

14th TSMAD MEETING

4-8 June 2007, UKHO, Taunton – UK
 11 June 2007, Stavanger – Norway.

TSMAD Focus Group 3 Report

Ottawa Canada
 23 to 27 April 2007

Annex A – Agenda

Annex B – List of Participants

Annex C - Working list of items to be addressed by S-100 components

Monday 23 April

Barrie explained that unfortunately due to an accident Holger Bothien had broken his leg and was not able to attend the meeting but he had made arrangements to include his participation via teleconference.

Report and actions from FG2 Silver Springs Action Items.

The action Item concerning the list of survey metadata items. A list had been produced and sent to BG just prior to the meeting. The list will be sent to Brian Calder for action.

What is the position re the BAG? Brian to seek approval from the Open Nav Surface group. Bag is one PS - it is a bit narrow – what about other product specifications for other types of bathy data e.g. point cloud soundings etc ?

It was agreed that there is a need to identify what the requirements are for raw bathy data – need for thorough definition of the metadata elements and the group must also ensure that the specification for raw bathy data supports post processed data products.

Julia noted that the Registry profile was near to completion.

Action: Barry to make alterations to reflect new changes in terminology (i.e. Feature Concept Dictionary) in the Registry. Julia to distribute the document as committee draft the following week – for acceptance as final draft at the Taunton TSMAD meeting.

Tony reported that a list of Tidal datums had been circulated prior the meeting. PB noted that DGWG had also produced a list of tidal datums and definitions were needed. Should these be included in a register? This could be a simple list.

Action: Barrie to request the Tidal Committee to provide an official list of tidal datum (including definitions) and request them to maintain (and be the authority for) the list in the Registry. Holger – should give consideration to datum transformations also in the Registry. VORF Vertical Offshore Reference Framework needs further investigation.

Feature Catalogues – Discussion on the proposed changes to 19110 and the direction that should be taken for S-100.

(Conference call) - Holger noted that the name and terms should be changed to Feature Concept Dictionary – Paul proposed that we it was appropriate to keep FDD because the Hydro Registry will include data types.

Feature Catalogues (FC) - Peter Parslow

The product specification will contain an application schema and a feature catalogue. To what extent does it matter to us that S-100 catalogues conform strictly to ISO defined catalogues?

Holger went through the Catalogue UML diagram (FG3-1d) and noted that the main difference between the Feature Catalogue and the FDD is the concept of binding. He provided a description of the feature catalogue and questioned whether it was a requirement to build a 19110 conformant catalogue or was it merely necessary to ensure that the existing catalogue allows for the conversion to 19110 conformant models.

Action: Peter Parslow to go through the new model and compare it to the one in 19110, and document the changes. Need to change the terminology to conform to 19110. Paul noted that there were terminology inconsistencies (e.g. DictionaryInfo should be CI_Citation). Holger agreed that this could be done however there must not be changes the concepts of model. (This action was completed during the meeting).

Breakout group to review the FC Catalogue UML Model to report later.

Tuesday 24

Teleconference with Holger. Response on the revised 19110 model. Holger had studied the proposed draft and had prepared a new proposed structure – (see Fig FC1 below). Questions from Holger: Listed values – to which attributes do they belong ? – sharing of listed values between attributes should not be allowed - this should be made clear in the model. This should also be stated in the tables.

Class FC Binding – does not seem to have much value and is very generic. Binding classes should have some more specific information – perhaps there is a need to extend the class. He also noted that FC_Binding disappears in the new model.

Concerning the spreadsheet outlining questions concerning usage type class produced by the breakout group and sent to Holger:

ENC Product specification lists a number of mandatory attributes. There are also conditional mandatory conditions specified in the ENC product specification which can't be described using UML conditionality. Paul noted that these special types of conditionality (required at the data instance) need to be documented in the encoding guide. He questioned whether it is the intent to try and capture everything that is in the USOC and tie it into the catalogue model? The model needs to support constraints, but it is not possible to include all constraints in the catalogue without diverging from the 19110 model. Perhaps there is a need to consider defining constraints using OCL. It was noted that the British National Framework catalogue WG have extended the FC_constraints class.

BG noted that bindings are to be removed from the next version of 19110. Constraints will be kept.

