be done to every cell separately. When you have more cells, it takes more time and resources to manage them.

More ENC cells could also mean more expenses for the mariner.

Strict grid can also lead to situations where important features fall into different cells than the actual fairway. If you just mechanically split the data into different cells without analyzing the actual data you are presenting, it may result that safety critical information may fall outside the cells that the mariner is using. If for example, a single leading beacon is in the different cell than the fairway. Will the mariner buy that other cell just for that beacon? Or, is it better that we adjust the cell limits so that the feature related to that fairway is in the same cell as the fairway itself and we can be sure that the mariner has all the important features in the ECDIS.

Conclusions

Currently we scheme our ENC's freely. We analyze the data and find the best limits for the ENC cells. All of our cell are rectangular and the cells in the same usage never overlap. Our ENC scheme is a grid but is not a regular grid.

We have no problems with our current way of ENC scheming and we do not see any benefits in going back to regular grid.

Recommendations

Each hydrographic office should be allowed to decide how they scheme their data/products, whether they choose to use regular grid or another grid. It is more important that there are no gaps and overlaps in the data.

Justification and Impacts

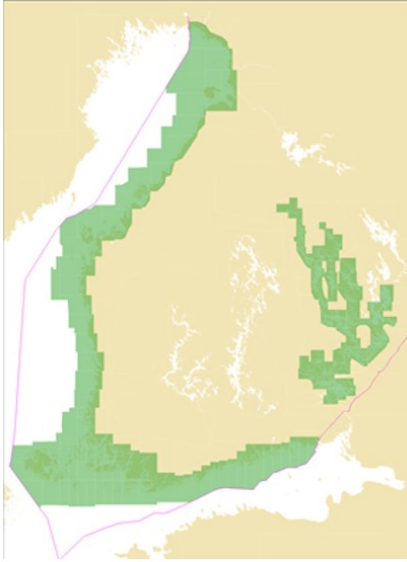
The main reason we gave up the regular grid was production efficiency reasons. It is a lot more efficient and easy to manage 130 cells than 350 cells. We feel there are other more important things we need to focus our resources on than the management of extra ENC cells. Our view is that having strict grid does not bring any benefits in the production.

Action Required of WENDWG

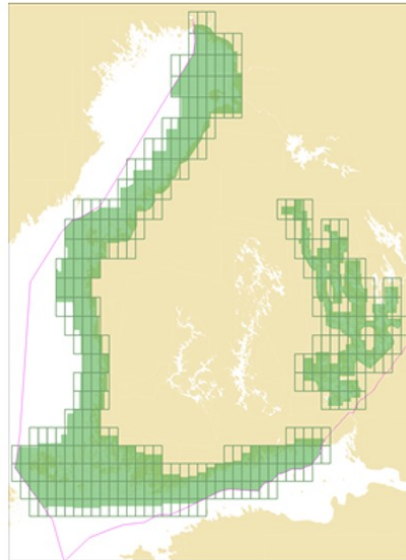
The WENDWG is invited to note a report.

Annex 1

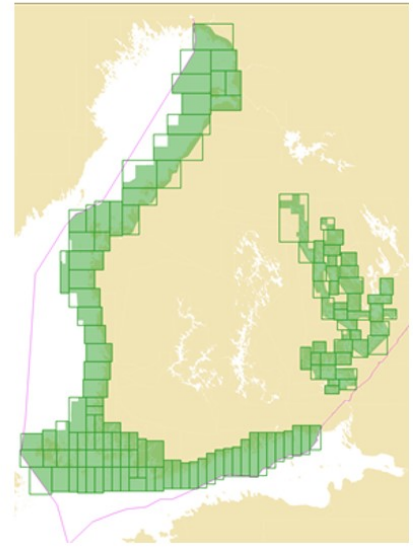
ENC scheming – approach (Finland)



Approach ENC coverage area



Regular 15'x15' grid, (335 cells)



Existing approach ENC -scheme
(131 cells)