

CIDOC CRM Special Interest Group

Report of the 3rd joined meeting of the CIDOC Special Interest Group and ISO/TC46/SC4/WG9

Editor:

Matthew Stiff

Venue: Asilomar Conference Centre, Monterey Peninsula, CA, USA

Local Organizer:

Research Libraries Group

Meeting Moderation:

Martin Doerr

Present

Martin Doerr (MD)
Tony Gill (TG)
Anne Hume (AH)
Siegfried Krause (SK)
Karl Lampe (KL)
Patrick Le Bœuf (PLB)
Rioji Murata (RM)
Christian-Emil Ore (CEO)
Merrilee Proffitt (MP) - Day 1 Only
Matthew Stiff (MS)
Stephen Stead (SDS)

Apologies

Nick Crofts (NC)
Jane Hunter (JH)

Tuesday 19 February, 2002

1. Introduction

MD introduced the meeting, explaining the purpose of the group in bringing the CRM into the ISO community. This meeting will focus on the Natural History requirements. It will also focus on Properties scope notes. Finally it will examine solutions to issues raised (approximately 30 points). It will also look at potential new issues.

TG repeated the welcome on behalf of RLG. MD thanked TG for organising the meeting venue.

Newcomers were particularly welcomed. Discussions will begin with an introduction to the CRM before focussing on the scientific requirements of the Natural History domain.

2. The CRM

MD began by explaining the principles of object orientation. Museums, libraries and archives already have databases that vary widely in design due to different disciplines, orientation and approaches. MD posed scenarios including exchange of data between different databases and simultaneous querying of multiple databases. He discussed exporting to a data warehouse. He also discussed query mediation. Finally he talked about virtual global schema. A global schema is also required for data transformation. This is where the CIDOC CRM has a great value.

The CRM should be able to transform data so long as the databases have been well designed. If not, the CRM can provide recommendations for best practice in database design. Experiments have shown that the CRM fulfils this role well, but no data has been available for natural history collections.

MD then talked about RDF. The CIDOC CRM has an intellectual structure that is compatible with RDF. He showed an example of recent work from ICS FORTH- an example from the Benaki Museum, Athens. A programme has been developed to automatically convert the XML records into RDF. RDF has the ability to validate that the properties and the classes are correctly used.

Object Orientation

MD then discussed the differences between relational and object-oriented modelling. He explained multiple inheritance and multiple instantiation. It is not necessary to foresee all the combinations of concepts in the CRM.

MD used a PowerPoint presentation that can be viewed on the CRM web site.

CRM

MD then discussed the CRM - Cultural diversity and data standards. Each aspect needs its own methods, forms and communication means. Each needs its own schema, despite the fact that data overlaps. All efforts to produce one schema have tended to fail. Diversity of data requires many (meta)data standards. The CRM solution is to have explicit events, object identity and symmetry.

The CRM currently consists of 75 classes and 106 properties (version 3.2). Accepted by ISO TC46 as committee draft in Sept2000.

The CRM does not deal with help for data entry. It does not propose WHAT you should describe. It allows the interpretation of what museums

ACTUALLY describe. Intellectually it is focussed on information about the past, not the future.

MD then described the top level entities for integration:

Appellations - refer to, identify

Types - refer to, refine

- Actors
- Conceptual Objects
- Physical Entities
- Temporal Entities
- Place

Relationships talk about

- Identification
- Classification
- Part-decomposition
- Participation
- Location
- Influence
- Reference

MD then showed the Temporal Hierarchy. He stressed that the model does not show all possible subclasses, only those that have so far been modelled.

He showed examples including Participation, Place, Physical Stuff, Conceptual Objects etc.

He then showed an example of the mapping of Dublin Core to the CRM.

This presentation will also be available on the CRM web site.

There then followed a coffee break.

3. *Metadata Encoding and Transmission Standard (METS) – Presentation by Merrilee Proffitt, RLG*

METS only deals with digital objects, not physical ones. MP began with a problem statement.

She talked about the two types of digital library objects:

- reformatted to digital
- born digital

These are comprised

- Simple objects
- Complex Objects

METS is primarily concerned with complex digital objects. These include web sites, databases, multimedia presentations etc.

METS supports structural metadata and provides a wrapper framework. It emerged from the *Making of America 2* Project. An XML DTD was defined for this project but it proved unsatisfactory. A group convened with a need for structural metadata focussing on a flexible metadata schema for structural metadata.

Metadata can either be externally referenced or wrapped in the document in one of two ways.

She described the METS File Inventory, the METS Structural Map and the METS Pointer and File Pointer mechanism.

The group originally looked at SMIL and RDF.

METS is also potentially useful within the OAIS model.

Summary

METS deals with descriptive, technical and administrative metadata. It is concerned with structural metadata - could be seen as SMIL-Lite. Tools are under development for metadata capture, transformation, transfer and dissemination/display. Profiles are necessary for interoperation - Which extension schemas have been used? How are structure maps organised?