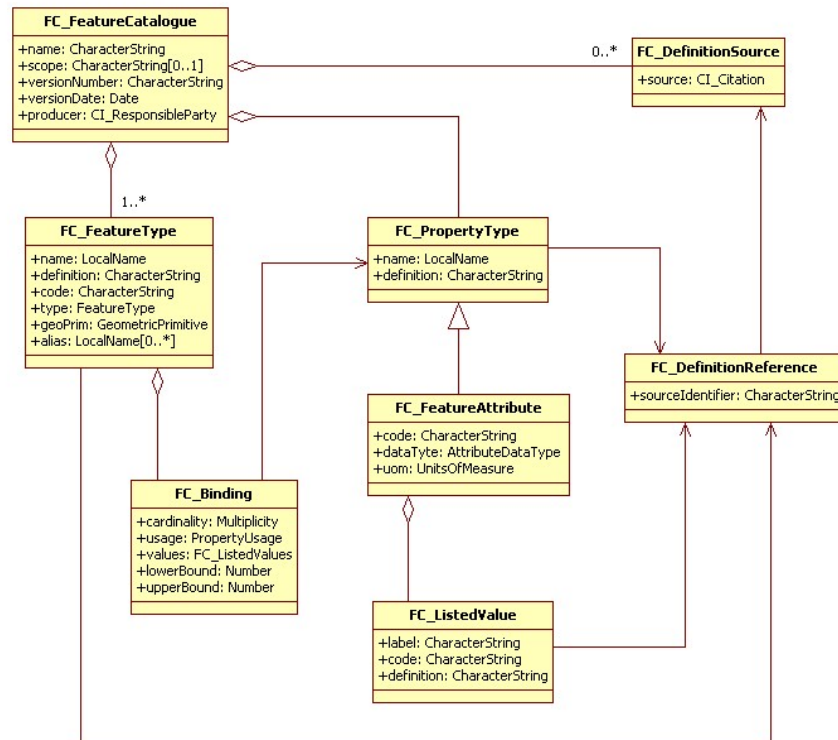
PP questioned where constraints get defined – in the catalogue, the application schema or just in words in the product specs as is the case for ENC PS for S-57 Ed 3.1? There is a need for the inclusion of a constraints language. From the modeling view point – is there a need to allow constraints to be defined in the Feature Catalogue? 19131 does not say that constraints need to be defined in the feature catalogue. It was decided to investigate the possibility of defining constraints in the application schema. There is a need however to be able to encapsulate the constraints to be included in an exchangeable feature catalogue. After further discussion, it was decided to not include constraints at this point, as it may be too early to make a final decision. - Needs further consideration.

PP – questioned whether the units of measure should be specified in the feature catalogue, or should it be expressed at the data instance level? Paul Birkel – is this not just another type of constraint that perhaps could be described in the dataset header – i.e all heights are defined in meters. Variances at the feature level could be defined at the feature level and would override the dataset definition. Example – runway must be specified as a length – units

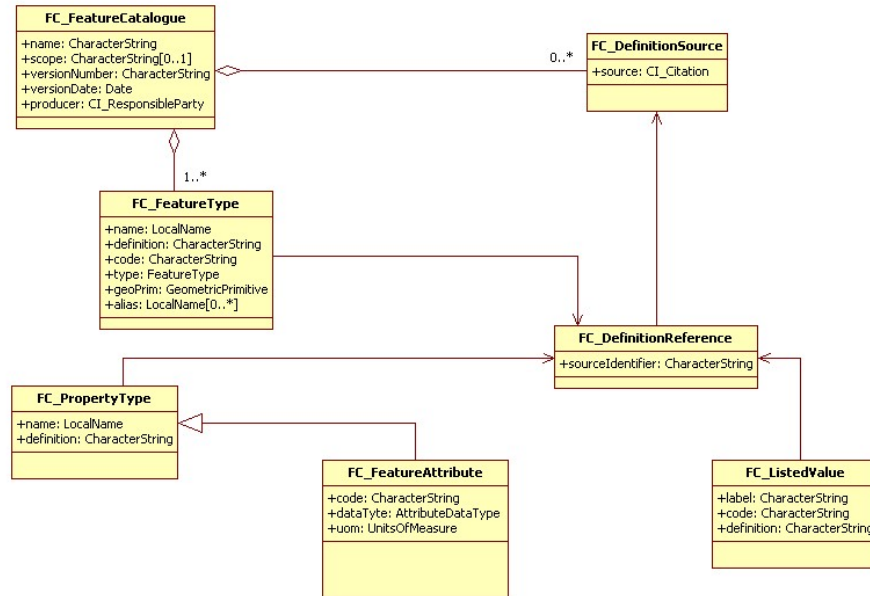
must be meters, specified at the data instance either directly or by reference - (measure type [length] – units of measure [meters]). It was noted that GML describes units of measure (UOM) at the data instance level. If GML is going to be used, then there is no need to define it in the feature catalogue. It was noted that there may however be a need to define it in the feature catalogue for other requirements.

Do we want to restrict UOM at the feature type level, or should it be defined at the instance level? It was agreed that there must ensure that there should not be two unites of measure for the same feature type in the same instance.

Holger Bothien revised models are copied below as FC1 and FC2



Feature Class 1



Feature Class 2
Figure 1

Issue concerning bindings – how far do we want to deviate from the 19110 model? It was decided to move bindings to the Feature Attribute class level – this makes it more compliant with the 19110 model.

There is a requirement to determine whether the application schema should be generated from a type of Feature Catalogue ++, or should the FC be more 19110 compliant. Holger suggested that the only way to be able to decide this would be to carry out test to better understand the issues. Roger noted that he has produced a UML application schema and 19110 XML schema for ENC that could be used for the test. **Action: Roger to send 19110 schemas for ENC to Holger who will conduct the test – with help from Peter P.**

Peter P enquired whether there any other issues that should be considered such as including association roles and inheritance on associations. If there is a requirement for this we need to include FC_Inheritance and abstract. Do we want to have a type of super class to make provision of more than one role type, and to be defined for a feature class e.g. where a bridge feature passes over a river and a railway? It should be possible to have a super class “over” that could make provision for defining different types of “overness” e.g. over a bridge, road, river etc... Holger suggested that the problem could be solved in 19110 by changing the cardinality of attributes. Paul – this will cause incompatibility problems – should only make changes to the 19110 model if absolutely necessary.

Agenda 6 CRS Component – Finalise ready for EC meeting in Taunton.

