



Canadian Coast Guard S-124 implementation

TSM10, Monaco, 2024-03-13

Eivind Mong



Canadian Coast Guard

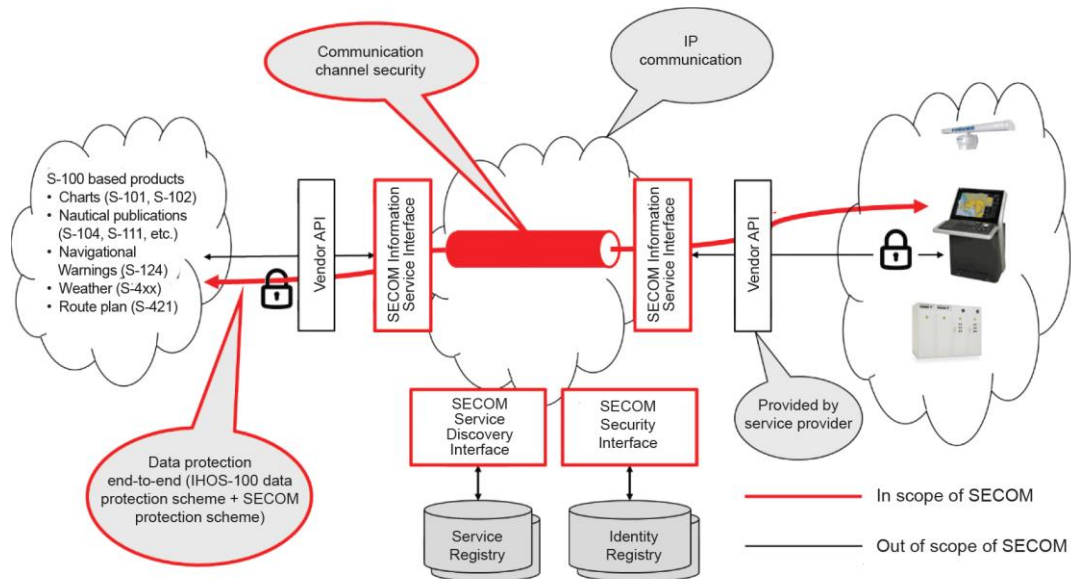
- AtoN service
- VTS
- Ice Breaking
- SAR
- 66/124 ships



Implementation is where it's at!

CCG S-124 implementation driven

Implementing a technical service compatible with SECOM to validate distribution of NAVWARNs ++