Version 1.0 is due out in March 2002. An editorial board is being established. Maintenance agency will be supplied by the Library of Congress standards office. DLF and RLG are underwriting the project.

METS is not all things to all people. It is designed for local institutional application support. Profiling is necessary to interoperate.

A copy of MP's presentation will be accessible from the CRM web site. The METS web pages are at <http://www.loc.gov/standards/mets>.

A discussion then followed on the significance of METS to the CRM.

TG proposed applying the structural map to the CRM.

Decision: The parts of METS that fall within the intended scope of the CRM are also part of the practical scope. This comprises at least the Structure Map (sequence and hierarchy).

Action: MP was asked to investigate fits with other models including ABC Harmony. The possibility of future collaboration was discussed to keep the projects informed of progress.

Action: TG was asked to do a proposal for a mapping between METS and the CRM including any extensions required.

4. Natural History Requirements Discussion

Following lunch discussion centred on requirements of the Natural History community. MD pointed out the distinction that needs to be made between the ordinary collections management issues and the taxonomic discourse.

Issues relating to naming conventions and field collection information - habitat, location etc.

Specimen, collection
Ecosystem level - observation
Molecular identification
Identification process

Contemporary Naming Procedure (Taxon Creation): - Look at a range of specimens, write a description (protologue in botany), find a single representative example specimen (holotype), assign a type name (Taxon) according to International Codes for Nomenclature, documented in a paper (question: is it the new Taxon or the creation of the Taxon that is published - or could it be either?) and, finally, published.

Identification Procedure: "Determination" (normally at the species level). Includes both Systematic and Molecular identification. e.g. gene bank. E17 Type Assignment.

- International Code of Zoological Nomenclature
- International Code of Botanical Nomenclature

Latitude and longitude information for field collection place.

CEO pointed out that the process of devising naming conventions should be modelled in the CRM.

KL took the group through the "Type" terminology, explaining the concepts underlying this: <http://fp.bio.utk.edu/mycology/Nomenclature/nom-type.htm>

AH pointed out that the issue of species is highly subjective.

KL pointed out the problem that different concepts are dealing with the same name. The problem of the potential taxon is largely dealt with using "secundum" ("according to") followed by the literary references used to define it.

Example

"Taxon Creation" is an Event.

It takes place in a Place and Time.

It creates a Taxon. There is also a description of the Taxon (the Protologue) - similar to the scope note in a thesaurus.

The Taxon has note String, has type Protologue.
The Taxon Creation is based on/designated holotype Biological Object.

Example

"Taxon Creation" had original elements Biological Object
"Taxon Creation" designated holotype Biological Object
"Taxon Creation" designated paratype Biological Object
"Taxon Creation" created taxon Taxon
Taxon has type Type
Taxon is identified by....
Taxon has note String
Taxon has broader term Taxon.
Taxon documented in....

When it is published it is a Taxon.

Identification process

Type Assignment (Determination)

MD pointed out that he can see no difference between "Taxon" and CRM
"Type".

There are two ways of determination
Higher to lower rank within a determination tree
Probability - The determinator (person responsible for the determination) is
its mark of quality.

It is possible to have multiple determination of a single specimen.

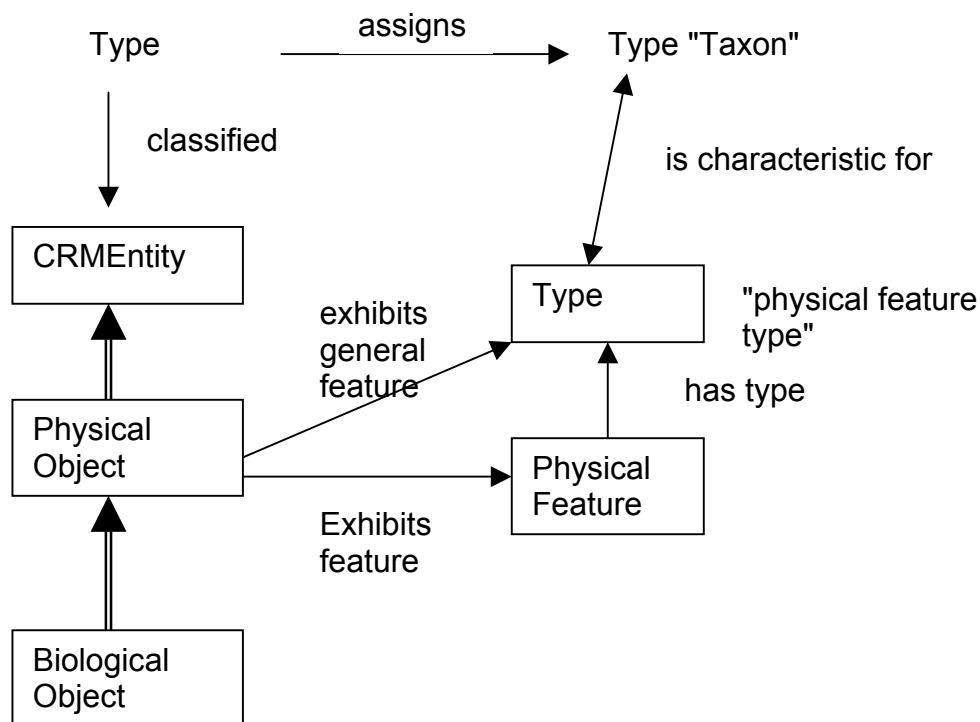
The procedure of the determination may be different.

