STATUS AND NEEDS FOR A SUCCESSFUL REALISATION OF S-200

Presentation for e-navigation Underway 2018

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Introduction

Common Maritime Data Structure

International agreement on need for a Common Maritime Data Structure to support e-navigation.

IHO Geo-spatial Information Standard S-100 to be used as the baseline for the CMDS.

IALA S-200 Registry was established with the approval of IHO

IALA's role

- IHO has approved IALA as a Submitting Organization and Domain Controller.
- IALA Product Specifications compliant with the IHO S-100 standard, use the numbering series S-201 to S-299
- IALA Domain covers:
  - Aids to Navigation (AtoN)
  - Vessel Traffic Services (VTS)
  - Positioning Systems
  - Communication Systems
  - AIS, ASM, VDES.

S-200 Status

Two Product Specifications are reaching maturity:

- S-201 – AtoN Information
- S-240 – DGNSS Almanacs

Versions for comment being posted on IALA website

Other specifications under development or planned, including S-210, Inter VTS Exchange Format

Awaiting discussions in IHO on ‘data streaming’

Further specifications will emerge from MSP development

Guidelines & Recommendations

The IALA recommendation on Product Specification Development and Management refers to the ‘relevant guidelines’.

These are:

G-1106 on the Development of Product Specifications

G-1087 on the Management of the IALA Domain

both of which were further revised at ENAV 19.

Context

S-100 Product Specifications being developed by several organisations, in addition to IHO and IALA

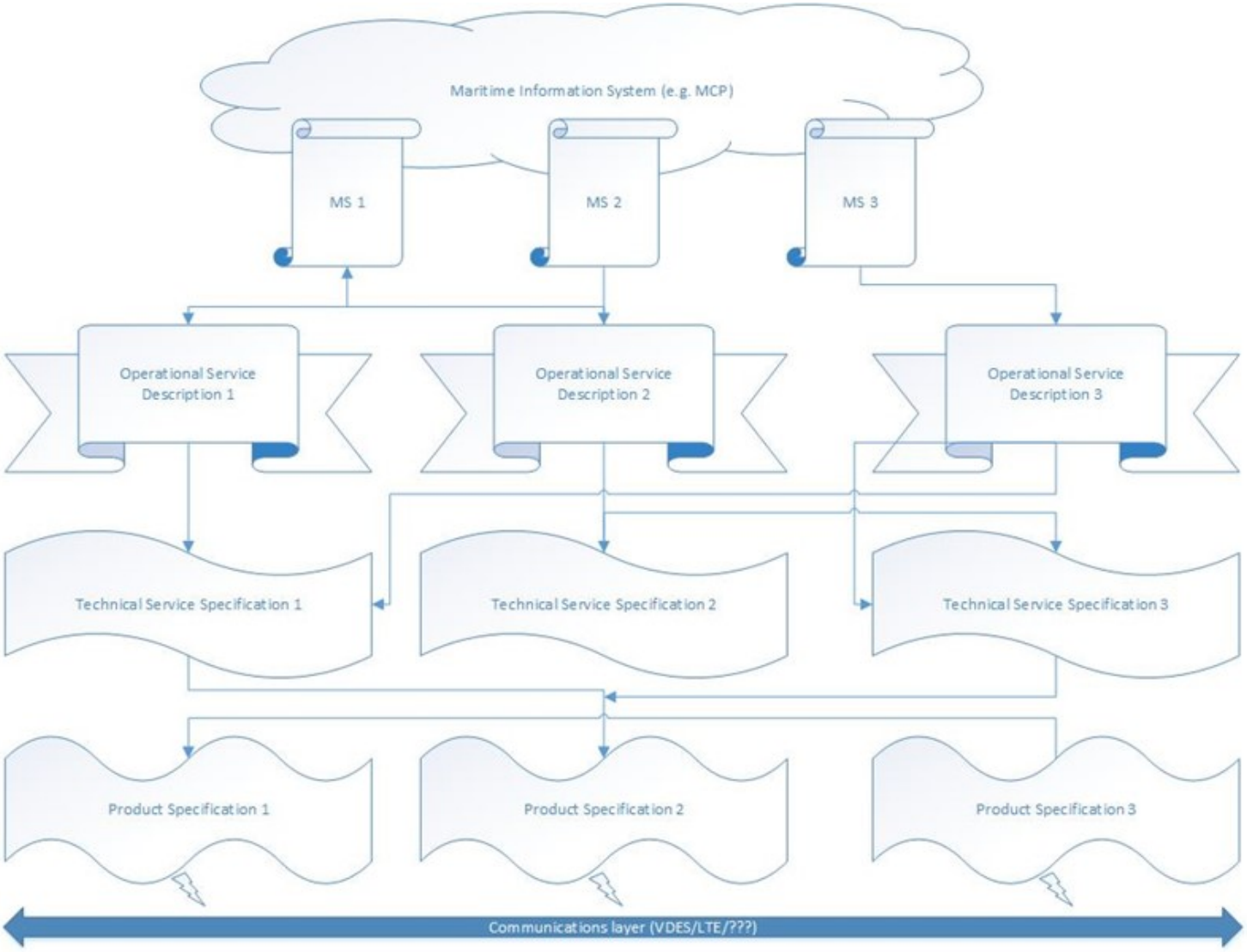
Data formats for e-navigation technical services are also being developed and implemented without reference to S-100

ASM implemented as binary code, in accordance with IMO Circ. 289. The binary encoding is specific to these applications

Standardise at Technical Service Specification level, each TSS referring to the relevant data exchange specification

Need to coordinate development of S-201 with S-101, S-124, S-125 and probably some other S-100 based PS

Hierarchy of e-navigation services



Proposed IALA Strategy

IALA coordinating specifications and data exchange formats that will underpin e-navigation services in the future.

S-200 Product Specifications reaching maturity (S-201 and S-240) need to be finalised and their use promoted

Development of other PS should be progressed, in particular S-210, lead to application of S-100 to data streaming services.

Agree structure of e-navigation, from information system through to data exchange formats and communications layer
Harmonisation of S-100 and S-200 specifications through a joint IALA/IHO Workshop and IHO & IALA working groups

Reflect outcomes in IALA Information Services Standard.