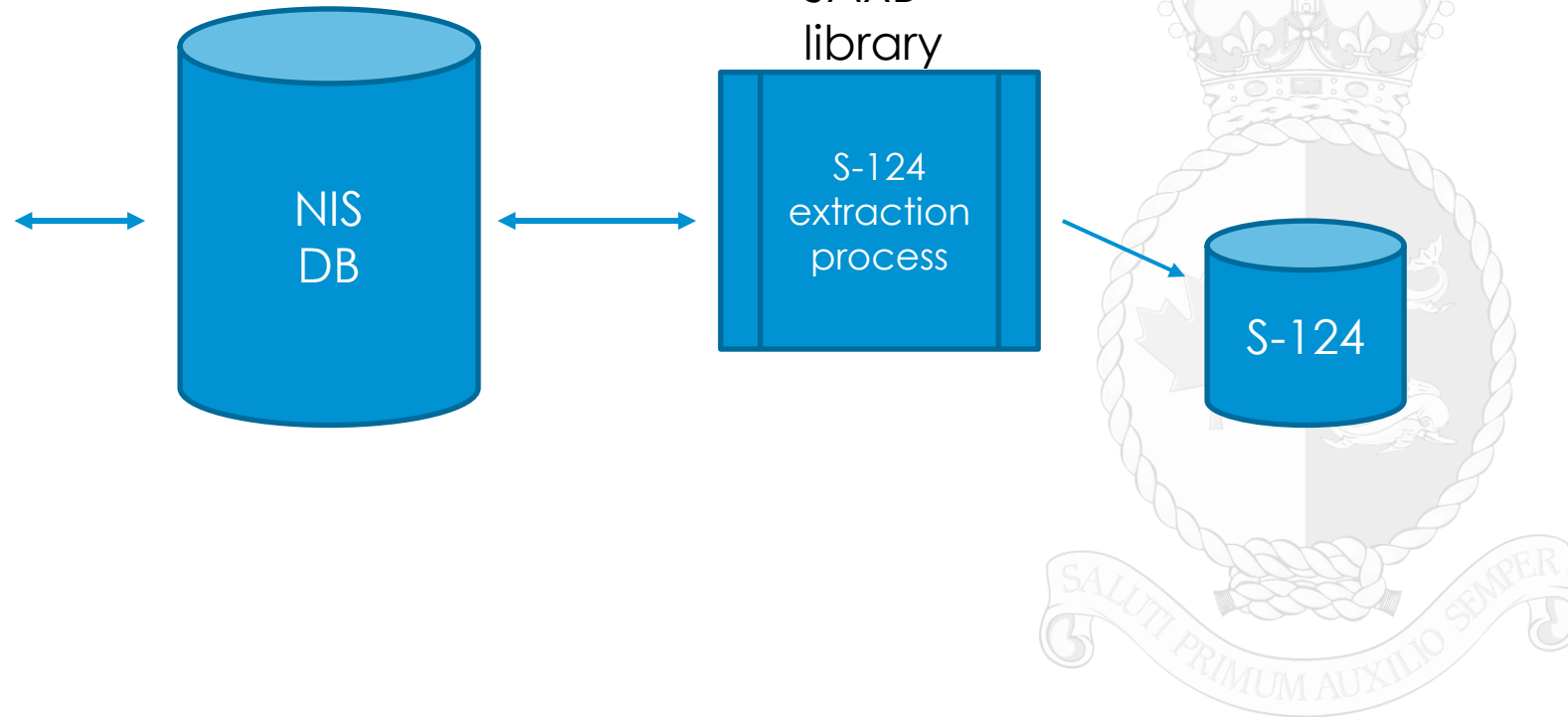
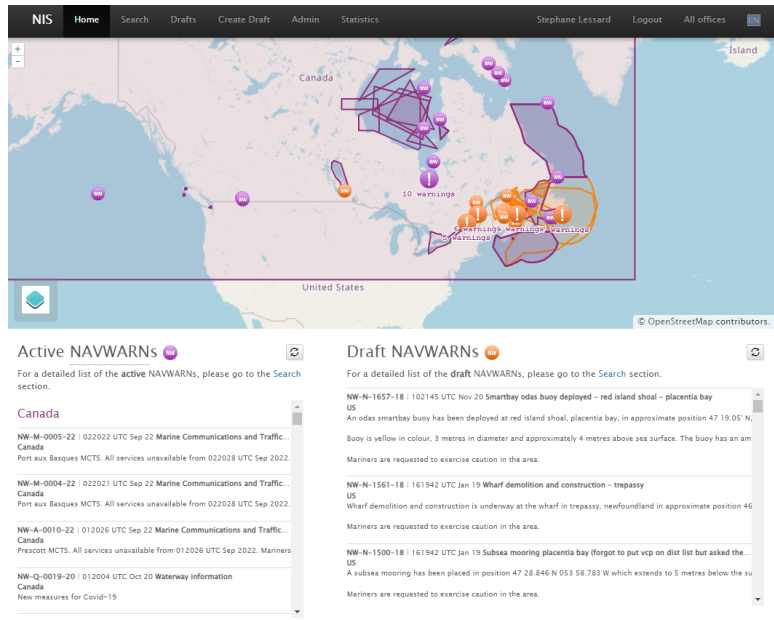


