Status of XSLT CSPs

September 13, 2016 Hugh Astle

XSLT accesses nodes in a tree

- XSLT expects a DOM model but is implemented with an interface to be able to iterate over nodes in a hierarchy/tree. Data does not have to be converted/copied into an XML document.

- https://www.w3.org/TR/DOM-Level-1/introduction.html

- https://www.w3.org/TR/xpath/#data-model

Portrayal Input Schema

- Is mainly a conceptual pattern of the expected hierarchy of the data to be processed.

- Can be generalized by defining the keywords to access elements such as Curve, Surface, Information Types, Features

- General pattern for feature elements by class code and feature attributes by class code.

- Could be useful to have a list of elements which a particular portrayal needs to access as a potential for optimization.

XSLT Portrayal implementation status

- It is expected that the necessary portions of S-52 needed for S-101 can be completely replaced by a machine readable portrayal using XSLT.

- Just because some CSPs have not been fully implemented yet does not mean that they cannot be done with XSLT.

XSLT variable and Indexes

- In XSLT 'variables' can not be modified.
- Indexes (Keys) can be used to optimize access to nodes.
-     `<xsl:key name="Contours" match="/Dataset/Features/*[DepthContour]" use="Curve/@ref"/>`
- Variables and keys are not instantiated until they are referenced.

DEPARE03

- SEABED01 called directly from Depth area and Dredged area template for colour fill by depth range.

- SEABED01 and RESCSP03 called directly from Dredged area template as well as pattern fill

- DEPARE03 reduced to processing boundaries of safe water to detect unsafe borders to present as safety contour.

- Safety contour curves symbolized as solid or dashed based on relationship with spatial quality information type.

DEPARE03

- SAFCON02 used to turn contour depth into contour label symbols. Not yet implemented. Should not be a problem. Implementation was left out expecting a discussion about presenting soundings as text instead of symbols.

DEPARE03 Questions

- Current implementation of safety contour is focused on only boundaries of safe water, is it really necessary to test for long list of land features or can presentation suppression be handled with priorities?

- What should happen when safe water shares border of cell? Is a test needed to test if safe water continues in the next cell?

- Propose avoiding use of CompositeCurve in model exposed for presentation. Will simplify portrayal logic.

DEPCNT03

- Can draw safety contour when valdco is equal to SAFETY_CONTOUR. But that duplicates what DEPARE03 is doing?

- Draws dashed line if quality is low

- Calls SAFCON01, which is not yet implemented.

SAFCON01

- Used to create contour label

- Converts contour depth value into list of symbols for each digit.

- May not be necessary if PC instruction is added to define style info (font, colour, size,…) and let ECDIS present the number using fonts.

WRECKS04, 05

- WRECKS04 logic implemented in 2015 draft PC in Wreck_custom.xsl.

- Calls UDWHAZ05

- Uses new attribute surroundingDepth instead of trying to calculate surrounding depth on the fly.

- QUAPNT logic needs to be added, simple.

- Needs review

OBSTRN06, 07

- Attribute Default Clearance Depth used
- **UnderWaterAwashRock_custom.xsl**
- QUAPNT logic needs to be added, simple.
- No change in csp logic from 06 to 07
- Includes UDWHAZ05.
- Rock logic separated into UnderWaterAwashRock_custom.xsl
- Needs review

LIGHTS05

- Broken into separate logic to match new Light Features in S-101 such as LightSectored

- Work in progress with adjustments to code delivered in 2015 PC

- New blue colour and Major 360Sector lights need to be accounted for. (from LIGHTS06)

- Needs review

UDWHAZ04

- Draft provided in 2015 PC
- Needs review against preslib 4.0.0

SLCONS04

- Draft provided in 2015 PC
- Needs review against preslib 4.0.0
- Low accuracy test needs to be added.

QUAPOS01

- Under construction

QUALIN01

- Draft in progress
- CONRAD logic can be moved to coastline template

QUAPNT01

- Draft in progress

DEPVAL02

- Should become obsolete with introduction of new attributes regarding clearance depth and surrounding depth instead.

- Logic from DEPVAL can be used to assign initial defaults that Producer should be validating and adjusting as needed.

RESTRN01 & RESCSP02

- RESTRN01 Just calls RESCSP02 if restriction.

- Handled within Object class templates that have restrictions.

- Logic to be reviewed/adjusted against new DCEG restriction model

RESARE04

- Implemented in 2015 PC RestrictedArea_Custom.xsl
- To be optimized now that restrictions have been remodelled in DCEG.

SEABED01

- Implemented in 2015 PC seabed01.xsl

SNDFRM04 & SOUNDG02

- Generates symbols for each sounding digit.

- Implemented in sndfrm04.xsl and soundg02.xsl for individual soundings

- Needs enhancement to support Sounding cluster/groups as per SPAWAR discussion at last S-100 meeting in Tokyo

- Or Sounding instructions could be used to define sounding style info for shallow or deep values and ECDIS could generate labels

info@caris.com | www.caris.com