Development of S-201 AtoN Information

Standardised method of exchanging information on Aids to Navigation, initially between lighthouse authorities and hydrographic offices, but ultimately from the AtoN provider to the user (mariner)

IALA ENAV WG1 – Task Group 1

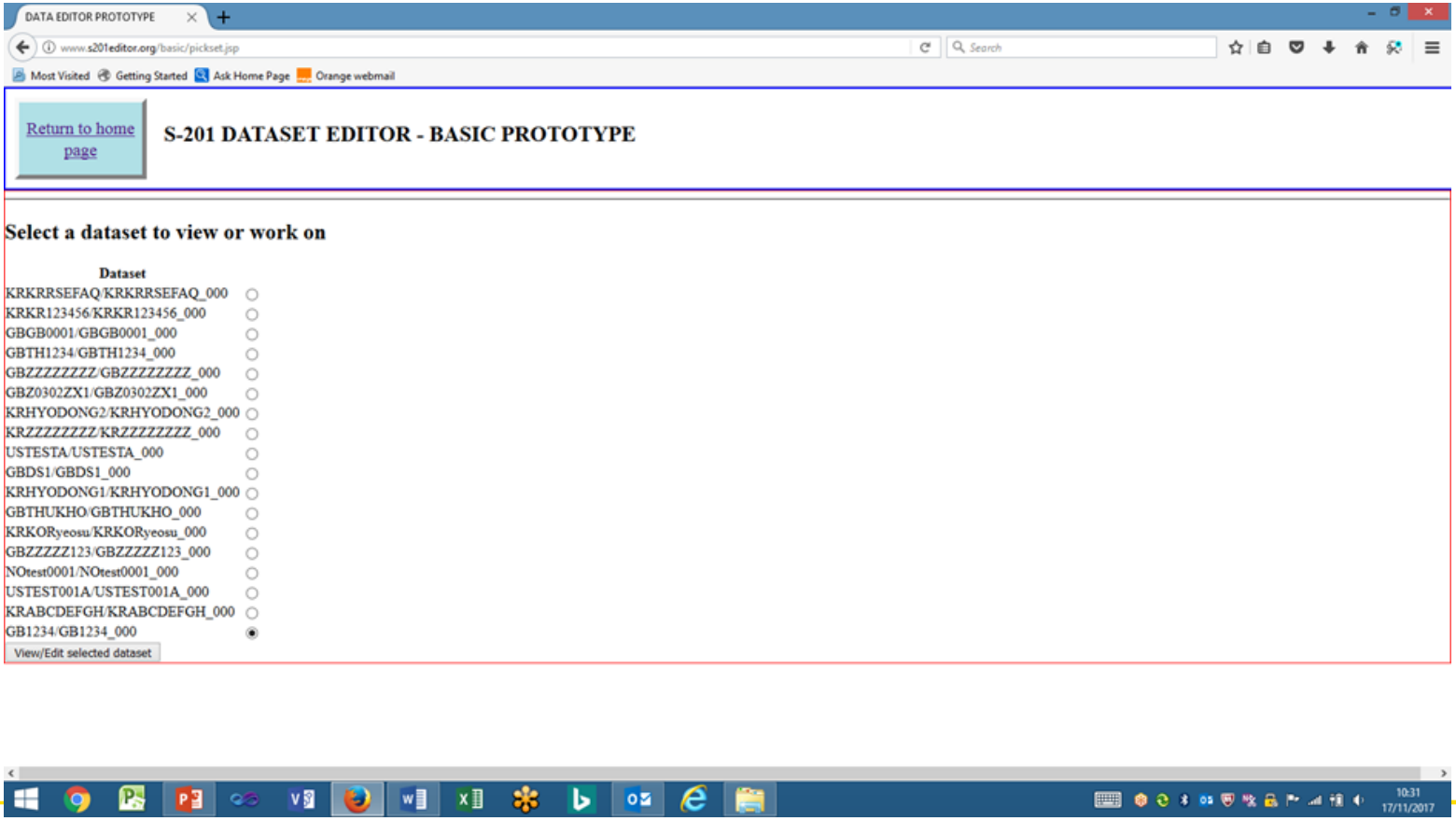
Web app for data input (GLA/Portolan Sciences)

Viewer for presentation (KRISO)