IEC



NAVWARN Issuing System (NIS) description

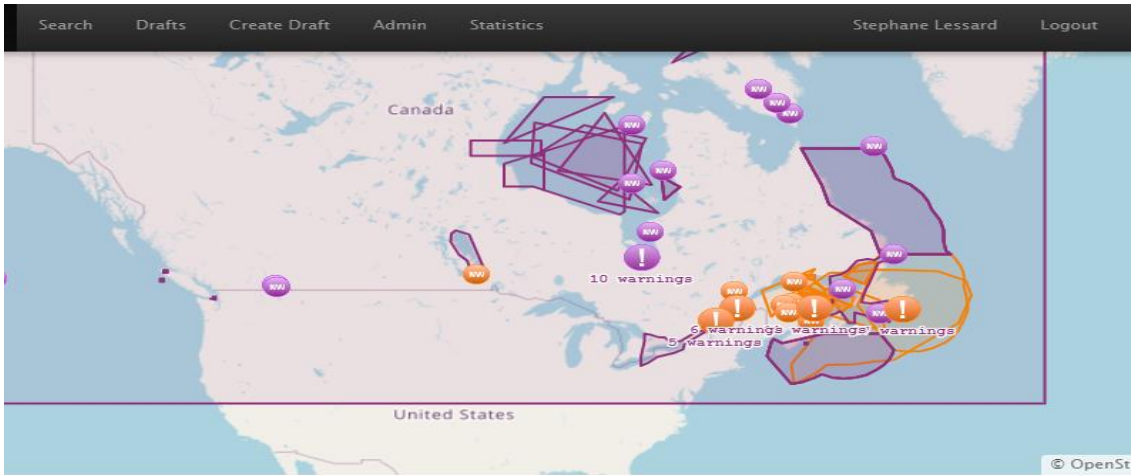
- NIS with the S-124 process highlighted



S-124 extraction process

- java JAXB library (configured using .XSD) to create the .xml content with java class objects.
- S-124 distribution and technical service compatible with SECOM being developed.
- Adopting libraries from GLA within the Digital Incubator Initiative (informal group grown out of IALA).
- Two service calls implemented (summary and get requests).





WARNs

the active NAVWARNs, please go to the Search

- 22 UTC Sep 22 Marine Communications and Traffic...
- All services unavailable from 022028 UTC Sep 2022.
- 21 UTC Sep 22 Marine Communications and Traffic...

Draft NAVWARNs

For a detailed list of the draft NAVWARNs, please go to the Search section.

- NW-N-1657-18** | 102145 UTC Nov 20 Smartbay odas buoy deployed – red island shoal – plac US
An odas smartbay buoy has been deployed at red island shoal, placencia bay, in approximate...
Buoy is yellow in colour, 3 metres in diameter and approximately 4 metres above sea surface.
Mariners are requested to exercise caution in the area.
- NW-N-1561-18** | 161942 UTC Jan 19 Wharf demolition and construction – trepassy

gccc.ca/swagger-ui/index.html#/SECOM/getSummary

```

{
  "Info_status": "PUBLISHED",
  "Info_description": "A anchor with 4 shackles of chain lost in position 46°00' 12\"/>

```

Response headers

```

connection: keep-alive
content-type: application/json
date: Wed, 06 Sep 2024 20:09:43 GMT
server: nginx/1.16.1
transfer-encoding: chunked

```

Responses

Code	Description	Links
200	OK	No links

Media type

Controls Accept header

```

{
  "summaryObject": {
    "dataReference": "796897664-5717-4562-b3fc-2c963966afad",
    "dataProtection": true,
    "dataCompression": true,
    "containerType": "0",
    "dataProductType": "OTHER",
    "Info_Identifier": "string",
    "Info_Name": "string",
    "Info_Status": "string",
    "Info_Description": "string",
    "Info_LastModified": "189904121845300",
    "Info_ProductVersion": "string",
    "Info_Size": 0
  },
  "population": {
    "totalItems": 0,
    "nextLink": null,
    "nextLinkPage": 0
  },
  "responseText": "string"
}

```

Schemas



gccc.ca/swagger-ui/index.html#/SECOM/getSummary

GET /api/secom/v1/object/summary

Parameters

No parameters

Execute Clear

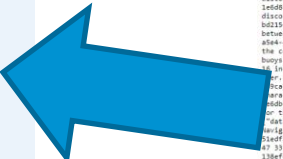
Responses

```

{
  "summaryObject": {
    "dataReference": "16246087-4054-f6bc-fc3c-8c2c070f9f",
    "dataProtection": false,
    "dataCompression": false,
    "containerType": "0",
    "dataProductType": "1324",
    "Info_Identifier": "NW-C-0098-23",
    "Info_Name": "Aids to Navigation",
    "Info_Status": "PUBLISHED",
    "Info_Description": "Permanently relocated to 58 01.2388 097 03.3800",
    "Info_LastModified": "20230816232302",
    "Info_ProductVersion": "1.0.0",
    "Info_Size": 100
  },
  "population": {
    "totalItems": 0,
    "nextLink": null,
    "nextLinkPage": 0
  },
  "responseText": "string"
}