Proposal: MD proposed for Type Assignment (determination):

Physical Object exhibits feature Physical Feature
Physical Object exhibits general feature Type - Taxon

Full example:

Type Assignment assigns Type
Type Assignment classified CRM Entity
CRM Entity ISA Physical Object
Physical Object exhibits general feature Type
Physical Object exhibits feature Physical Feature
Physical Feature has type Type



All of the above constitutes a proposal as to how to deal with natural history objects. Two decisions are required -

- Is this in scope?
- Is it the appropriate form (and if so, does it create other conflicts within the model or can it be generalised with something else?)

Proposal: The creation of Type can fit under creation of Conceptual Object. This means that we should investigate whether Type can become a subclass of Conceptual Object.

Justification for the above discussions comes from

W. Berendsohn, A. Anagnostopoulos, G. Hagedorn, J. Jakupovic, P.L. Nimis & B. Valdés (Forthcoming). "CDEFD Information Model for Biological Collections", *Proceedings of the European Science Foundation Workshop "Disseminating Biodiversity Information" (Amsterdam 25-27 March 1996)*.

KL also suggested checking against an example from the Harvard Collection.

5. Clayton Herbarium/ABC Harmony

MD then discussed the experience of the c.100 records provided by the Natural History Museum to Clayton Herbarium collection to the ABC Harmony project.

MD asked AH if she could provide other material with which to validate his proposed CRM approach.

The meeting closed at 16:30 to be followed by a CHIOS partners' meeting.

6. CHIOS Meeting - Action Points and Decisions

Action: MD to ask mda for a copy of the SPECTRUM/CRM mapping.

Action: MD to ask for a one-month delay on the WP2 deliverable if necessary (end of March - Month 11). Delay due to taking into account Natural History Requirements.

Project Officer will inform us of how to handle new membership of project.

No other delays in project.

Wednesday 20 February, 2002

7. Validating Applications

Issue 19: How is the CRM going to be used?

Action: NC to be reminded that he should write an article on use of the CRM.

Action: TG to write a short paragraph on RLG experience.

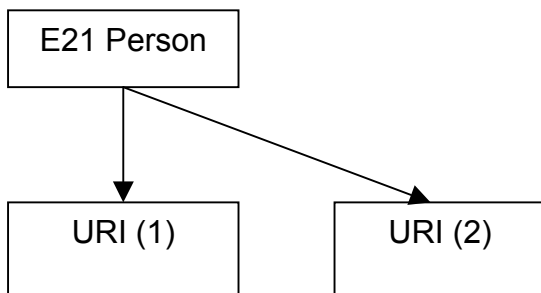
Action: SK and MD to write a short paragraph on GNM experience.

MD also reported on the Taiwan Digital Archive project, which will be attempting to use the CRM as an access layer. This project follows on from the Taiwan Digital Museum project.

8. Issue 22: How to deal with implementation guidelines

SDS handed round an example of how to deal with people's names. It raised a number of issues.

MD considered the issue of use of strings to be an implementation problem.



SDS pointed out that he and his grandmother (Susan Stead) shared a *representation* of their names (S. Stead) but did not share the same name. There is also the problem that the same name can have different representations (Martin Doerr and Martin Dórr).

TG wanted to know why we have strings for some properties and not for others.

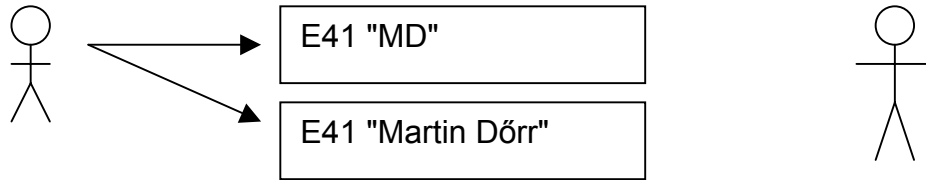
MD pointed to the difference between the name and the person.

TG posed the following question: Do all classes have to terminate in primitives?

MD gave the answer - They do not- They can either end in a primitive value or an identifier of an instance of a class.