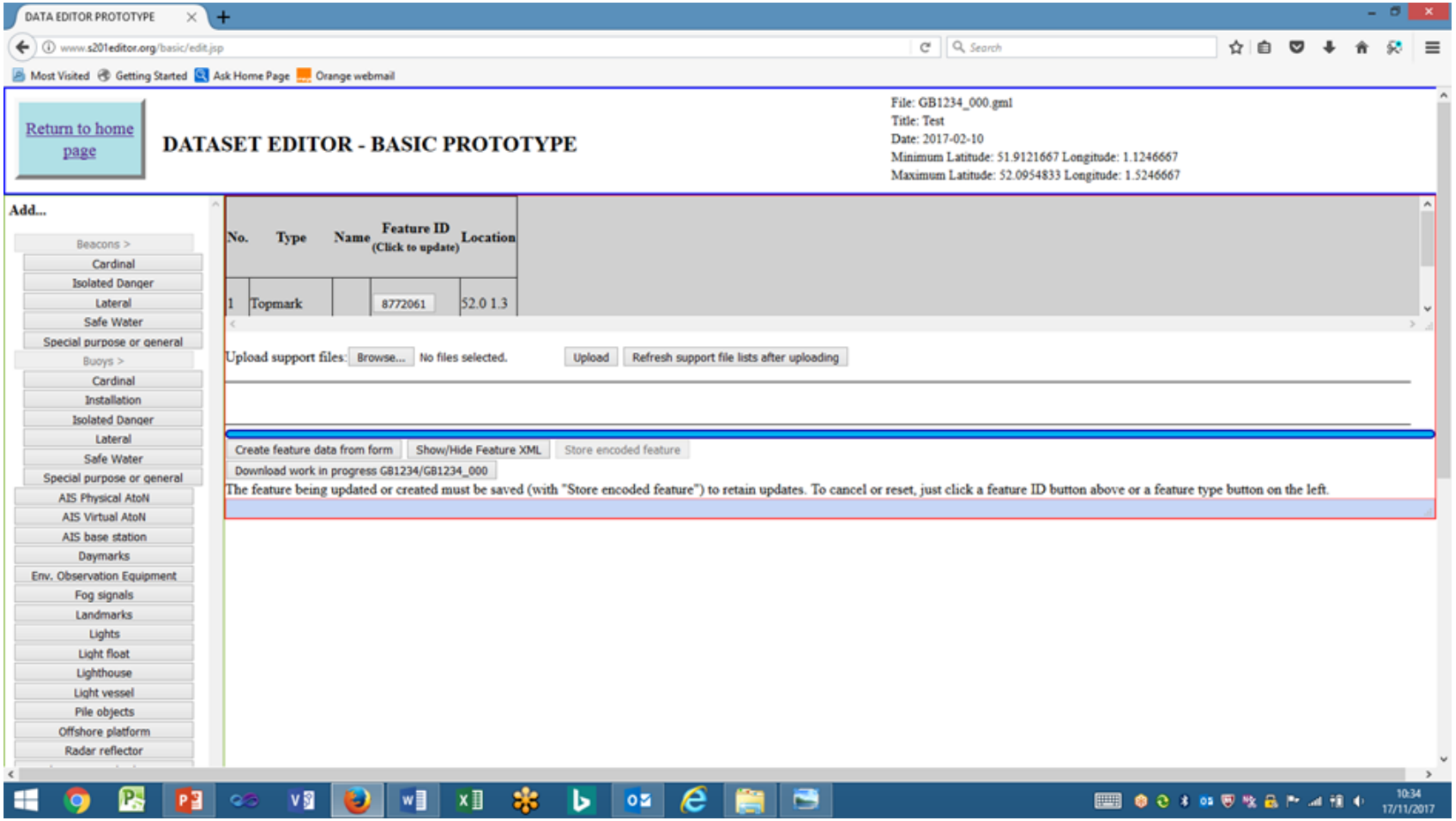
S-201 DATA EDITOR PROTOTYPE

Things you can do with this application

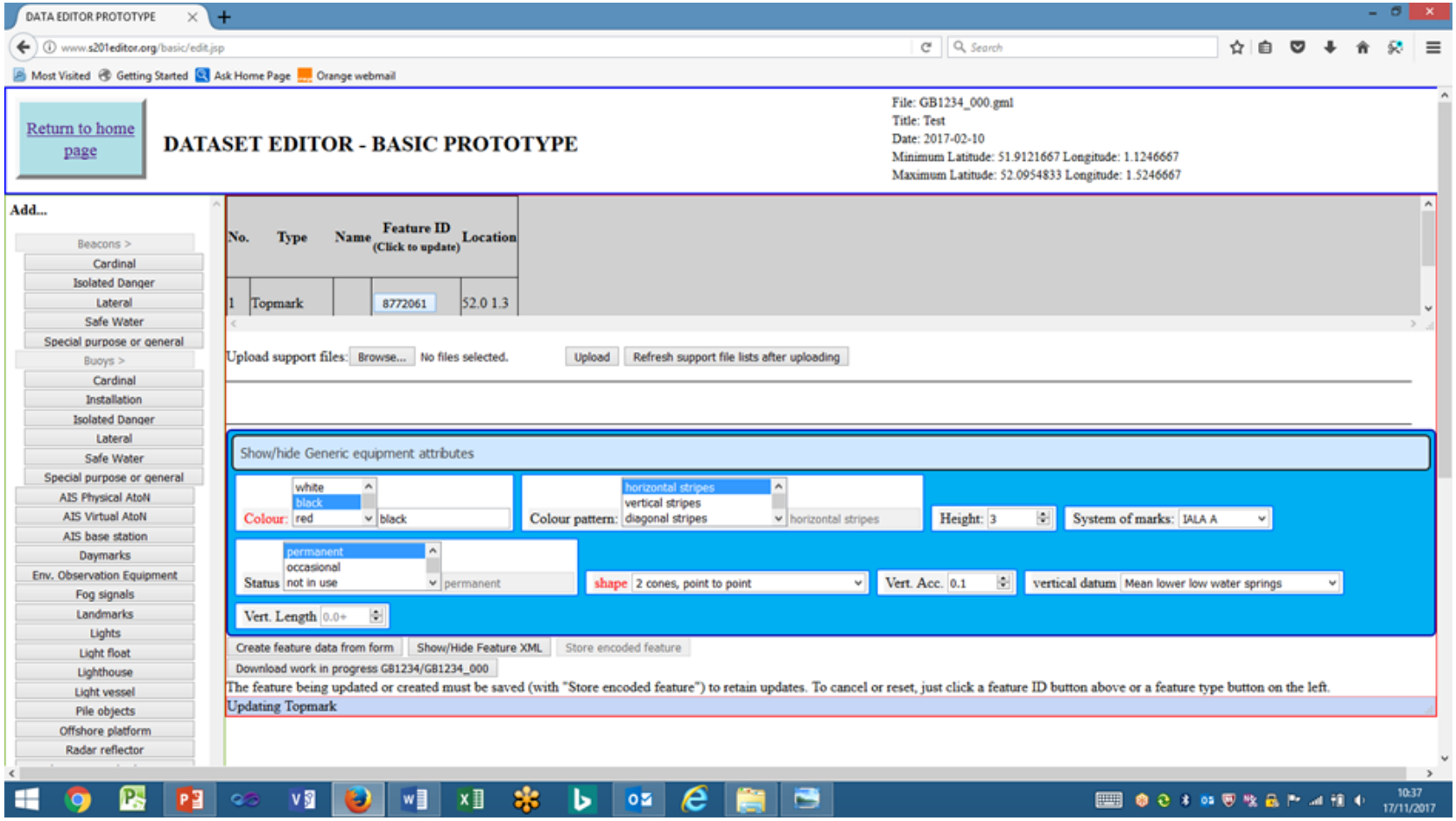
- View/Update the sample using a form for entering attributes and creating features
- Make a new dataset using the same form interface as above for entering attribute values and creating features
- Pick a dataset to edit from a list of available datasets and create features and attributes using the same form-based interface
- Choose a specific task (under development)