Based on the new version of 19111 - 2006. Holger – document not a profile but rather comparison between 19111 and S-57. Good exercise but not suitable as an S-100 component document. Question – what is the mechanism to reference constants – such as datum lists which are already defined in some databases e.g. EPSG. Paul – EPSG may not be suitable for all military applications that need to recognize variants of WGS 84 for instance. (These differences may be small, but could have significant implications). Problem with using EPSG – this community has no control over their definitions. It may be possible to get around this by having our own authoritative references. Holger B question whether the relevance of including the engineering datum - is it used for hydo requirements?

Encoding – Formulate plan for GML in S-100 and discuss ISO/IEC 8211 improvements.

Barrie G noted that the group needs to decide what is to be included in S-100 and S-101. There is a need to look at what is being done for AML and how does this fit with S-100.

Peter P – there is a need to start with a life cycle model and to look at the information model for the products. Should TSMAD opt for a “model driven” architecture, i.e. from a UML model, or should it use fragments of GML. Roger B proposed that it should be an engineering output from a UML model as described in the diagram (Figure 2) below:

Do we want to use the TC 211 tool to generate the GML application schema or do we want to build the application schema from the Feature Catalogue and generate the UML model for documentation purposes?

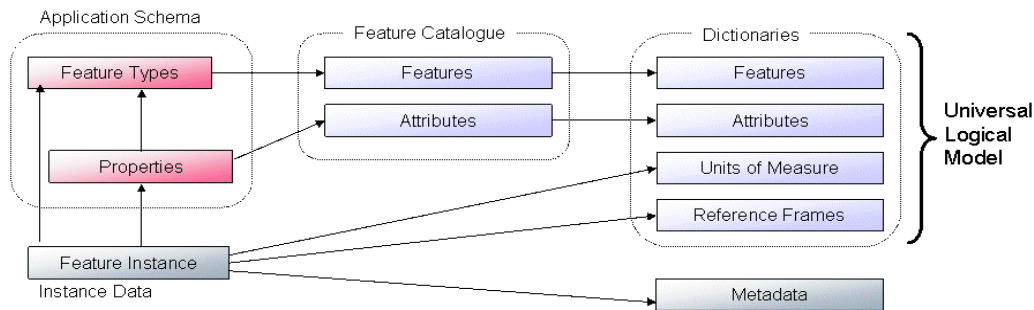


Figure 2

Discussion about different approaches to defining the application schema, FC and UML models.

Roger B presented several issues relating to implementation of S100 product specs within the ISO19100/TC211 model and proposed possible modeling approaches for S100 within ISO19100 Models – see Figure 3 below.

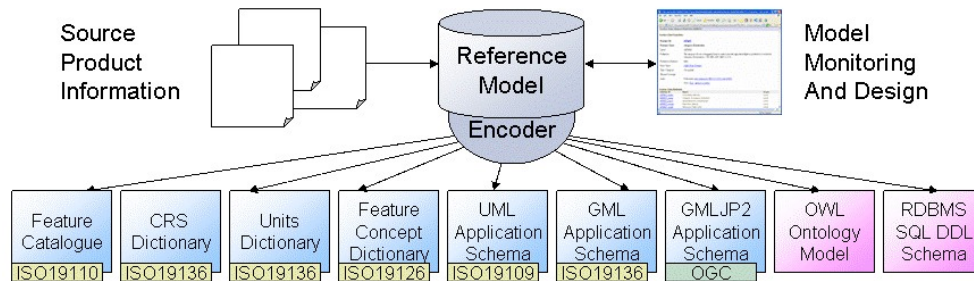


Figure 3

The model references the 19110 (Feature Catalogue) and 19109 (Application Schema) models. From this it will be necessary to produce the interchange models, particularly the UML Application Schema which integrates the application semantic and the spatial, temporal, metadata or other component models. Specific encodings (GML, RDBMS, GML Simple Feature, Shape File, etc...) could then be generated using either ISO defined or extended, custom encoding rules as appropriate.

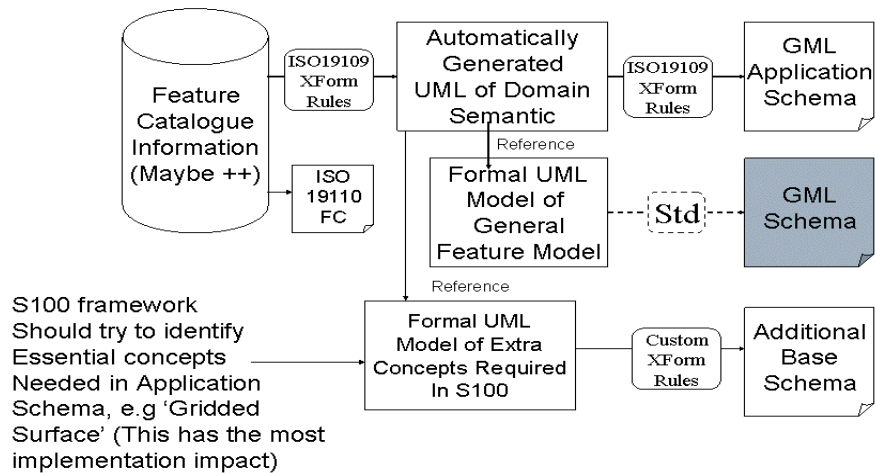


Figure 4

The alternative is to do the modelling in the specific exchange/database standard. This tends to lose the formalism and repeatability.