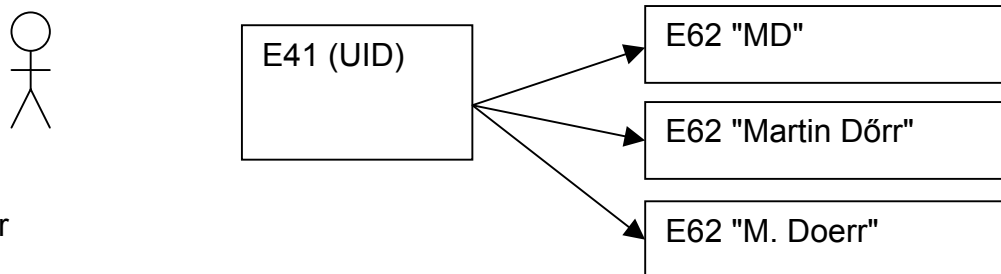
MD proposed that Appellation is identified by itself and it is possible to make a proposal that there is an alternative identifier. So, you have an identifier (as in thesauri) for which there are synonyms.

Proposal 1: An Appellation is identified by itself.



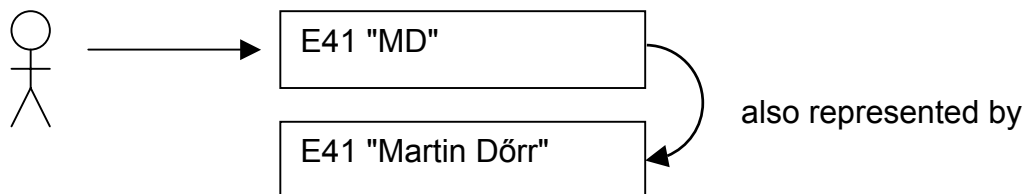
Or

Proposal 2



Or

Proposal 3



Decision: The group voted for Proposal 3 which requires the creation of a new property: "Also represented by". Appellation instances are identified by the name itself. Alternatives of the same name as opposed to alternative names of the identified object or person can be connected to an appellation instance by the property "Also Represented by" (which is bi-directional).

Implementation guidelines

1. Contents questions such as "How to deal with person names"
2. Using the CRM as schema
RDFS, RDBMS, O-O DBMS, XML DTD, XML Schema
3. Compatibility notion.

Action: All to submit questions arising from mappings to SDS for inclusion in WP2 deliverable.

Issue 39: Creation of test data set for validating CRM compliance

Action: NC to check ISO 9000 as a methodology so that SDS and MD can work on this prior to the CAA Conference.

Issue 57: Effort to teach use of the CRM

MD and SS to make available material from CAA workshop. Investigate possibility of session at **mda** Conference.

Decision: MD to hold 2-3 hour tutorial on RDF at next CRM SIG meeting (Copenhagen).

9. Editorial Issues

Property scope notes

SDS has observed two viewpoints for dealing with scope noting and numerous ways of dealing with these.

Is it the links that hold data or the entities? It seems increasingly obvious that it is the links. Do we make property notes talk about how we express data with the link or just describe the link and allow other people to infer how it should be used? It was generally felt that it is necessary to say what it is that the link allows us to express.

Should examples be given?

Should these also be expressed as a meaningful sentence?

Discussion centred on the example of the scope note to P95.

Scope Note: P95

This property links a Formation (E66) type of Event (E5) to a Group (E74). It is the link between the founding or formation of a group and the group itself. Note that this does not imply that the members of the group are aware of their membership of the group. This is a sub-property of both *brought into existence (was brought into existence by)* (P92) and *had participants (participated in)* (P11).

Example: "The CIDOC CRM SIG was formed by the CIDOC Board meeting, August 2000"

CIDOC Board meeting, August 2000 (E65 Formation)

has formed (P95)

CIDOC CRM SIG (E74 Group)

Decision: The group agreed not to repeat the link statement in the first line of the scope note.

Decision: It is useful when you have a reference to a class that you have direct access to its position in the class hierarchy.

Property Scope Note Requirements

The following requirements were identified for property scope notes, to be structured in the given order:

1. Concise definition of meaning
2. Usage (including "Is there a shortcut or indirection?")
3. References
4. Example
5. Sub/Super properties
6. Properties on properties
7. Cardinality (one to many, many to many etc.)

Decision: Every scope note should stand on its own without reference to another scope note.

Decision: A chapter is required for use of Types. NC has started to draft something on this.

Decision: NC to provide editorial consistency for scope notes.

General note: SDS to provide latest edited version of scope notes. Many changes were made to the scope notes that have not been recorded in these minutes.

P1.

Decision: The meaning is OK but it needs to be reworked.

P2.

Decision: The meaning is OK but it needs to be reworked.

P3.

Decision: Should not refer to P2. Replace "informal" with "not formalised". Otherwise the meaning is OK but it needs to be reworked.

