Report of the Second Joined Meeting of ISO/TC46/SC4/WG9 and CIDOC CRM SIG

Paris / Bibliothèque Nationale from 15th to 18th of October

List of Participants:

Steve Stead (SDS)	Lene Rold (LR)	Monika Hagedorn-Saupe (MHS)
Henri Hudrsuer (HH)	Christian-Emil Ore (CEO)	Ikudo Sugano (IS)
Patrick le Boeuf (PLB)	Matthew Stiff (MS)	Regine Stein (RS)
Flore Hervé (FH)	Catherine Hetzel (CH)	Ewa Ndeszkowske (EN)
Anila Arugjeli (AA)	Siegfried Krause (SK)	Tony Gill (TG)
Nick Crofts (NC)	Kati Geber (KG)	Martin Doerr (MD)

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Activities on the 15th of October

a. Workshop

b. Management Meeting CHIOS Group and SIG Steering Committee

Activities on the 16th, 17th, 18th of October

Discussion on the amendments and open issues to the CRM

a. Workshop

Due to the strong task of dissemination actions within the CHIOS project the meeting started with a workshop for all newcomers. The workshop gave a methodological introduction to the CIDOC-CRM (Conceptual Reference Model) as well as an introduction to 'How to map the CRM with other standards or Data structures'.

The workshop was attended by 9 persons. Out of the workshop 2 participants took the decision to become active members of the CIDOC CRM SIG.

b. Management Meeting CHIOS Group and Steering Committee

The business meeting was held by the CHIOS project leader Martin Doerr (MD). Martin Doerr explained to the team the PowerPoint presentation prepared by Patricia Manson dealing with contract related issues.

General Topics discussed:

(listed in statements)

a. Dissemination / Structure of requirements

Tony Gill presented the Dissemination plan. Modifications were made to include additional target groups. It was emphasized the 'lossless' nature of the CRM and the compatibility with other library and bibliographic standards

b. Naming problems of CRM

Due to the rules of ISO a new name is required for the CRM.

There is also a problem caused by industrial use of the acronym CRM which is in the meanwhile much better known as 'Customer Relationship'.

c. Offical CRM-Web-Site

The CRM-Web-Site has to be relaunched. A professional Web designer will be employed for developing an structural design.

The documentation of the CRM is not always accessible, therefore all CRM articles should be presented in HTML.

Building a calendar for dissemination events

Key information should be provided in other languages.

The former CRM website in Geneva is dead, as requested from its maintainer.

d. Authoring

For having more input on the Web site, everyone is encouraged to write papers, preferably collaborative.

ISO/TC46/SC4/WG - CIDOC CRM/SIG

16th – 18th of October

Reports:

ISO-Report

A brief report on the progress of the ISO process. The ISO working group has had a successful meeting in Barcelona. The CRM is to be submitted for consideration as a committee draft (CD) before the end of October 2001. Nick Crofts will be attending the TC46 meeting in Paris 18-19 October 2001.

Report of the German CRM User Group

Regine Stein (SIG-member) reported that a German CRM group was founded under the umbrella of the German Museum Documentation Committee of the German Museum Association (Deutscher Museumsbund). A first 2 day meeting took place at Berlin in the Konrad Zuse Zentrum at the end of September. The experience of this workshop in Berlin showed very fruitful and successful results for the use of the CRM.

This report was very interesting. It was shown by independent users of the CRM that (1) the CRM has reached a level of maturity which could be used for a broad spectrum of information mappings; and (2) the documentation work of the CRM is so far developed that the model is understandable.

A very successful result was the observation, that the mapping of different sources could enrich the data of the more poorly described information objects. This observation is very important for future research in the cultural domain and will arise a lot of new methodological questions for researchers.

Nevertheless it became obvious that improvements have to be made on the clearness of the CRM documentation, especially on the scope notes. E.g. collecting more real world examples, will strengthen the strong explanatory power. It was also seen the need for improvements by new products of the group. These products are: Developing a guide for good practice. Creating a section on the Web site which will deal with Frequently Asked Questions (FAQ). These topics will be focused in the upcoming requirements for the CHIOS project at the end of February 2002.

Mapping Reports

To remember: In Barcelona the decision was taken to map as many documentation standards as possible with the CRM. This work is seen as very important. A study of practical feasibility has to be understood as a methodological prove for the CRM and gives the safety for creating a standardized ontology for the cultural domain. This work is very ambitious and time consuming. Therefore first results should be expected not before the 4th meeting.

Experiences of the mapping trials:

Tony Gill explained the **Dublin Core** – **CIMI Guidelines**. He noted, that there is a need not only for the documentation of the standard, it is also very important to have data based on the specific format. CIMI insisted very much on the use of type elements. Mapping to the CRM is dependant on these three type elements (orginal – surrogates / genre / form). Assuming at

least 3 type attributes there are theoretically a total of 48 different type combinations proposed by the CIMI Guidelines to be mapped to the CRM. A solution to this problem is the introduction of super-classes to deal with this

Nick Crofts explained that the **IFLA FRBR** standards is based on functional requirements for bibliographic records, comparable to the CRM in the library world. It shows a similar level of functionality especially for high-level entities, attributes and scope notes. From a formal point of view it is different – the entity relational model is less formally strict.