2. Complex Attributes – Finalise concept including list attributes and a decision on data type register.

Discussion about Holgers example document. Paper FC3 – 2b - provides examples of attributes in the FDD and demonstrates encodings of complex attributes. Paul B noted that ISO does not use complex attributes but does use complex data types. The model would be supported in XML, but does not fit the GLM model. There is a UML model for “nillable” which should be implemented in the model.

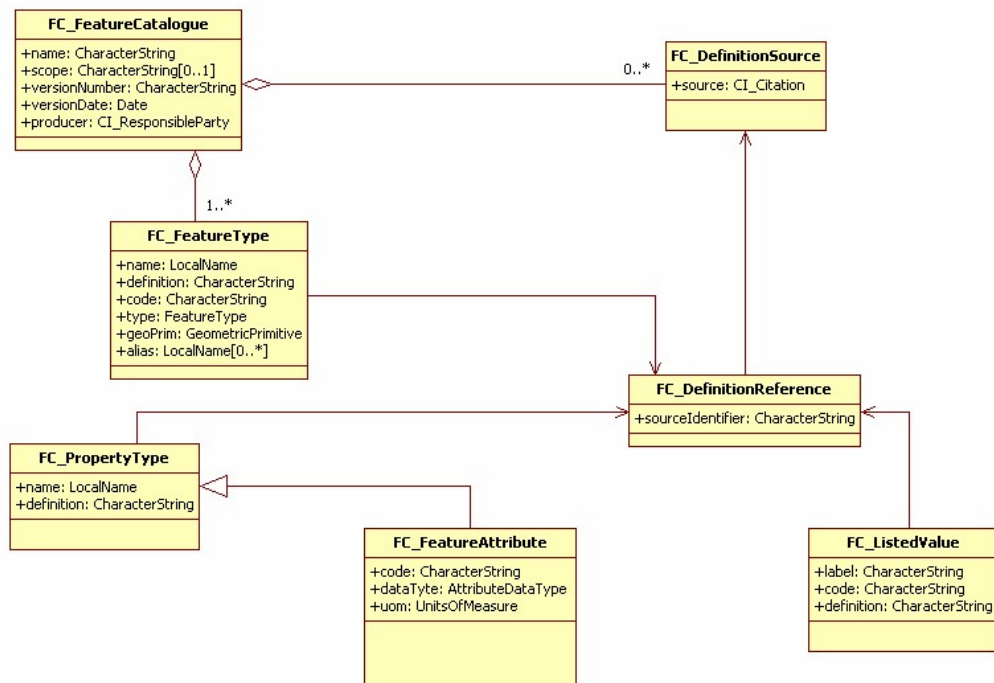


Figure 5

Diagram produced by Holger

CARIS noted that in many instances there are many good ideas that don't fit the ISO model. This should not stop TSMAD implementing them. The group should however try and ensure a level of compatibility to support data transformation - e.g. complex attributes could be mapped to attributes of attributes. It was agreed that if complex attributes serve the purpose, then they should be used.

It was decided that Holger Bs proposal should be accepted, with the changes discussed during the meeting (with some rewording and alignments to 19110). The proposal to including complex attributes as described in paper FC3-2b was also accepted and should be included / implemented.

Discussion about the Registry

Proposal to include camelCase names in the registry is underway and will be passed to DGWG for inclusion in there registry when completed.

Paul B said that DIGWG are developing a datatype registry that will include complex data types such types as CI_Citation and CI_ResponsibleParty. They are also developing a CRS register.

How to deal with (include) S-57 clarifications in the Registry? Paul proposed that all the variants of the clarification need to be kept. The only reason that a definition could be changed by a clarification would be for something such as a spelling of grammatical error. Any clarifications that change the content or semantics of a definition will require a super session of the feature. DGIWG will be making decisions during the following week that may affect the IHO registry.

Action: Paul to inform Barrie of any decisions that may influence the IHO registry.

Action: Paul to provide Barrie with the DGIWG registry and FDD schemas. Peter to develop style sheet to convert xml to document (human) readable format.

Discussion on the Implications of UML v 3.

Barrie outlined the proposed changes to the UML version 3 within ISO/TC 211 and questioned the impact that this will have on TSMAD work. 19107 is of particular importance and it was questioned how this will this affect our profile of the standard. Peter - the issue of multiplicity is purely aesthetic, and should not affect the content.

Consensus – these changes should not have any impact on TSMAD development work, and no action is required in response to this.

Review of ISO 19107 and Implications of possible changes.

ISO TC211 19107 is coming up for its 5 year review. Does TSMAD want to make a submission to 19107 WG to include spatial attribution (as is presently modelled in S-57)? [i.e. to allow for an attribute on a piece of spatial geometry]. Paul noted that DGWG had made provision for this (for metadata) by sub typing geometric primitives. The following possibilities were considered;

1. Create separate (sub) features that include those pieces of geometry that require similar spatial attribution. The full feature will be a composite of the sub features.
2. Make provision for spatial attributes as per the present S-57 model.
3. Sub type the geometric primitives and include the spatial attribution on the sub typed geometry.

It was noted that Spatial attribution – subtype GM Primitive would be fine for GML but may not be suitable for 8211. There may be a need two variants see Figure 6 below.

