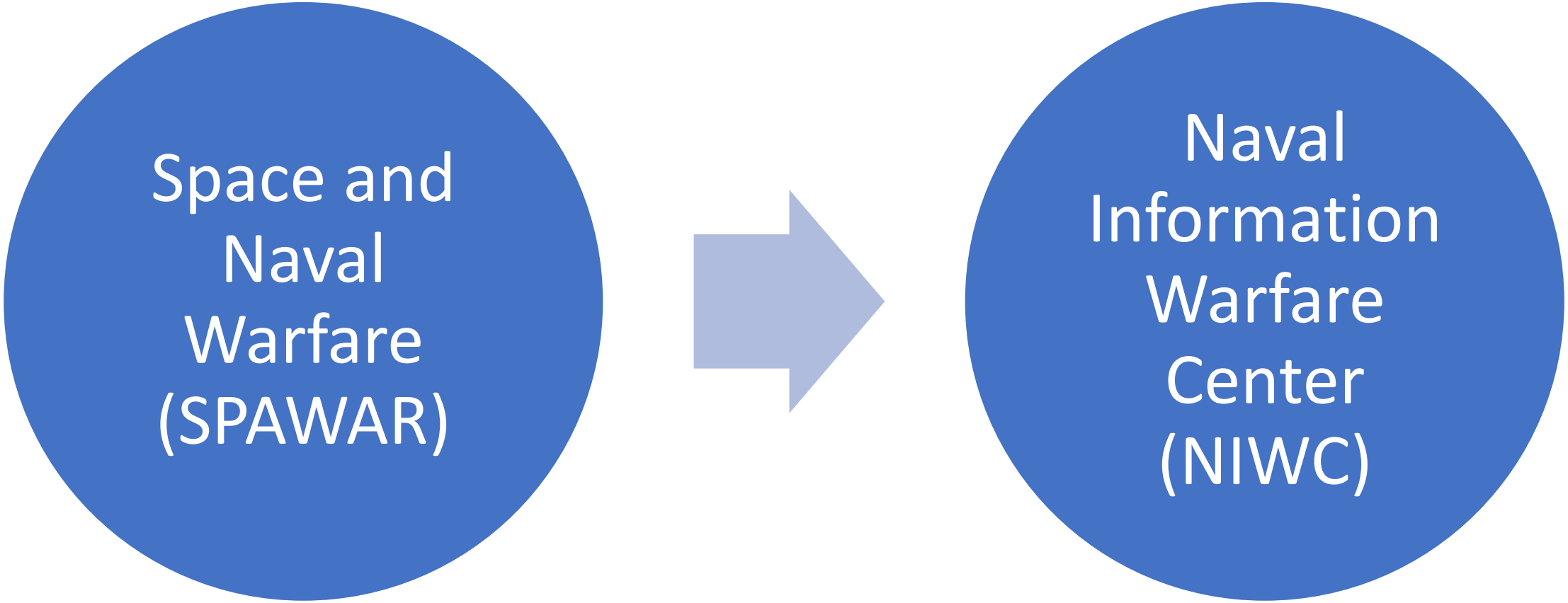
NIWC S-100 Testbed Report

Presented by NIWC

for S101PT4

JUN 2019

SPAWAR is now NIWC



NIWC Testbed Results

S-101PT Related Items

NIWC Testbed: S-101PT Related Items

S-100WG4-8.2: Resolve the issues relating to Light Sector Extension

- Reference separate paper: *S101PT4-5.4*
- Change definition to: *"The distance in screen millimetres (mm) by which a sector is extended beyond the default."*
- Remove 2nd remark: *"The displayed sector must not exceed the nominal range of the light sector on the ECDIS display."*

DCEG 30.4 - Light Sector Extension

- DCEG 30.4
  - *“The displayed sector must not exceed the nominal range of the light sector on the ECDIS display.”*
  - Requirement doesn’t exist in S-52
  - Can’t be implemented in PC
    - Sector extension uses *LocalCRS* (mm)
    - On-screen radius in NM is affected by scale
  - Can’t be implemented by data producers
    - See paper