General Decision: Property scope notes should be self-sustaining and should not refer to other property scope notes.

P4.

Decision: There should be a pointer to how to express multiple opinions. Otherwise the meaning is OK but it needs to be reworked.

P5.

Decision: Delete "complete". Otherwise, the meaning is OK but it needs to be reworked.

P6.

Decision: The idea of concurrency between these condition states related by "falls within" should be formulated more clearly. The difference between "falls within" and "consists of" should be explained in an FAQ (it is already referred to in the introduction). The meaning is OK but it needs to be reworked.

P7.

Decision: The meaning is OK but it needs to be reworked.

P8.

Decision: Replace "object" with Physical Stuff. Otherwise, the meaning is OK but it needs to be reworked.

P9.

Decision: Remove "complete". Otherwise, the meaning is OK but it needs to be reworked.

General Decision: Harmonise all property scope notes for "consists of".

General Decision: Harmonise all property scope notes for "falls within".

P10.

Decision: The meaning is OK but it needs to be reworked.

P11.

Decision: The reference to the sub-property is missing. The meaning is OK but it needs to be reworked.

Action: MD to redraft.

P12.

Decision: The meaning of the presence of immaterial objects should be explained in more detail. Otherwise, the meaning is OK but it needs to be reworked.

P13.

Decision: The meaning is OK but it needs to be reworked.

P14.

Decision: The meaning is OK but it needs to be reworked.

P15.

Decision: P15 to become a sub-property of P12.

P16.

Decision: The meaning is OK but it needs to be reworked.

P17.

Decision: Change property name to "was motivated by (motivated)". Otherwise, the meaning is OK but it needs to be reworked.

P18.

Decision: Link to have a range that is Activity E7 to Activity E7. Property name is "was motivation of (motivated)". Otherwise, the meaning is OK but it needs to be reworked.

P19.

Decision: Needs extension of description to the link underneath. The meaning is OK but it needs to be reworked.

Issue: There is a requirement for the numbering of properties of properties, and the documenting of them.

Proposal: These should be documented within the property that they are a property of.

P20.

Decision: The meaning is OK but it needs to be reworked.

P21.

Decision: Complete this scope note!

General Decision: Create FAQ: "What does the word 'general' mean in a property name in the CRM?"

P22.

Decision: Consistency is required between P14 and P22. In P14 "intentionally" is replaced by "actively taking part". Clarify the term for organisation or person with legal status. Otherwise, the meaning is OK but it needs to be reworked.

P23.

Decision: The meaning is OK but it needs to be reworked.

P24.

Issue: The range for P24 (currently E19 Physical Object) needs to be reviewed in the light of physical feature and immaterial objects (i.e. trademarks, patents etc.). Is this in scope?

Decision: Otherwise, the meaning is OK but it needs to be reworked.

P25.

Decision: The meaning is OK but it needs to be reworked.

P26.

Decision: The meaning is OK but it needs to be reworked.

Decision: FAQ: "How should we model sequences of moves where intermediate places are not known?"

P27.

Decision: This scope note needs to be corrected.

P28.

Decision: The meaning is OK but it needs to be reworked.

P29.

Decision: The meaning is OK but it needs to be reworked.

P30.

Decision: The meaning is OK but it needs to be reworked.

General Decision: We should handle references to other properties in the same way that we would handle references to other documents.

P31.

Decision: Incorrect. Needs to be rewritten.

P32.

Decision: The meaning is OK but it needs to be reworked.

P33.

Decision: The meaning is OK but it needs to be reworked.

P34.

Decision: The meaning is OK but it needs to be reworked.

P35.

Decision: Should be "the condition state observed". Otherwise the meaning is OK but it needs to be reworked.

P36.

Decision: The meaning is OK but it needs to be reworked.

P37.

Decision: The meaning is OK but it needs to be reworked.

P38.

Decision: The meaning is OK but it needs to be reworked.

P39.

Decision: Missing reference to P43. The meaning is OK but it needs to be reworked.

P40.

Decision: The meaning is OK but it needs to be reworked.

Decision: FAQ required: "How does one represent ranges of values?"

General Decision: A dimension must be capable of pointing to an interval.

P41.

Decision: The meaning is OK but it needs to be reworked.

P42.

Decision: The meaning is OK but it needs to be reworked.

P43.

Decision: Need object in example. Otherwise, the meaning is OK but it needs to be reworked.

P44.

Decision: The meaning is OK but it needs to be reworked.

Decision: FAQ required: "What is meant by a shortcut?"

P45.

Decision: The meaning is OK but it needs to be reworked.

P46.

Decision: The meaning is OK but it needs to be reworked.

P47.

Decision: The meaning is OK but it needs to be reworked.

Decision: FAQ required dealing with parts and wholes.

P47.

Decision: The meaning is OK but it needs to be reworked.

P48.

Decision: The meaning is OK but it needs to be reworked.

P49.