Dataset GB1234



Dataset expanded to first level



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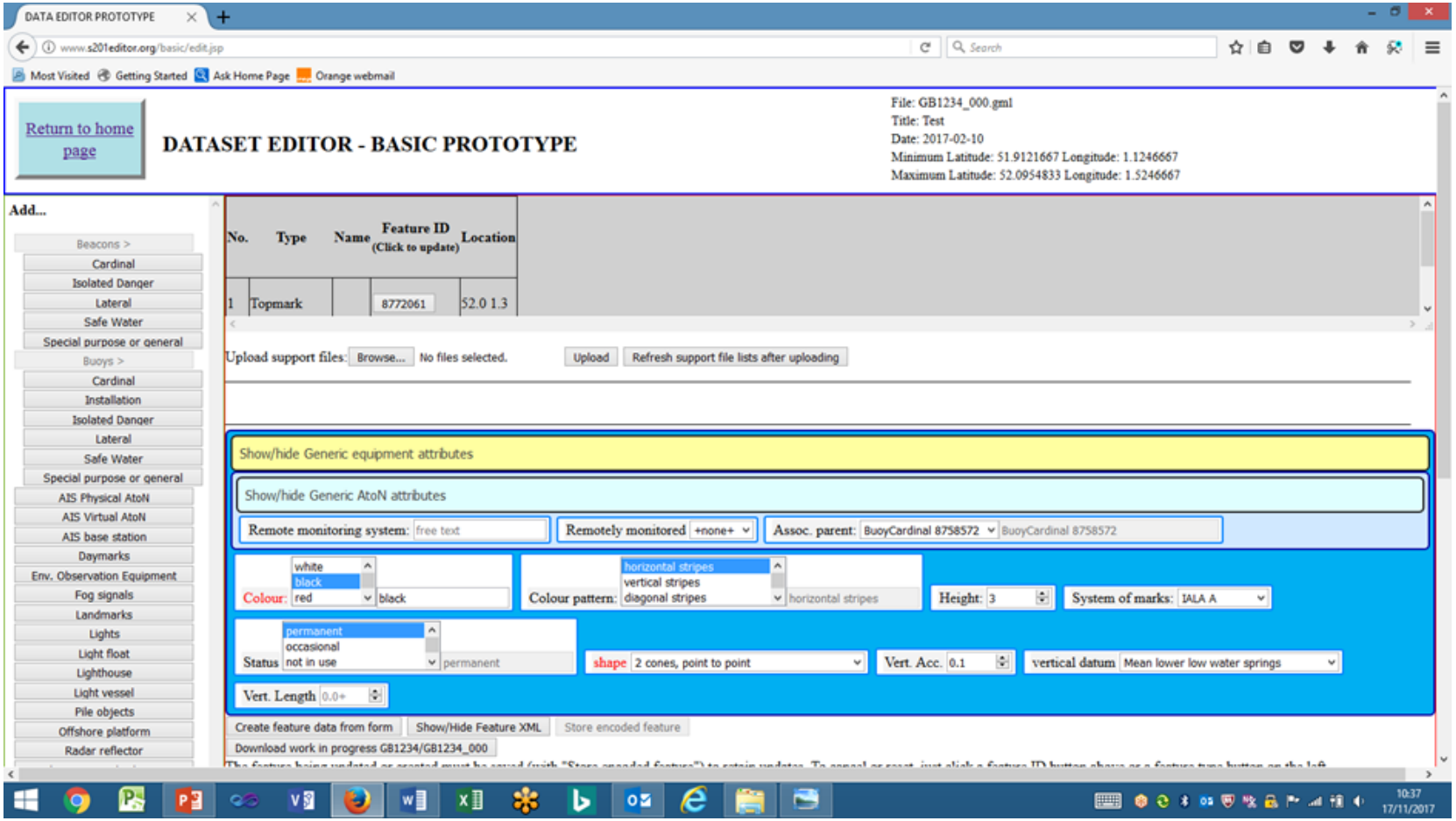
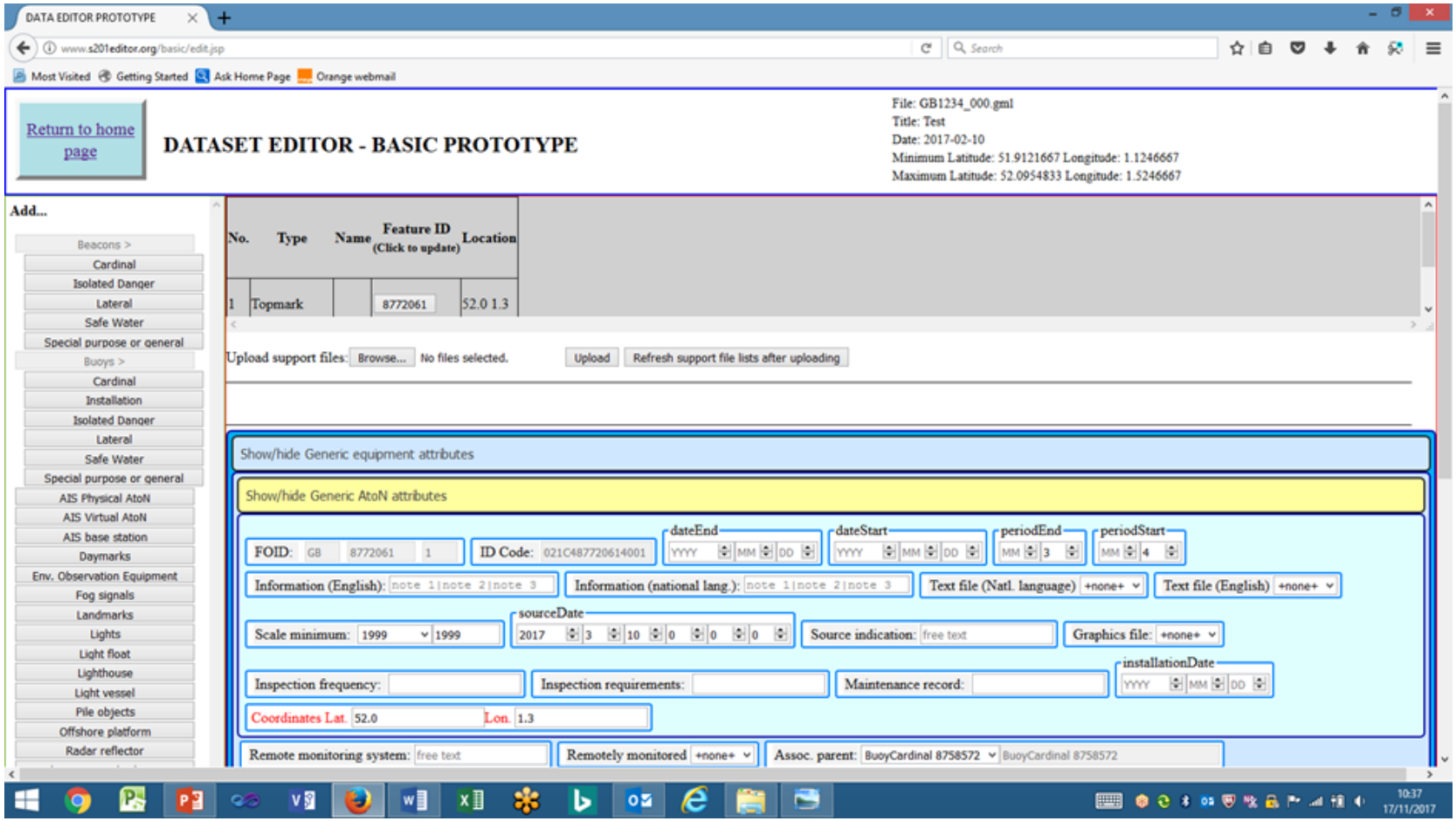
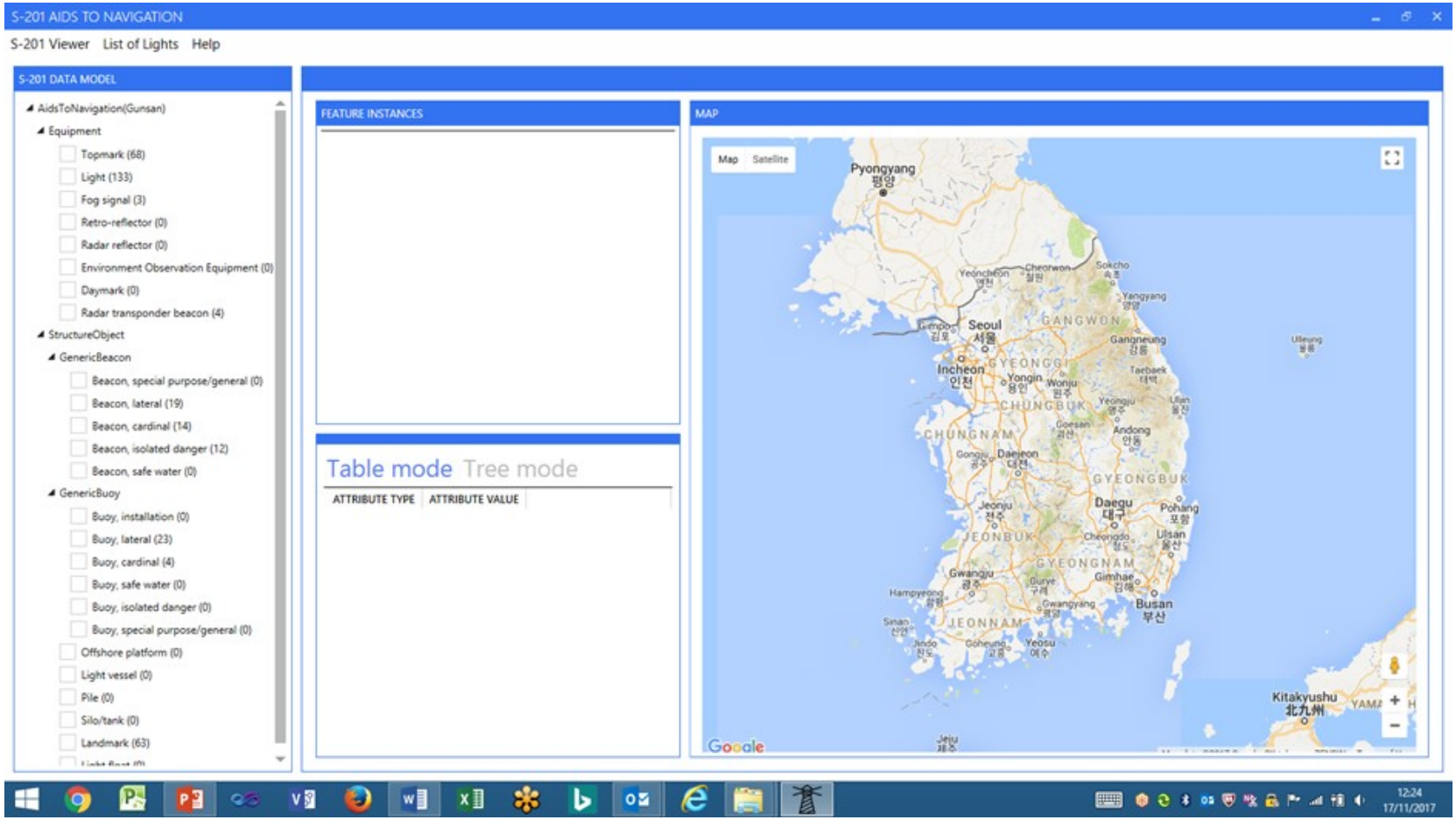