NIWC Testbed: S-101PT Related Items

S-101 Portrayal Catalogue 1.0.1

- Available on Basecamp
- Provides all viewing groups
- Implements results of Portrayal Catalogue Builder project, including testPCB symbol

INFORM01 symbol example

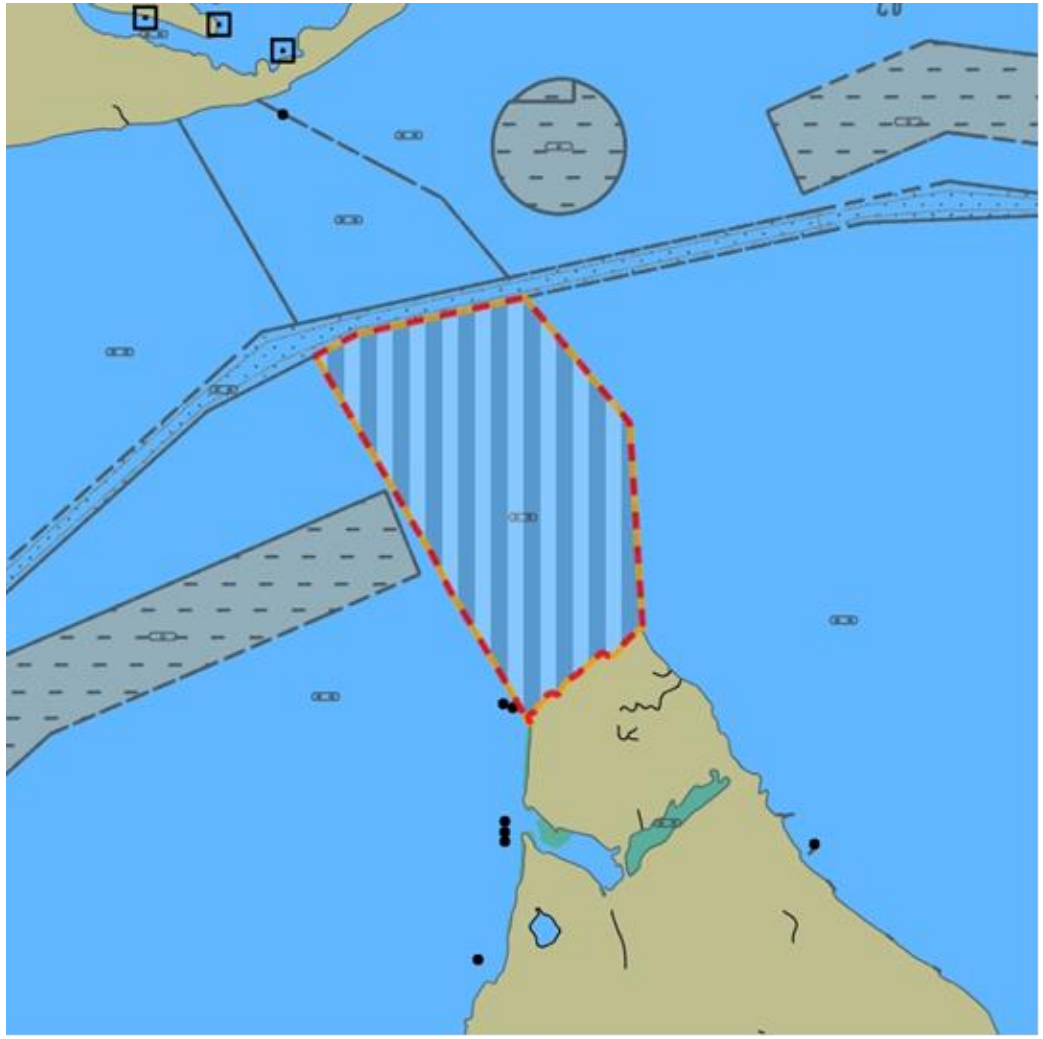
- Features with associated *NauticalInformation* are portrayed using an INFORM01 symbol