Decision: The meaning is OK but it needs to be reworked.

P50.

Decision: The meaning is OK but it needs to be reworked.

Decision: P51 through to P55 should move from physical object to physical stuff.

P51.

Decision: Otherwise, the meaning is OK but it needs to be reworked.

P52.

Decision: Otherwise, the meaning is OK but it needs to be reworked.

Decision: P49 and P50 need to be harmonised with P51 and P52.

The group finished work at 5:30.

Wednesday 21 February, 2002

P53.

Decision: Otherwise, the meaning is OK but it needs to be reworked.

P54.

Decision: It is not true that you can express permanent location through E9 Move. Otherwise, the meaning is OK but it needs to be reworked.

Decision: Notes P49-P55 should have a common feel to them. P55, P52 and P50 require super-property information.

P55.

Decision: Otherwise, the meaning is OK but it needs to be reworked.

P56.

Decision: The meaning is OK but it needs to be reworked.

P57.

Decision: "Has number of parts" is useful in the creation of algorithms used in counting inventories. e.g. a tea service may be catalogued as one item consisting of 150 parts. Otherwise, the meaning is OK but it needs to be reworked.

Decision: FAQ required: "Why do primitive values and recursive symmetric links not have reverse labels on their properties?"

P58.

Decision: The meaning is OK but it needs to be reworked.

General decision: Properties which are short cut by another property should mention this in their property scope note.

P59.

Decision: The meaning is OK but it needs to be reworked.

General decision: The graphics in the introduction should also contain entity numbers and property numbers for easier referencing.

P60.

Decision: This needs to be reworked.

Decision: Consistency of P60 and P107 need to be looked at. Should possibly point to group rather than legal body and should use the former-current and current construct used elsewhere.

P62-P65.

Decision: These property links need to be revisited in the light of the physical carrier discussion. For revision of this we need to take into account the Getty *Categories for the Description of Works of Art*.

Decision: FAQ required: "What are the principles used to choose one entity as the domain of a property and the other as the range (and not vice versa)?"

P66.

Proposal: Delete P66 as being completely covered by P67.

P67.

Decision: Amend this scope note to take into account the deletion of P66 (SDS may already have done this). Otherwise, the meaning is OK but it needs to be reworked.

P68.

Decision: The meaning is OK but it needs to be reworked.

P69.

Decision: The meaning is OK but it needs to be reworked.

P70.

Decision: The meaning is OK but it needs to be reworked.

P71-P80.

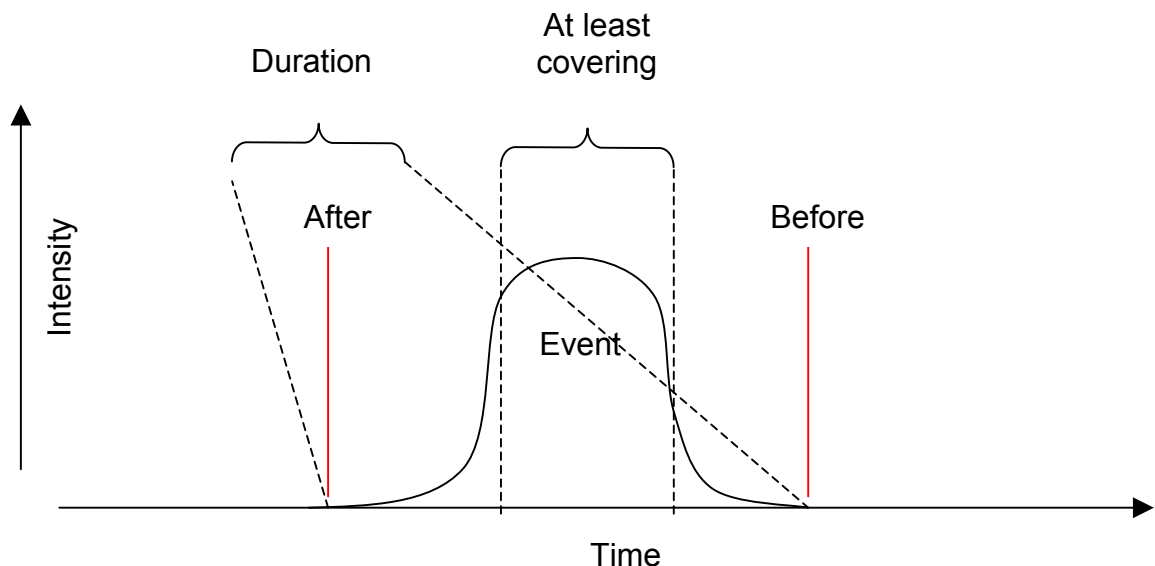
Decision: These notes require more work!

Note: P71 Property name to change to "Defines (is defined by)"

Example: "Castle is defined by the *Thesaurus of Monument Types*".