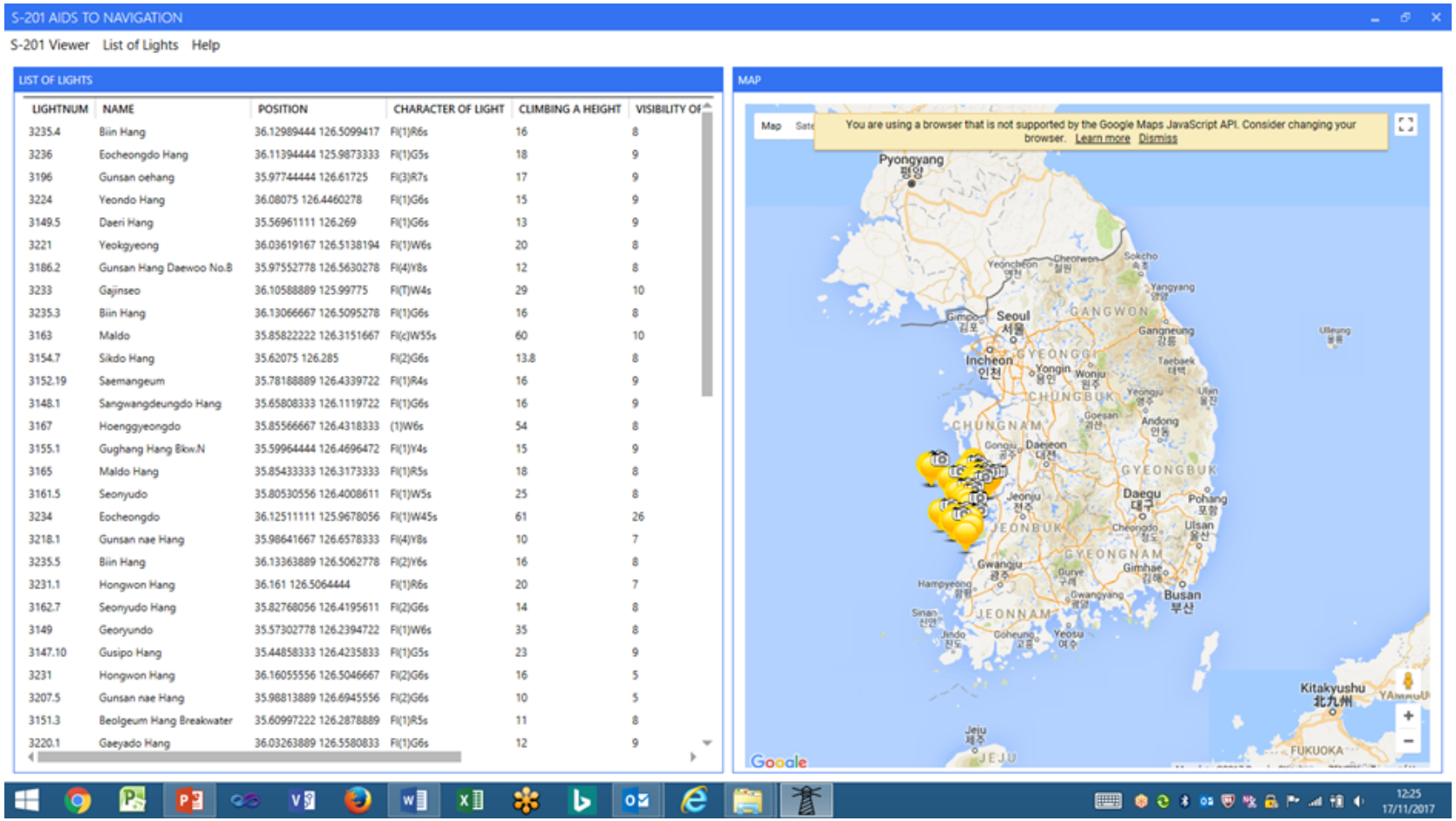
Dataset expanded to third level



Entry screen for KRISO Viewer

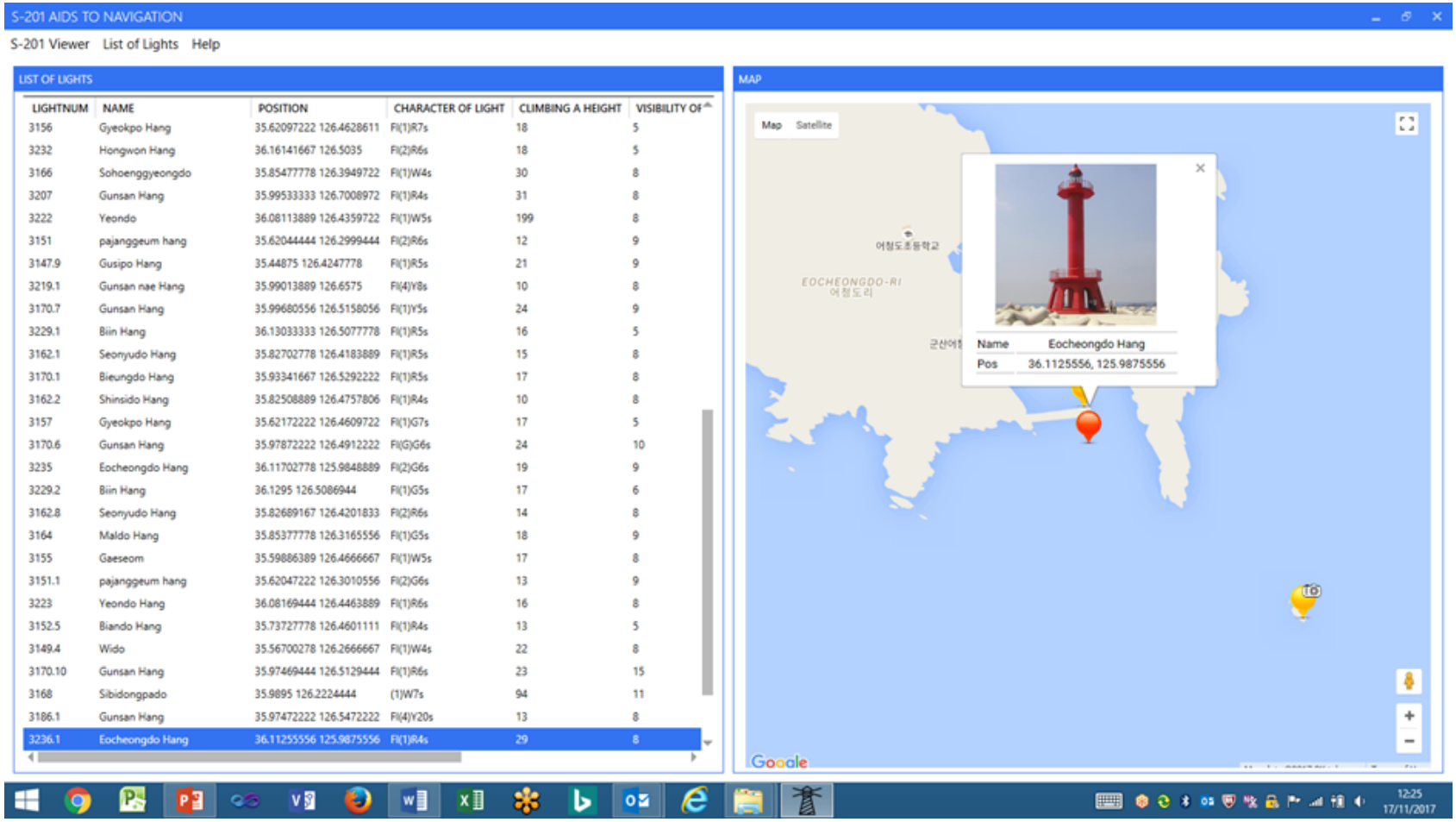


AtoNs for selected area highlighted



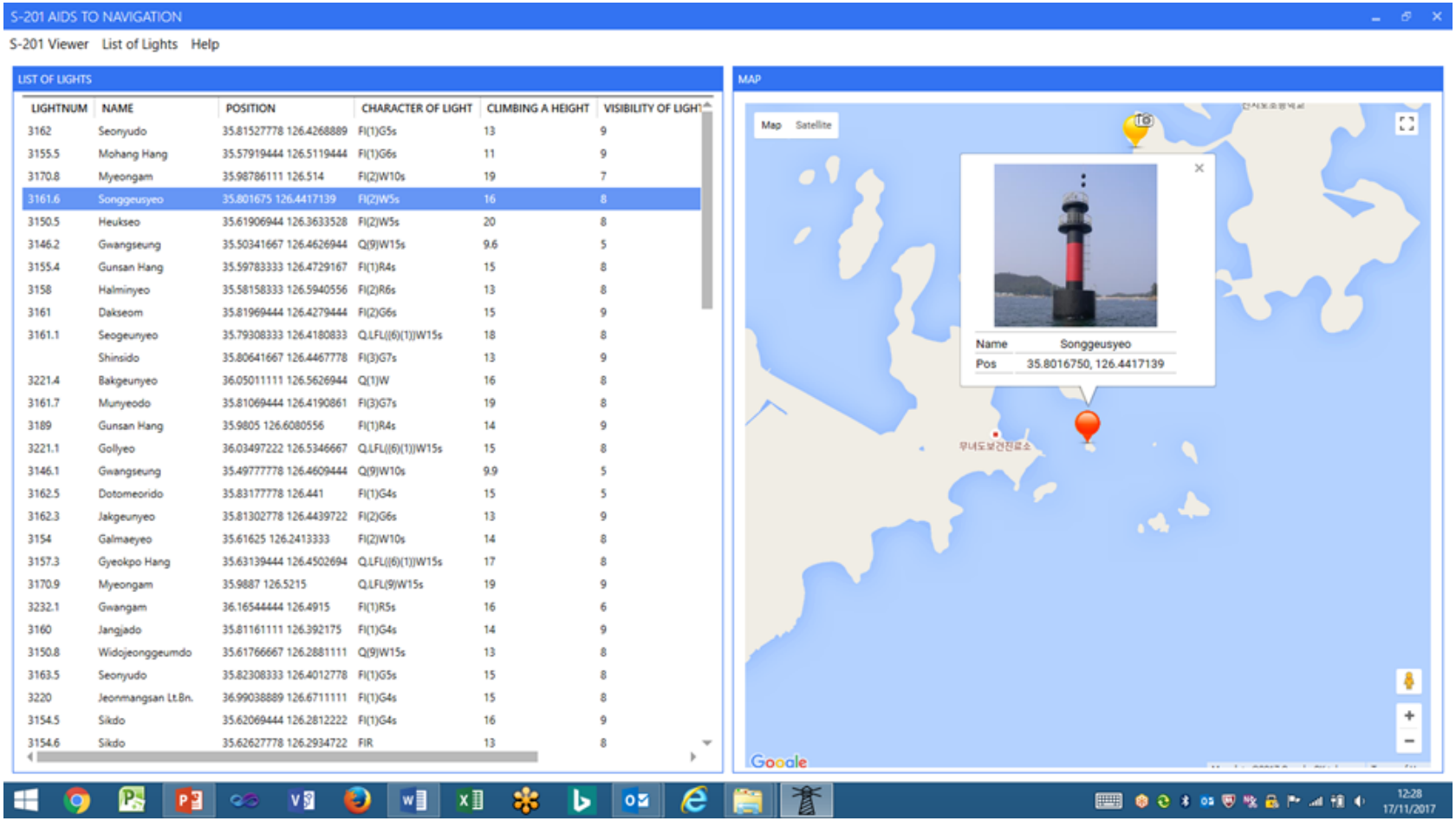
LIGHTNUM	NAME	POSITION	CHARACTER OF LIGHT	CLIMBING A HEIGHT	VISIBILITY OF
3235.4	Biin Hang	36.12989444 126.5099417	Fl(1)R6s	16	8
3236	Eocheongdo Hang	36.11394444 125.9873333	Fl(1)G5s	18	9
3196	Gunsan oehang	35.97744444 126.61725	Fl(3)R7s	17	9
3224	Yeondo Hang	36.08075 126.4460278	Fl(1)G6s	15	9
3149.5	Daeri Hang	35.56961111 126.269	Fl(1)G6s	13	9
3221	Yeokgyeong	36.03619167 126.5138194	Fl(1)W6s	20	8
3186.2	Gunsan Hang Daewoo No.8	35.97552778 126.5630278	Fl(4)Y8s	12	8
3233	Gajinseo	36.10588889 125.99775	Fl(T)W4s	29	10
3235.3	Biin Hang	36.13066667 126.5095278	Fl(1)G6s	16	8
3163	Maldo	35.85822222 126.3151667	Fl(c)W5s	60	10
3154.7	Sikdo Hang	35.62075 126.285	Fl(2)G6s	13.8	8
3152.19	Saemangeum	35.78188889 126.4339722	Fl(1)R4s	16	9