```

Summary request



```

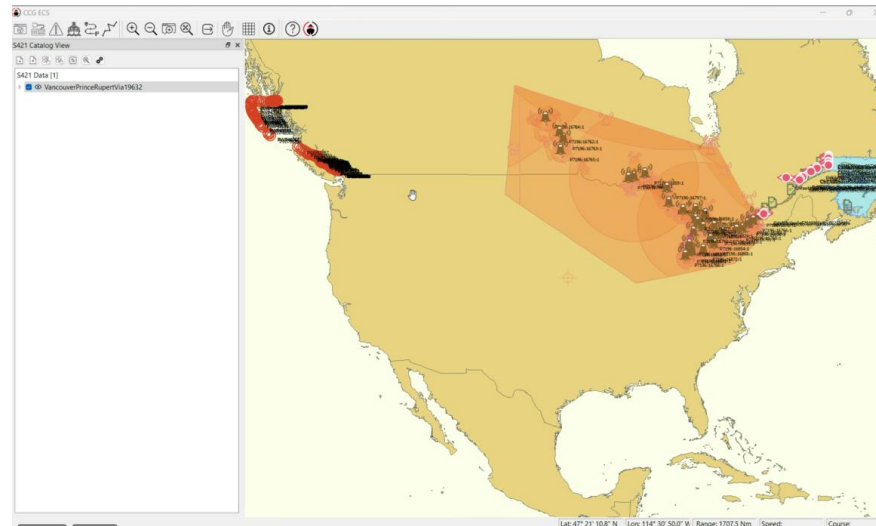
{
  "summaryObject": {
    "dataReference": "ea080f1-3067-4b3c-887c-12484504949f",
    "dataProtection": false,
    "dataCompression": false,
    "containerType": "0",
    "dataProductType": "1324",
    "Info_Identifier": "NW-C-0098-23",
    "Info_Name": "Aids to Navigation",
    "Info_Status": "PUBLISHED",
    "Info_Description": "Permanently relocated to 58 01.2388 097 03.3800",
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  },
  "population": {
    "totalItems": 0,
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    "nextLinkPage": 0
  },
  "responseText": "string"
}

```



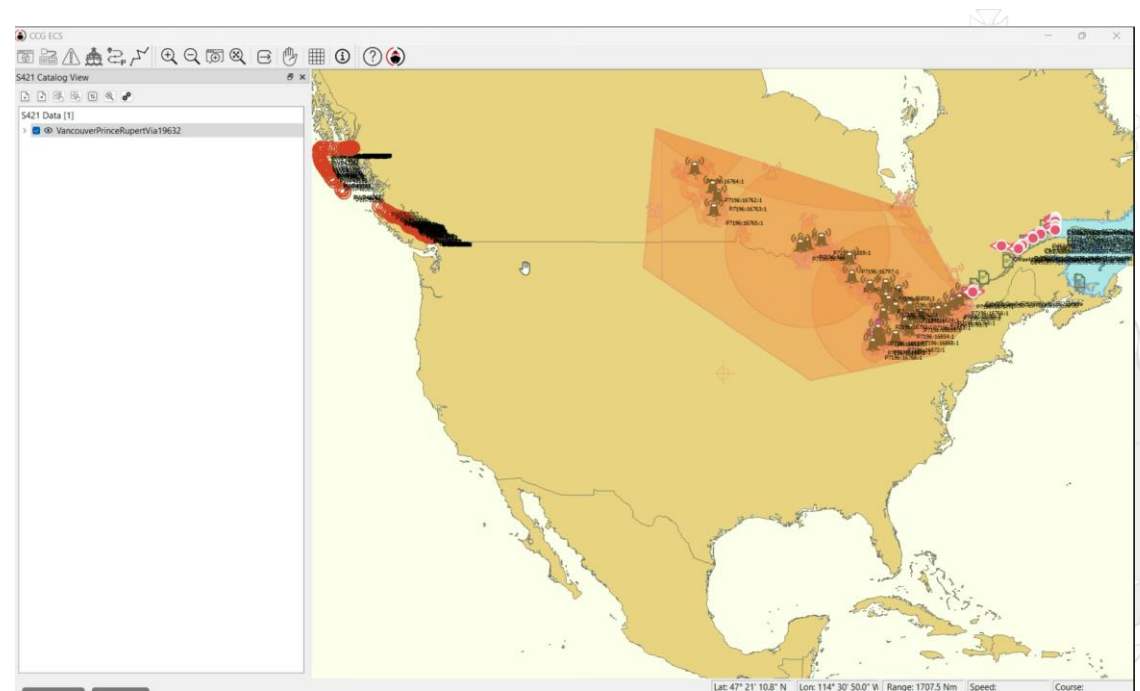
Innovation project (2023 – 2024)