Decision: All of the time-span links would benefit from a diagrammatic representation.

Action: MD to enhance existing diagram dealing with Time Uncertainty, Certainty and Duration



Note: Subsequently properties P71-P80 were scope noted as follows (decisions included):

P71

This property is used to link a Type to the Authority Document in which it is defined. Without this definition the meaning of the Type remains ambiguous.

Example: "Castle" is defined by the English Heritage *Monument Types Thesaurus*.

Decision: OK

P72

This property is used to link a Linguistic Object to the Language in which it is expressed. Multilingual linguistic objects will have more than one language.

Example: The Constitution of the United States of America is written in American English.

Decision: OK

P73

This property is used to show that one linguistic object has been translated from another linguistic object. It indicates both the target and the source. This can be regarded as a short cut of the translation event, which is an instance of conceptual creation. Using the property P15 Took into Account in order to point to the source.

Example: The text of the book known under the title of *Notre-Dame de Paris* has been translated into an English text known under the title of *The Hunchback of Notre Dame*.

Decision: OK

P74

This property is used to link an Actor to its current or former place of residence. In the case of a move this can be seen as a short cut of a move event that does not imply the movement of an object.

Example: President Bill Clinton lived in the White House.

Decision: OK

P75

This property is used to link an Actor with a Right that it possesses. P105 is the short cut of the property P104 E30 P75.

Example: Cunard owns the Queen Elizabeth II.

Note: There is a technical document produced for ISO that models rights issues - PLB to provide pointer to this document. SK to provide better example.

In the E30 scope note there is no mention of the fact that we have Ownership as a means of expressing legal rights to something. MD to rework the scope note to E30.

Decision: Otherwise OK.

P76

This property is used to link an Actor to a former or current Contact Point through which one could or can communicate with it.

Example: The email address of **mda** is mda@mda.org.uk.

Decision: OK

P77

This property is used to link a Legal body to another Legal Body of which it is a constituent part. In the case of countries or large and complex organisations these can be nested.

Example: BBC WorldWide is a subsidiary of the British Broadcasting Corporation.

Decision: OK

P78

This property is used to link a Time Span to a Time Appellation by which it is known.

Example: Showa is the name of the Time Span of the Emperor Hirohito of Japan.

Decision: OK

P79

This link points to a text that describes the knowledge about the beginning of a Time Span.

Decision: OK

P80

This link points to a text that describes the knowledge about the end of a Time Span.

Decision: OK

P81-P82

Decision: Properties to be renamed.

Action: MS to provide EH definitions for time spans - Check MIDAS.

P83.

Decision: The meaning is OK but it needs to be reworked.

P84.

Decision: The meaning is OK but it needs to be reworked.

P85.

Proposal: This property should be deleted as the Allan Operators for Event, along with P86, give us all of the functionality that we need.

Decision: The E52 Scope Notes need to stress that times spans may not have precisely known temporal extents.

P86.

Decision: The meaning is OK but it needs to be reworked.

P87.

Decision: The meaning is OK but it needs to be reworked.

P88.

Decision: The meaning is OK but it needs to be reworked.

P89.

Decision: The meaning is OK but it needs to be reworked.

P90.

Decision: The meaning is OK but it needs to be reworked.

P91.

Decision: The meaning is OK but it needs to be reworked.

P92.

Decision: The meaning is OK but it needs to be reworked.

P93.

Decision: Concrete example required. Otherwise, the meaning is OK but it needs to be reworked.

P94.

Decision: The meaning is OK but it needs to be reworked.

P95.

See work carried out on example scope note on Tuesday morning.

P96.

Decision: The meaning is OK but it needs to be reworked.

P97.

Decision: The meaning is OK but it needs to be reworked.

P98.

Decision: The meaning is OK but it needs to be reworked.

P99.

Decision: The meaning is OK but it needs to be reworked.

P100.

Decision: The meaning is OK but it needs to be reworked.

P101.

Decision: The meaning is OK but it needs to be reworked.

P102.

Decision: This needs to be reworked!

Action: SDS to redraft.

P103.

Decision: The meaning is OK but it needs to be reworked.

P104.

Decision: The meaning is OK but it needs to be reworked.

P105.

Decision: This needs to be reworked!

Action: SDS to redraft.

P106.

Decision: The meaning is OK but it needs to be reworked.

P107.

Decision: Revisit as part of review of P60.

P108.

Decision: The meaning is OK but it needs to be reworked.

10. Editorial Issues

Decision: KL and RM's organisations were formally invited to join the group.

Decisions were required on a range of Scope Note issues:

Issue 1.

Decision: Small edits to the scope note suggested by MD were incorporated and the new whole approved.

Issue 2.

Decision: Proposals were approved.

Issue 10.

Decision: To the proposed scope note for Issue 10 add that the door hole is a feature, but the door, being attached by hinges, is not. Otherwise proposal was approved.