3148.1	Sangwangdeungdo Hang	35.65808333 126.1119722	Fl(1)G6s	16	9
3167	Hoenggyeongdo	35.85566667 126.4318333	(1)W6s	54	8
3155.1	Gughang Hang Bkw.N	35.59964444 126.4696472	Fl(1)Y4s	15	9
3165	Maldo Hang	35.85433333 126.3173333	Fl(1)R5s	18	8
3161.5	Seonyudo	35.80530556 126.4008611	Fl(1)W5s	25	8
3234	Eocheongdo	36.12511111 125.9678056	Fl(1)W45s	61	26
3218.1	Gunsan nae Hang	35.98641667 126.6578333	Fl(4)Y8s	10	7
3235.5	Biin Hang	36.13363889 126.5062778	Fl(2)Y6s	16	8
3231.1	Hongwon Hang	36.161 126.5064444	Fl(1)R6s	20	7
3162.7	Seonyudo Hang	35.82768056 126.4195611	Fl(2)G6s	14	8
3149	Georyundo	35.57302778 126.2394722	Fl(1)W6s	35	8
3147.10	Gusipo Hang	35.44858333 126.4235833	Fl(1)G5s	23	9
3231	Hongwon Hang	36.16055556 126.5046667	Fl(2)G6s	16	5
3207.5	Gunsan nae Hang	35.98813889 126.6945556	Fl(2)G6s	10	5
3151.3	Beolgeum Hang Breakwater	35.60997222 126.2878889	Fl(1)R5s	11	8
3220.1	Gaeyado Hang	36.03263889 126.5580833	Fl(1)G6s	12	9

