

Integration of the Automated Compilation Tools in the CHS Chart Production Workflow

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In the world of hydrography, data acquisition has encountered an astonishing evolution in terms of collecting capacity, leaving behind chart compilation aspect with huge challenges. The time has come to fill that gap and enhance the capacity to deliver more data promptly. New products such as S-102 have a quick turnaround; The ENC needs to keep up with the pace to maintain consistency. In the near future, as part of its transformation, the Canadian Hydrographic Service (CHS) is looking at automating the ENC creation and updating. More interestingly, CHS is aiming at triggering the automated updating automatically when new validated bathymetry is loaded into its databases. Such approach can free up the cartographers' time to vet the resulting ENC rather than applying the edits manually.

Using a hybrid production/development approach, CHS has built from the ground-up a sequence of automated operations allowing the cartographer to generate, in a few clicks, the coastline, the depth contours, the relevant soundings and the quality of data polygons (M_QUAL). Pushing further, the resulting bathymetric features are automatically integrated into the CARIS HPD usage effectively replacing the old features by the new ones and cleaning the topology at the same time.

Using a computer to take each and every choice creates a result obviously different than the same task performed by a human. Such differences are most of the time positives as subjectivity has been removed from the decision process. However, some situations require the cartographer to alter the automated results where the computer has not been provided all the information required to make the best decision. The hybrid approach where chart production is done using in-development tools provides real-life use cases to enhance the models continually.