Example

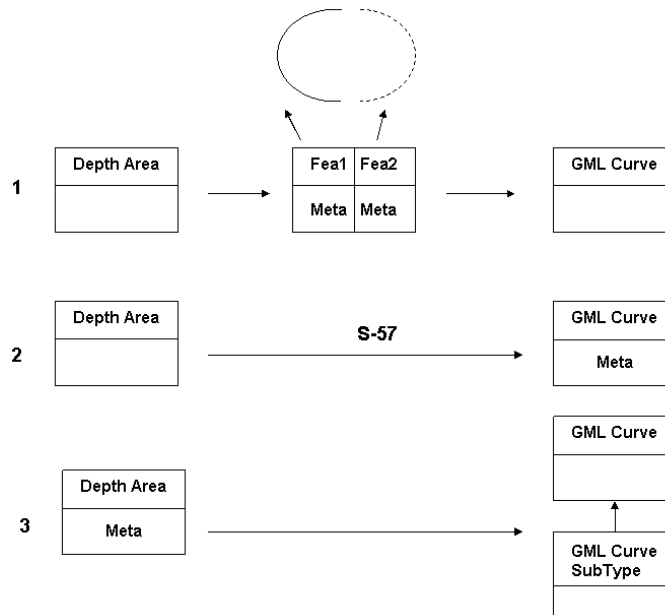


Figure 6

Consensus opinion: Sub typing the GM primitives (e.g. GM_Curve) and include required attributes - described in 19109 Figure 12.

Wednesday 25th

Metadata Part 2 Quality presented by Deon G

Paul - what is the status of part one. Deon note that there are some changes that needed to be harmonized with the Part 2. [Should be completed soon]. Deon noted that there was a need to change DQ_Element - nameOfMeasure from character string to codelist. Barrie also noted that he had just distributed the list of survey metadata elements to the group. (This was an action: item from Silverspring meeting for David Parker and Brian Calder). These have also been sent to Deon for evaluation.

Review of metadata elements at Annex C for decision as to whether they should be included.

Action: Deon to fix the model – with the new picklist). Julia to prepare letter for Barrie to send out to TSMAD and S-44 working groups. The letter to include the list at Annex C of the document. The letter is to request WG members to identify which of the quality elements apply (or don't apply). This should be accompanied by one of the annexes from 19138. Responses to be ready for the Taunton TSMAD meeting.

Data Product Specification Profile (DPSP) – FG3-9b

Julia provided some background as to why the document was produced – parts of the document are still missing. The document is based on the DGWIG profile and 19131. There is a need for constructing the S-101 (and other S-10X) product specifications. General content and structure follows 19131.

Peter – what is the relationship between this document and the framework document which seems to have an overlap of content? Should the duplicate information be removed from the framework document? Barrie - the framework document is closer to a cookbook on how to build a product specification. It was agreed that the two documents should be progressed in parallel and will be harmonized as they are progressed. Peter will have a new edition of the framework document ready for the Taunton TSMAD meeting. Section 5 of the framework will be held back until the Data Product Spec profile document is firmed up.

Data Quality – can have many scopes – the scope must define what DQ measures are to be used.

Action: Julia to compare the 19131 and DIGIWG profile and extract those components that are required for the Hydrographic profile.

Temporal Component

BG outlined the paper produced by Thomas Mellor – discussion about the model. Don V noted that to include temporal (time) as a dimension is very complicated and it may be sufficient to include it in S-100 as an attribute. If not required as a 4th dimension, why implement it? Peter – GML models, and makes provision for, temporal requirements as an attribute. Are there requirements for more complex temporal models from the oceanographic community? **Action: Don Vachon to get feedback on the document from the CHS oceanography experts – to report to the Taunton meeting.**

Should primitive data types be in the framework document? – Peter proposed to put all the temporal data types in this section of the framework document.

Review of the Spatial Reference

Review of comments sheet.

On the polygon doughnut issue, it was decided to follow the 19107 protocol - (i.e. opposite direction to S-57). There is a need to determine what impact this will have on ENCs both from the producers and consumers perspective.

Thursday 26

Continued discussion about the polygon direction issue. May be able accommodated the change in direction within the ECDIS system, however it was agreed that it should be consistent at the production stage before being released. Having different orientations in different datasets of the same version (e.g. 3.1), will cause problems and is not tenable. Will need to make sure that an edition 3.1 dataset will work an S-101 ECDIS. Barrie G noted that we need to have a closed interface with technical ECDIS “role players” and recommended making a presentation at the next CIRM meeting on S-101.

Continued discussion about the feature catalogue/application schema. Peter P – there is a need to get clarity on what we want the feature catalogue to do. Machine readable format – what do we need to have in it and what should not be in it? It should probably close to a 19110 catalogue with a bit more (i.e. ++). What are the extra things – constraints? Need to review the package that both Holger and Rogers proposed. (Roger is going to provide the “++” bits to include in a database that will make provision for the FC++ and will allow for the generation of UML and application schema. See figure 7 below. (Perhaps available next week).