Issue 12.

Decision: No decision.

Issue 37.

Decision: Make the list supplied by MD explicitly end in the word "Event".

Issue 63.

Decision: Proposals accepted.

Issue 64.

Decision: Also add that they imply precision intervals. Otherwise, proposal accepted.

Issue 71.

Decision: Replace "such as a book" with "such as a textual work". Otherwise, proposals accepted.

Issue 73.

Decision: Last paragraph of proposed scope note to be deleted. After sentence "Human beings etc. " insert section to make it clear that also material objects in daily use also undergo material changes due to maintenance etc. without changing identity. Otherwise, proposal accepted (not including NC's comments dealt with under P75).

Issue 75.

Decision: Proposal to rename "E77 Existence" as "E77 Persistent Item" accepted.

Decision: Proposal to rename "Stuff" rejected.

Issue 3.

Proposal: Life stages are already covered by Type.

Issue 16.

Action: NC to check ISO 2382

Issue 54.

Action: MS to create list of FAQs (should be responsibility of mda - transfer of resource?).

11. Mapping of FRBR.

PLB described the process of mapping FRBR to the CRM.

The group finished work at 6:00pm.

Friday 22 February, 2002

12. Test data for data-integration demonstrator

MD described the need for some records in different formats to demonstrate the bringing together of data from different sources so that they can be integrated into a story.

Action: MS to obtain matching data from databases for MD - LBS, RSM, NewHIS, Excavation Index (GLSMR?).

Action: Christian to obtain similar data.

Action: AH to obtain similar data - Expedition based.

13. Date of next meeting

Subject to confirmation of availability:

1 July-4 July, Copenhagen.

14. Amendment Issues

Issue 6.

Decision: Databases are regarded as a special case of E31 Document. This has to be included in the scope note. No changes to the model are required.

Issue 12

Decision: Proposal accepted.

Issue 38

Decision: Proposal accepted (Gender deleted).

Proposal: Delete "has language".

Issue 45

Decision: Issue dropped.

Proposal: Revisit issue for causal link between events "Event has caused Event".

Issue 47

Decision: Proposal accepted.

Issue 48

Decision: Proposal accepted.

Issue 49

Decision: Proposal accepted.

Issue 53

Decision: Proposal accepted.

Issue 56

Decision: Postpone decision- proposal premature in the light of discussions during meeting.

Issue 66

Decision: Proposal accepted.

Action: MD to include explanation of "disjoint" in introductory chapter

Issue 67

Proposal: The birth of living beings in general is sufficiently covered by the entity Begin of Existence.

Issue 68

Decision: Proposal accepted.

Issue 69

Proposal: Two links proposed: "Overlaps" and "Is separated from".

Note: The question of whether temporal relationships may be related on a point to point basis in the case of spatio-temporal phenomena is interesting - MD to check whether Allen logic applies.

Issue 74

Decision: Proposal accepted.

15. Progress reports on issues not formulated into proposals**Issue 7**

Note: A proposal *has* been formulated for this issue.

Proposal: Introduce a new entity: Information Carrier to replace Iconographic Object. The link for this would be "Is Carrier of (Is materialized by)" which points to Information Object.

Issue 14

Proposal: Link to decision made on moving the "refers to" link.

Issue 21

Action: MS to check whether such data structures are included in EH data. If so then it will be treated as in scope and a proposal formulated.

Issue 23

Note: Proposal deferred until next meeting.

Issue 36

Note: This should come out of TG's examination of METS. Proposal deferred until next meeting (may be available before then).

Issue 44

Note: Do we need situations in the CRM? If so, where do we model these in the CRM?

Proposal: Situations should not be included in the CRM. MD to produce a mapping instruction and extension guidelines.

16. Extended documentation.**Issue 22**

Note: This issue has been covered in other discussions this week.

Issue 23

Note: This issue has been covered in other discussions this week.

Issue 35

Note: Will be an FAQ - Largely dealt with by the rewriting of scope note for Title.

17. Dissemination activities

Action: MD to provide MS with outline document for CAA Conference. MS to propose a workshop at the **mda** Conference.

Action: April 2 2002, SDS and MD to run workshop at CAA Conference.

Action: SDS to run workshop at CIDOC Conference, Brazil.

Action: PLB to produce mapping of UNIMARC to CRM.

18. Other issues

Action: FAQ required for mapping semi-structured data - TG to send SDS date string example and SDS to write FAQ.

Action: Define border point between the CRM and MPEG 7 - where one ends and the other begins. MD and JH to do this.

Action: MS to invite NC to come to Oxford for 2 days to go through property scope notes. Otherwise, parcel out scope notes among MS, NC, SDS and TG. Property scope notes to have been produced by 10 June in time for distribution and decision at next meeting.

Action: MD to create version of CRM to include both proposals and decisions in time for next meeting.

The meeting closed 4.40pm.