- Screen + software + motorized stand

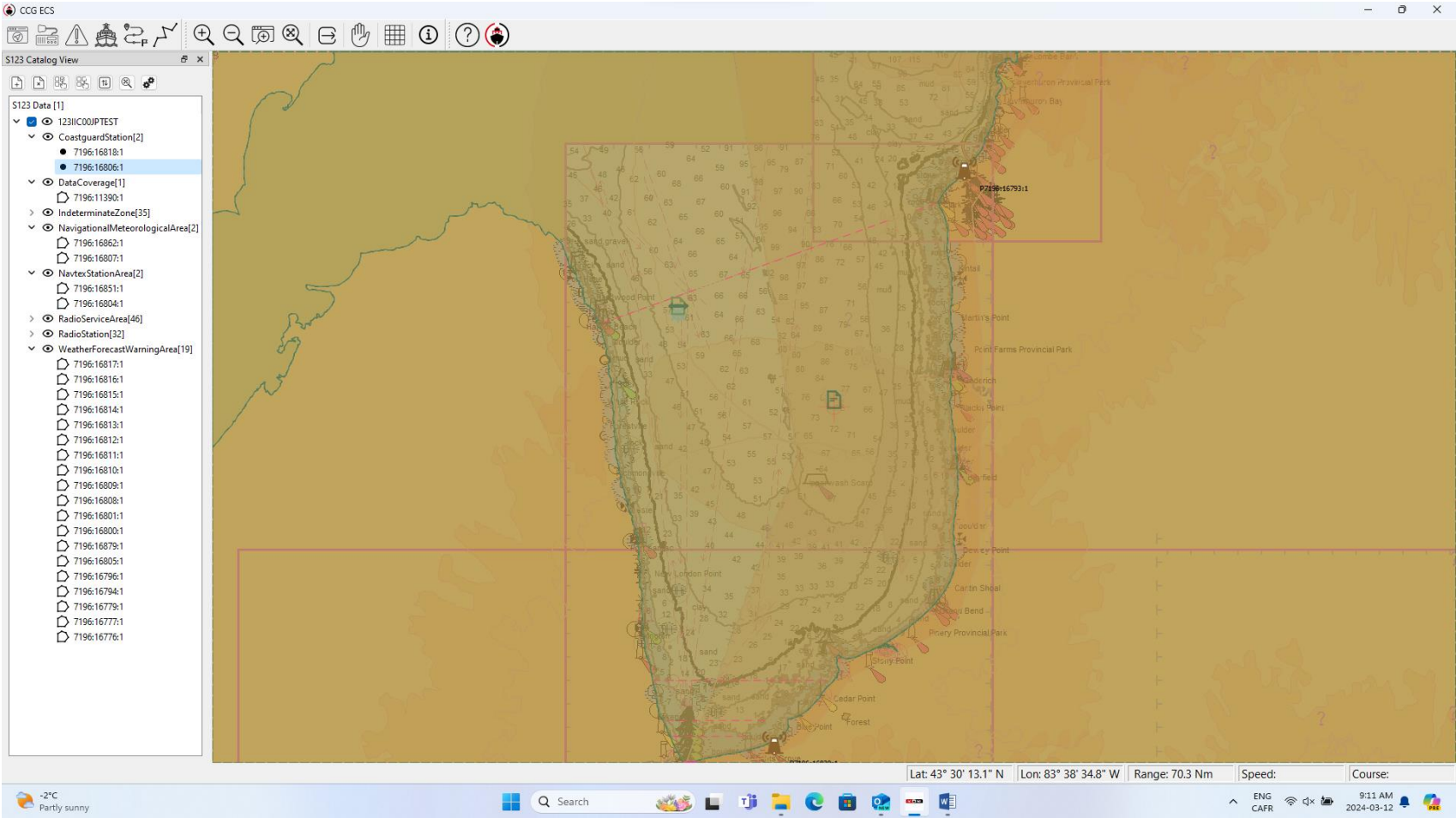


IIC developed tool

- S-57 base
- S-123, S-124 and S-127
- S-421 + RTZ
- Connects to S-124 service
- Testing layer interaction and user interface requirements



ENC, S-123 & S-127 over South Lake Huron on MNPS



ENC, S-123 & S-127 over South Lake Huron on MNPS

CCG ECS

S127 Catalog View

S127 Data [1]

- 1272C7196113901SARNIAv5
 - RadioCallingInPoint[22]
 - Cecbcfeb73b79db15c14148f7...
 - C7086fd94d5708ca53fb882bf0...
 - C8809ff704ca46ab3f38f78c5d...
 - Cc6a355733f89aeb63ea3412...
 - Ce5abf499b17dd74286ee3375...
 - Caf7f0306c6b391ffbbd49ebf...
 - C78b5780654944c11ee87fb9b...
 - Cb4231f0d906807af6c2c3a143...
 - C8f674694ba7acac0fb1866c...
 - C96691b9d733e56ad1b090b...
 - Cd7afd76c866899e1626465fb...
 - C9118df8588895a907ce883...
 - Ce6a2d92e83b6d53380709f0...
 - C50e8fb990546b7738ed022fc...
 - C83249446d7bafab370a5ee1e...
 - C6565e4c01d8b2d7d57d298...
 - C5050345c0741808d9c3c1b86...
 - C1b713f75ede777eb37b179f...
 - C77794626a0f9950fe10ca3b...
 - Ca1072317eb52f92acb298cab...
 - Ca1b5fbcbb6af44bd583e105...
 - Cb0f0002e800c8d5178bf574f6...
 - RouteingMeasure[1]
 - Cf79d9d93566c5f3473279100...
 - ShipReportingServiceArea[4]
 - C9848fc7181b8845b415046cd...
 - C4003b1b1e93c8c47038625e...
 - Cbce94c62273dc7ecfab3c565...
 - C70fed692dfa06c151c9f4d889...
 - VesselTrafficServiceArea[1]