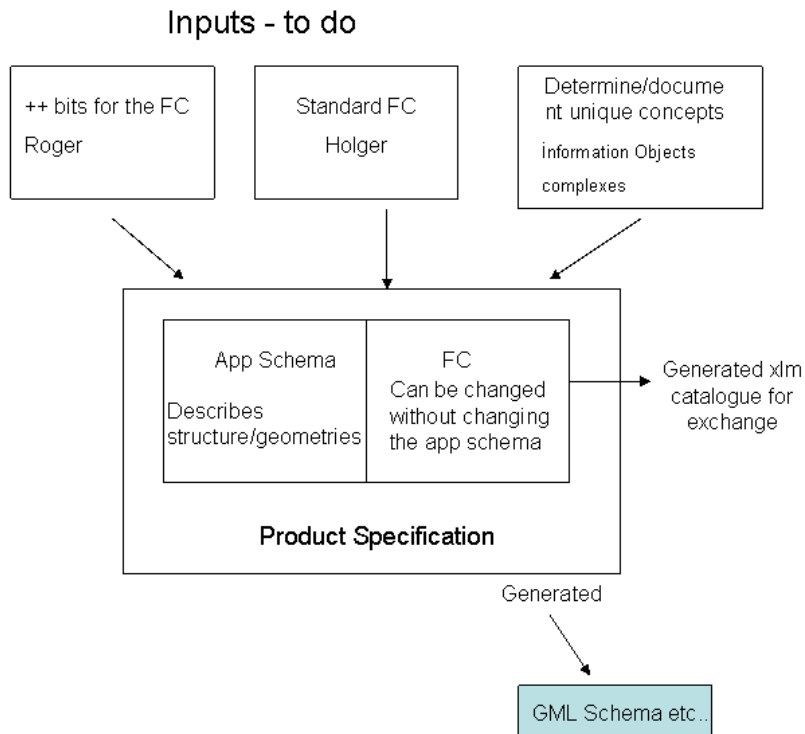


Figure 7

Application schema – what will the database output be?

- generate UML diagrams (from which the GML schema could be generated, to validate against)
- generate the xml exchange of the FC

Three options that the UML could be used for. (See Figure 8 below).

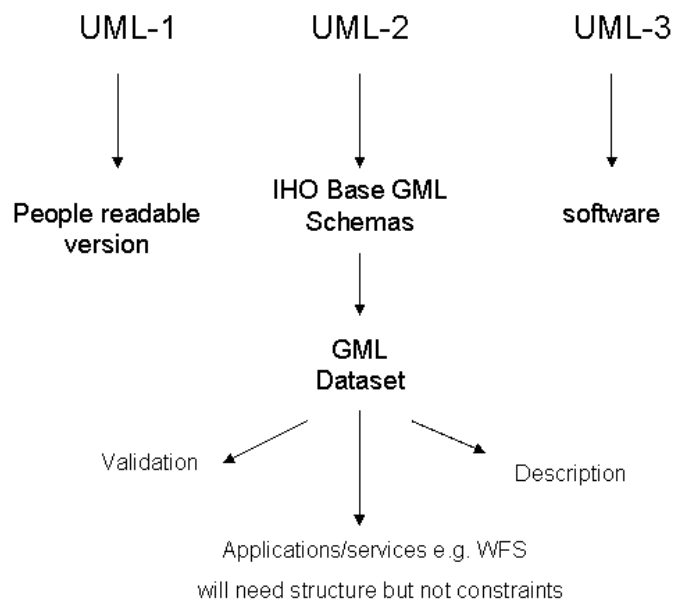


Figure 8

Hugh – highlighted a problem with a features that has parts of its geometry passing into a cell multiple times. See Figure 9. It was recognized that this was a problem that need further study.

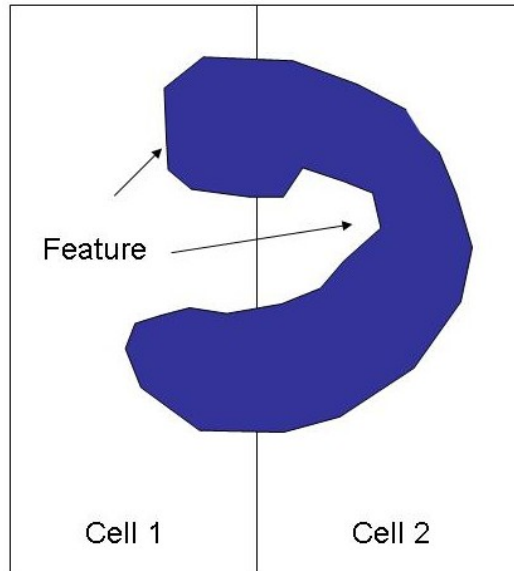


Figure 9

Friday

Report from Doug Obrien on the DGIWG Conference – Cologne

Doug Obrien provided an overview of some of the important issues that took place at the DGIWG meeting in Cologne during the previous the first part of the week.

DGIWG Registry – It is intended that there will be several registers – presently being hosted by Northrop Grumend (cost approx \$150 000 p.a.). These are to be moved to the OGC servers (cost \$ 50 000).

Registry will comprise two components (areas):

Offline Area (see diagram)

- * Master registry – administered by Germany – will comprise of standalone database.
- * 19139 process of updating – by register manager
- * An online copy will be made available on the OGC web site
- * Will be password protected and will have a secure registry area

Secure Registry Area

- * Will be housed within NATO and will be part of the NATO core GIS
- * will be deployed as one of the core geospatial information components

DGIWG are presently working through some of the use cases for the registry. TSMAD should participate - submit IHO use cases.

Action: BG to contact Ian Greesly – to propose IHO use cases.

DGIWG Feature Catalogue

Project to define the features and attributes is complete. Databases are in the process of being populated. Maintenance teams are being set up. Catalogues will formally come on line within a few weeks.

