

16th Meeting of the Hydrographic Services and Standards Committee, HSSC16

Risks faced in S-100 implementation and mitigating those risks

Agenda Item HSSC16 7.12.A

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SevenCs / ChartWorld S-100 activities

- S-100 ECDIS kernel development
 - Currently implementing various S-10x products (for use in ECDIS)
 - S-98 interoperability and dual-fuel concept
- Solutions for S-100 services
 - S-100 data workflow management,
 - S-100 authentication (dataset signing, key and certificate management)
 - S-100 exchange set creation
 - S-100 validation (S-101, S-102, cross-product validation) and data fixing
 - S-100 data conversions (S-57 to S-101 and conversion 'back' from S-101 to S-57)
- S-100 ECDIS and demonstrators for testbeds

Concerns we have

- risk that not all S-100 Phase 1 specifications (incl. framework specifications) will meet the envisaged publication date in 2024
- S-98 Ed. 2.0.0 will be published in 2025 (not so much time left until entry into force of new ECDIS Performance Standard)
- at the time of writing, some fundamental functions of an S-100 ECDIS have not even been fully specified yet
 - loading algorithm
 - interoperability
 - consideration of accuracy information for alerts
 - S-101 update information

Risk of delays and their consequences

- delays in the completion of the standardization work will ...
 - delay the development of validation standards and completion of IEC test standards
 - leave less implementation time for ECDIS manufacturers
 - cause difficulties for industry in planning its implementation
- time pressure may result in operational S-100 product editions that are not sufficiently mature
 - risk that inconsistencies in ECDIS standards are detected only during the implementation phase, due to lack of testing time at an earlier stage
- for stakeholders that are not involved in standardization work it is difficult to assess what the latest status is

Status today

- IHO WGs/PTs are putting a lot of effort into a timely completion of the relevant standards
- Software producers are doing their best to update data production systems accordingly
- What is missing, as we see it, is comprehensive testbeds and sufficient testing time
- A few testbeds have been set up, but so far they can investigate particular use cases only and the test data does not always comply with the latest Product Specification updates

The conflict and its consequences

- S-100 development process is facing a conflict between a challenging scope of requirements and the envisaged deadlines
- It may be the case that precise standardisation (especially regarding ECDIS functionality) is not feasible on time, or it is risky
- Industry's motivation to contribute to S-100 development based on 'unstable' normative documents might be limited

Recommendations

- To comply with the new S-100 performance standard, it should be possible to focus on a defined sub-set of the Phase 1 products
- Reducing the scope of product specifications should be considered so far as is reasonably practicable
- More freedom should be given to industry to produce the best possible implementation
- Requirements should be 'softened' if it is not possible to produce 'firm/proven' technical requirements in time

Proposed criteria for reduction of scope

- Readiness level of the relevant product specifications
- Readiness level of the related interoperability specifications
- Confirmed practical experience, at least in prototype implementation and testbeds
- Expected availability of data and services
- Demands of maritime market customers

Proposed action

- That HSSC16 notes SevenCs' concerns and recommendations
- That actions are discussed and considered for allowing S-100 ECDIS compliance with a reduced scope of Phase 1 products



Thank You

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