 - C163b0c79e29883fc48b0e4ca...

Attribute	Value
boundedBy	true
informationAssociation	
href	#C9848fc7181b8...
arcrole	http://www.ihb.i...
id	RLN114
featureName	
name	A
featureName	
language	eng
name	Cordwood Point
featureName	
language	fra
name	Pointe Cordwood
textContent	
information	
language	eng
text	At Cordwood Po...
information	
language	fra
text	À Pointe Cordw...
trafficFlow	two-way
curveProperty	
srsName	http://www.ope...
id	X1

Lat: 44° 12' 58.9" N Lon: 83° 38' 18.4" W Range: 70.3 Nm Speed: Course:

-2°C Partly sunny

Lessons learned (and being learned) to date

- GML = complicated, but not very different from the early days of S-57 8211
- Detailed theoretical transmission coverage is probably not very useful and just gives complicated geometries and portrayal
- Need more GUI enhancements to give user more control
- S-98 needs to be implemented
- WMS to be added to give a quick access of HDF5 products, and later true support.
- Still undecided about how close to ECDIS the GUI needs to be.



Next steps - Planning station layout project

- 3 year project, \$2.5m CAD budget
- S-100 readiness investigation and preparedness
 - Using MNPS to define the requirements based on user trials
 - Update MNPS as needed
 - Provide lessons learned to international community
- Planning station to replace chart tables
 - 6 ships to be equipped for trial period



Questions?