Product specifications with GML encodings will be developed for all legacy products (VPF, AML, DNC, VMAP ...etc), and will be based on the DFDD. Standards/Specifications for these will be made openly available. There will be different ontology mappings between these products. See figure 10

- Level 1 ontology mapping - feature definition to feature definition
- Level 2a ontology mapping – Feature + attribute to feature + attribute (equivalence relationships).
- Level 2b ontology mapping – e.g. this feature is equivalent to that feature + those attributes.
- Level 3 ontology mapping – OWL - ontology

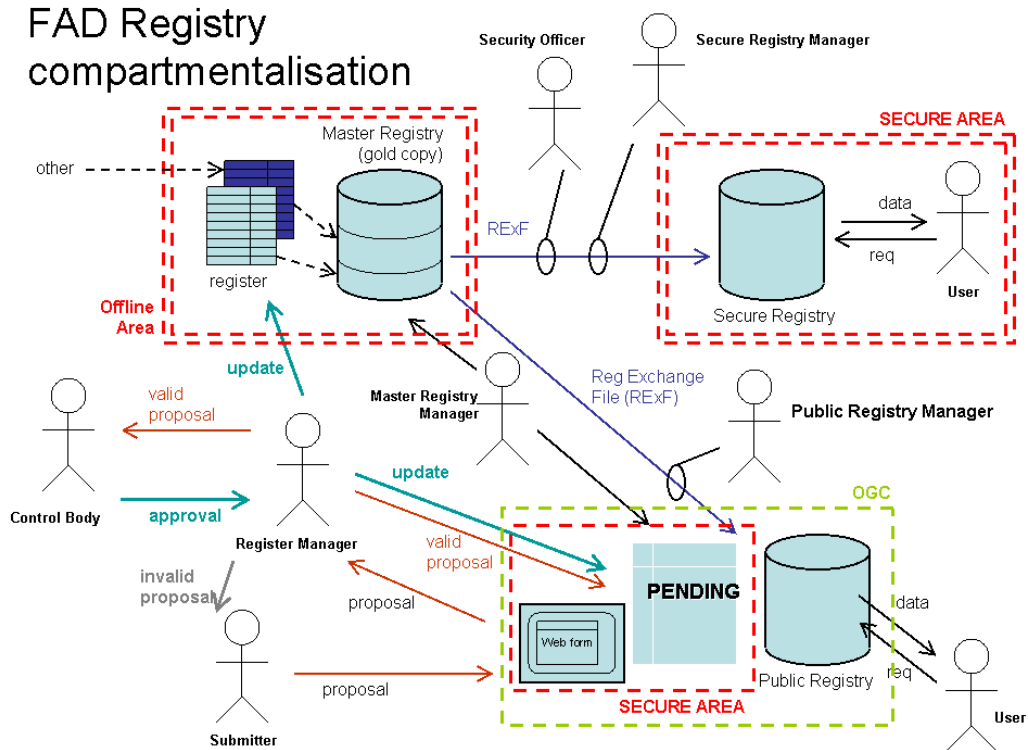


Figure 10

Metadata

NATO and DGIWG profile are compatible. They will develop metadata for products as required.

Portrayal

Roadmap on how portrayal is to be done is complete. This includes:

- How portrayal registers are being set up.
- One implementation will use GEOSYM and will use SVG. They are also looking at an X3D (ISO – C24-6) implementation.
- New version of GEOSYM are in the process of being produced.
- Also setting up a 2525 implementation (military symbols – will also have conditional rules based – similar to S-52).

Action: TP to establish what the status is of IEC TC80 WG13.

Three registers are being set up

- top lever register for symbols
- rules that will link features/attributes combinations to symbols

- ??

There will be a meeting in Minsk (Russia - August) on the symbols registry – Ian Greensly is the contact person.

IHO need to get consensus on how it is going to deal with portrayal. Presently C&SMWG main focus is to do with S-52 and ENC portrayal within ECDIS. C&SMWG will be establishing a registry for portrayal, however it is not clear what is to be done for other S-100 product specifications.

Action: Barrie G to invite Marlena Meyer to do a presentation on portrayal at the Stavanger C&SMWG.

Services

DGWIG will be building a number of service oriented architectures.

Barrie G asked what DGIWG were going to do in response to the proposed changes to 19110 (i.e. prohibiting the sharing of attributes between feature classes in the feature catalogue)? It was not clear what the DGIWG position was, however Doug O noted that provided there were sufficient negative votes from member nations, the advancement of the revised version could be blocked. (Only 2 negative votes required).

Action: TSMAD members to request their member bodies to not approve the revised edition. Peter Parslow to put a paper together a paper outlining the issues, and highlighting what TSMADs objections are.

There being no further business the chairman thanked FG members and closed the meeting.

**TSMAD S-100 – Focus Group Meeting
Ottawa 23-27 April 2007
Draft Agenda**

I have not included any timings for each item just the order of precedence. Relevant documents are listed and attached to the covering email.