clicking on AtoN for image



LIGHTNUM	NAME	POSITION	CHARACTER OF LIGHT	CLIMBING A HEIGHT	VISIBILITY OF
3156	Gyeokpo Hang	35.62097222 126.4628611	Fl(1)R7s	18	5
3232	Hongwon Hang	36.16141667 126.5035	Fl(2)R6s	18	5
3166	Sohoenggyeongdo	35.85477778 126.3949722	Fl(1)W4s	30	8
3207	Gunsan Hang	35.99533333 126.7008972	Fl(1)R4s	31	8
3222	Yeondo	36.08113889 126.4359722	Fl(1)W5s	199	8
3151	pajanggeum hang	35.62044444 126.2999444	Fl(2)R6s	12	9
3147.9	Gusipo Hang	35.44875 126.4247778	Fl(1)R5s	21	9
3219.1	Gunsan nae Hang	35.99013889 126.6575	Fl(4)Y8s	10	8
3170.7	Gunsan Hang	35.99680556 126.5158056	Fl(1)Y5s	24	9
3229.1	Biin Hang	36.13033333 126.5077778	Fl(1)R5s	16	5
3162.1	Seonyudo Hang	35.82702778 126.4183889	Fl(1)R5s	15	8
3170.1	Bieungdo Hang	35.93341667 126.5292222	Fl(1)R5s	17	8
3162.2	Shinsido Hang	35.82508889 126.4757806	Fl(1)R4s	10	8
3157	Gyeokpo Hang	35.62172222 126.4609722	Fl(1)G7s	17	5
3170.6	Gunsan Hang	35.97872222 126.4912222	Fl(G)G6s	24	10
3235	Eocheongdo Hang	36.11702778 125.9848889	Fl(2)G6s	19	9
3229.2	Biin Hang	36.1295 126.5086944	Fl(1)G5s	17	6
3162.8	Seonyudo Hang	35.82689167 126.4201833	Fl(2)R6s	14	8
3164	Maldo Hang	35.85377778 126.3165556	Fl(1)G5s	18	9
3155	Gaeseom	35.59886389 126.4666667	Fl(1)W5s	17	8
3151.1	pajanggeum hang	35.62047222 126.3010556	Fl(2)G6s	13	9
3223	Yeondo Hang	36.08169444 126.4463889	Fl(1)R6s	16	8
3152.5	Biando Hang	35.73727778 126.4601111	Fl(1)R4s	13	5
3149.4	Wido	35.56700278 126.2666667	Fl(1)W4s	22	8
3170.10	Gunsan Hang	35.97469444 126.5129444	Fl(1)R6s	23	15
3168	Sibidongpado	35.9895 126.2224444	(1)W7s	94	11
3186.1	Gunsan Hang	35.97472222 126.5472222	Fl(4)Y20s	13	8
3236.1	Eocheongdo Hang	36.11255556 125.9875556	Fl(1)R4s	29	8

lat/long, height, light character



LIGHTNUM	NAME	POSITION	CHARACTER OF LIGHT	CLIMBING A HEIGHT	VISIBILITY OF LIGHT
3162	Seonyudo	35.81527778 126.4268889	Fl(1)G5s	13	9
3155.5	Mohang Hang	35.57919444 126.5119444	Fl(1)G6s	11	9
3170.8	Myeongam	35.98786111 126.514	Fl(2)W10s	19	7
3161.6	Songgeusyeo	35.801675 126.4417139	Fl(2)W5s	16	8
3150.5	Heukseo	35.61906944 126.3633528	Fl(2)W5s	20	8
3146.2	Gwangseung	35.50341667 126.4626944	Q(9)W15s	9.6	5
3155.4	Gunsan Hang	35.59783333 126.4729167	Fl(1)R4s	15	8
3158	Halminyeo	35.58158333 126.5940556	Fl(2)R6s	13	8
3161	Dakseom	35.81969444 126.4279444	Fl(2)G6s	15	9
3161.1	Seogeunyeo	35.79308333 126.4180833	Q.LFL(|6)(1)|W15s	18	8
	Shinsido	35.80641667 126.4467778	Fl(3)G7s	13	9
3221.4	Bakgeunyeo	36.05011111 126.5626944	Q(1)W	16	8
3161.7	Munyeodo	35.81069444 126.4190861	Fl(3)G7s	19	8
3189	Gunsan Hang	35.9805 126.6080556	Fl(1)R4s	14	9
3221.1	Gollyeo	36.03497222 126.5346667	Q.LFL(|6)(1)|W15s	15	8
3146.1	Gwangseung	35.49777778 126.4609444	Q(9)W10s	9.9	5
3162.5	Dotomeorido	35.83177778 126.441	Fl(1)G4s	15	5
3162.3	Jakgeunyeo	35.81302778 126.4439722	Fl(2)G6s	13	9
3154	Galmaeyeo	35.61625 126.2413333	Fl(2)W10s	14	8
3157.3	Gyeokpo Hang	35.63139444 126.4502694	Q.LFL(|6)(1)|W15s	17	8
3170.9	Myeongam	35.9887 126.5215	Q.LFL(9)W15s	19	9
3232.1	Gwangam	36.16544444 126.4915	Fl(1)R5s	16	6
3160	Jangjado	35.81161111 126.392175	Fl(1)G4s	14	9
3150.8	Widojeonggeumdo	35.61766667 126.2881111	Q(9)W15s	13	8
3163.5	Seonyudo	35.82308333 126.4012778	Fl(1)G5s	15	8
3220	Jeonmangsan Lt.Bn.	36.99038889 126.6711111	Fl(1)G4s	15	8
3154.5	Sikdo	35.62069444 126.2812222	Fl(1)G4s	16	9
3154.6	Sikdo	35.62627778 126.2934722	FIR	13	8

Summary of S-201 status

web app demonstrates practical use of S-201 . KRISO viewer provides a presentation of output in ECS

S-201 is approaching a usable tool for navigation authorities, hydrographers and potentially end-users

Requires further work to provide portrayal catalogue and to ensure feature catalogue and encoding compliant with S-100.

Further work

Overlap between S-201, S-101 (ENC), S-124 (NavWarnings) and S-125 (Navigation Safety Info)

Liaison between IALA and the relevant IHO WGs necessary to ensure harmonization of standards.

Security – indication of ownership of data sets and authority to change them

Data entry – ensuring compatibility with systems already in use

QUESTIONS ?

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