NIWC Testbed: S-101PT Related Items

NIWC S-101 Portrayal Catalogue 1.0.1 changes

- *CreateAttributeConstraints*: new Standard Catalogue Function
  - Referenced in S-100 13-8.1.2.9, but not documented
- *QualityOfBathymetricData*: Portrayal modified per HSSC11-05.5B (picture next slide).
  - Centred point symbol replaces pattern fill
- Additional PC changes documented in Test Bed Report Section 1.5.1.2

Quality of Bathymetric Data symbol example



NIWC Testbed: S-101PT Related Items

NIWC proposed portrayal changes to S100WG based on feedback and experience

- S-100 Part 13
  - Add documentation for *CreateAttributeConstraints*
  - Update 13-8.1.1.5 *CreateCurve,* changing *startPoint* and *endPoint* to spatial references instead of direct points

NIWC Testbed Results

Updates on prior recommendations

NIWC Testbed: Prior Recommendations

Update on recommendations from S-101PT3-4.5 Test Bed Report section 7.2

- Complete: DCEG: Add *marksNavigationalSystemOf* attribute to *LocalDirectionOfBuoyage*
- Complete: Update S-101 Feature Catalogue 0.9.3 for S-101 1.0
- Complete: Update S-101 dataset converter for S-101 1.0
- Ongoing: Update S-101 portrayal catalogue for S-101 1.0
- Ongoing: Update S-101 specification for S-101 2.0

NIWC Testbed: Prior Recommendations

Update on recommendations from S-101PT3-4.5 Test Bed Report section 7.2 (cont)

- Ongoing: Update S-100 specification (date dependent)
- Update the S-101 portrayal catalogue for S-101 2.0
- Work remaining:
  - Nautical Cartography Working Group (NCWG) to develop the symbol concepts
  - NIWC to produce S-100 compliant SVG files from the symbol concepts
  - NIWC to update the S-101 Portrayal Catalogue with new symbols and corresponding portrayal rules
- Additional details in the Testbed Report section 1.5.2, item 7

NIWC Testbed: Prior Recommendations

Update on recommendations from S-101PT3-4.5 Test Bed Report section 7.2 (cont)

- Update testbed viewer for S-101 2.0
  - Complete: Implement guidance on palette changes for SVG symbols
- Schema changes accepted at S-100WG4 associate each S-100 colour palette with a corresponding SVG stylesheet
- Ongoing: Review NIWC S-101 Portrayal Catalogue and provide feedback

NIWC Testbed Results

S-100 Items relevant to S-101PT

NIWC Testbed: S-100 Items relevant to S-101PT

Lua Scripting Reference

- Created C++ Lua Scripting Reference Implementation (LSR)
  - Preliminary version is available on Basecamp
  - Intended to accelerate development of scripting capabilities
- Development revealed some minor issues within:
  - S-101PC 1.0.0 – fixed in S-101PC 1.0.1
  - S-100 4.0.0 part 9A and part 13 documentation
    - Will address via change proposals to S-100WG

NIWC Testbed: S-100 Items relevant to S-101PT

Interoperability

- Analysed required capabilities
- Implementation will be part of NIWC Shore Based ECDIS (Testbed phase 6)

NIWC Testbed: S-100 Items relevant to S-101PT

Discussions planned for TSM7

- Date Dependency
- Alerts and Indications
- Symbol / Viewing Group Dependency Issues

NIWC Testbed Results

Conclusions and Recommendations

Conclusions & Recommendations

We recommend the user community explore and provide feedback on S-101 Lua portrayal catalogue so that the S100WG and S101PT can fully mature the S-101 standard as soon as possible.

- **Own plans**
  - We welcome feedback on the Testbed and C++ reference implementation
  - Continue S-101 portrayal refinement based on community input
  - Continue the design of Shore Based ECDIS in support of interoperability