0. Report and actions from FG2 Silver Spring
FG3-0a - TSMAD Focus Group NOS Report.doc
1. Feature Catalogues – We need to discuss the proposed changes to 19110 and the direction S-100 should take.
FG3-1a – 19110 Feature Cataloguing Methodology
FG3-1b – ISO 19110 Amndt 1 – CD
FG3-1c gfc (XML schema for 19110 revision)
FG3-1d FeatureCatalogue (Holger Bothien model)
FG3-1e Feature Catalogue models (Peter Parslow)
2. Complex Attributes – Finalise concept including list attributes and a decision on data type register.
FG3-2a fddext – Feature Dictionary Model
FG3-2b FDDEExamples Complex – Attribute examples
FG3-2c S-100 improvements (Hugh Astle)
3. 5 year review of 19107 (spatial standard) and proposed changes to ISO model upgrading to UML version 2 – Discuss any recommendations from TSMAD to 19107 WG (e.g. spatial attribution). Discuss implications of UML v 3.
FG3-3a Style and UML changes
4. XML schema for FD exchange
FG3-4a FCD Exchange Schema.xsd
FG3-4b Hydro FDD_Feature_Valid.xml
FG3-4c xml report style.sps
5. Metadata Part 2
FG3_IHO_QualityMetadata_2007v1.doc
6. CRS Component – Finalise ready for EC meeting in Taunton.
FG3-5a 5026338_ISO19111_006
7. Encoding – Formulate plan for GML in S-100 and discuss ISO/IEC 8211 improvements.
FG3-6a ISO 8211 Spatial record structure (Holger Bothien)
FG3-6b AML.zip (AML XML schema)
8. 1-2D Spatial EC Meeting
Comment sheet will be distributed shortly
9. 3D Spatial Component – way ahead.

FG3-8a NGA-3D.2006-08-28-1505

10. Profile of ISO 19131- Do we adopt the DGIWG profile with some editing to make more S-100 specific?

FG3-9a STD-DS-06-XXX-Data_Product_Specification_Profile.doc

11. Temporal Component – Tom Mellor is writing a first draft and it is probably at an appropriate stage to decide if it is moving in the right direction.

Document coming soon

12. AOB

LIST OF PARTICIPANTS

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Working list of items to be addressed by S-100 components

Num.	S-100 Component	Name	Action	Meeting	Due Date	Addressed
1	Metadata for hydrographic data	Barrie	List of metadata items. A list had been produced and sent to BG just prior to the meeting. The list will be sent to Brian Calder for action. This list needs to go S-44 for Review. BG will send to S-44 for distribution and review	Ottawa 2007	Sept 2007	
2	FDD	Barrie	Action: Barry to make changes to reflect new changes in terminology (i.e. Feature Concept Dictionary) in the Registry.	Ottawa 2007		y
3	FDD	Julia	Julia to distribute the document as committee draft the following week – for acceptance as final draft at the Taunton TSMAD meeting.	Ottawa 2007	May4, 2007	
4	Registry	Barrie	Barrie to request the Tidal Committee to provide an official list of tidal datum (including definitions) and request them to maintain (and be the authority for) the list in the Registry. Holger – should give consideration to datum transformations also in the Registry.	Ottawa 2007		
5	Registry	Peter	Peter Parslow: VORF Vertical Offshore Reference Framework Needs further investigation		May 2007	
6	Registry	Holger	Holger – should give consideration to datum transformations also in the Registry.		May 2007	
7	FC	Roger Bracken	Roger to send 19110 schemas for ENC for further review by TSMAD "There is a requirement to determine whether the application schema should be generated from a FC ++ or should the FC be more 19110 compliant. Holger suggested that the only way to be able to decide this would be to carry out test to better understand the issues. Roger noted that he has produced a UML application schema and 19110 XML schema for ENC that could be used for the test. "		May4 2007	
8	CRS	Barrie	CRS component needs to be refined and is ongoing. Barrie will report in June as to the status.		June 2007	
9	FDD	Paul Birkle	Paul to provide the Barrie with the registry and FDD schemas.			

10	FDD	Peter Parslow	Develop style sheet to convert xml to document (human) readable format. Need Action 9 completed first.			
11	Metadata – part 1	Dion	<i>to fix the metadata model – with the new picklist</i>		June 2007	
12	Metadata	Dion	Place appendix C of the quality metadata into a Excel spreadsheet for distribution to S-44 members and TSMAD members as to what elements are actually needed.		May4 2007	
13	Metadata	Julia	Write a TSMAD letter for Barrie to distribute to S-44 and TSMAD concerning the spreadsheet and metadata elements		May7 2007	
14	Product Specification	Julia	<i>compare the 19131 and DIGIWG profile and extract those components that are required for the Hydrographic profile. Distribute in time for Taunton, include sections from Peters Framework document.</i>		May4, 2007	
15	Temporal component	Don Vachon	<i>Get feedback on the document from the CHS oceanography experts – to report to the Taunton meeting.</i>		May 2007	
16	Spatial Profile	Barrie	Update the spatial profile according to the result of the editing committee meeting. Barrie will distribute for TSMAD vote in June		May4, 2007	
17	Framework	Peter Parslow	Provide members with updated working draft containing discussions from Wellington and Ottawa.		May 11, 07	
18	Portrayal	Barrie	Approach CSMWG and CHRIS about what to do about portrayal and ISO 19117 conformance		June 07	
17	BAG profile	Barrie	Request the OpenNav Surface group about turning the BAG into an IHO product specification. After that agreement it needs to be formatted into a ISO 19131/S-100-13 product specification.			
18		Barrie	Action: BG to contact Ian Greesly – to propose IHO use cases.			
19	Portrayal	Tony	Establish what the status is of IEC TC80 WG13.			
20	Portrayal	Barrie	Invite Marlena Meyer to do a presentation on portrayal at the Stavanger C&SMWG.			
21	Feature Catalogue	TSMAD Peter P	Action: TSMAD members to request there member bodies to not approve the revised edition. Peter Parslow to put a paper together a paper outlining the issues, and highlighting what TSMADs objections are.			