Steve Stead discussed his work on the American Association for Museums Nazi Transfer Query Standard, launched in Barcelona in July. The standard is poorly specified with no rules for formatting. Almost impossible to map. Some interesting points came up:

- Material could not be attached to a creation activity except through a general technique, especially "consumed". It could only be said what an object consists of now, but not what the materials used in the life of an object.
- Previous attributions Who said what about something and when. Solution is out of currant scope for the ISO draft.
- Properties *used general techniques* (P32) and *used specific purpose* (P33) attached to TYPE (E55): strange inheritance. The issue here is one of technique as a subclass of TYPE.
- Need mono-hierarchy for properties.
- Scope notes for properties. This is already on the issues list.

Martin Doerr worked on the mapping to OpenGIS. This is a standardisation effort for the interoperability of GIS. The Open GIS definition is c.500 pages of mathematical definitions. The standard has only weak expressions on spatial-temporal relationships. Open GIS foresees only containers for this information. Little overlap between the standards. But there is compatibility. They compliment each other. The result of the mapping exercise is that the two standards are compatible. The Open GIS community has a lack and the need for a means to describe the semantic content of the objects they represent. OpenGIS can present ca only places with known coordinates

ABC Harmony model mapping. A meeting was held in Darmstadt in the context for the DELOS framework. Considering possible ABC/CRM convergence. The outcome of he 2 day session is that ABC is making changes to bring their model closer to the CRM and to solve some issues. Some issues from their side has been placed on our list. ABC comes from a position of modelling electronic objects.

Amendments.

To remember: Decisions to be made only on issues raised before this meeting. Issues raised in this meeting can only be decided in the next meeting. Refer to the issues document.

1. How to model collection

Discussion	Is there a need for a separate entity >> Collection <<. There was some discussion on the philosophy of collections – physical v. conceptual. <i>Curated by</i> is an required additional property.
Decision	Place Collection under Physical Man-Made Stuff and, if necessary, multiple instantiate it for Physical object. This will be examined to see if it works or whether it needs to be moved up a level.

2. How do things go in and out of the collection?

Discussion	This is a problem of all objects (removal of parts etc.).
2 10 0 10 10 11	Reference to the discussion in Washington on Accessioning,
	the intellectual process of adding to a collection
Decision	Part Addition
Decision	Subclass of Activity
	Added Physical Object
	To Physical Object
	Thysical coject
	Part Removal
	Subclass of Activity
	Removed Physical Object
	From Physical Object
	Part Addition
	Subclass of Modification
	Added (was added by) Physical Stuff
	Added to (was augmented by) Physical
	Man-Made Stuff
	sub-property of "has modified"
	Part Removal
	Subclass of Modification
	Removed (was removed by) Physical Stuff
	Removed from (was diminished by) Physical
	Man-Made Stuff
	1 0/4 127 12
	sub-property of "has modified"
Action	Martin Doerr is writing the scope notes

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3. How to model life stages of natural history specimens.

Decision	Still open

4. How to model extended topological operators.

Decision	All temporal relationships between temporal entities are defined through a set of 6 properties that are equal to the Allen operators.
Decision	Topological relationships are added for spatial relationships: "Place borders with Place" and "Overlaps with Place".
Spatiotemporal relationships	Issue left open for overlapping period. Martin Doerr will create a document to say why to stop here and not going further.
Decision	A property will be created: Period overlaps with period.

5. How to model sound and multi-media objects.

Decision	The issue is reformulated to "Where does an instance of a
	multimedia object appear in the CRM?
Decision	Disussion deferred until next meeting
Action	Kati Geber, Tony Gill and Nick Crofts to confer and make a
	proposal for the next meeting

6. How to model databases.

Discussion	Treating it in the same way as Multi-Media Objects or like
	conceptual objects?
Decision	There is a need to model databases in the CRM

7. How to model relation between physical carrier and conceptual object?

Action	To be prepared by Nick Crofts and Martin Doerr to work on
	a proposal for the next meeting.

14. How to model subjects.

Decision	A better definition of Subject is required.
Action	Tony Gill to circulate the way RLG & DC deal with this.
	Patrick le Boeuf to circulate the way FRBR deals with this.

25. How to model a physical documents class (e.g. books)

Decision	Deal with this as part of issue 7.

30. How to model a person's nationality.

Decision	Include nationality as social, national and cultural
	characteristic.
Decision	Link to item 21 Membership Entity
Decision	Process of becoming a citizen to be dealt with as a new
	issue.
Decision	For discussion as new issue: Type to have its own
	numbering sequence to distinguish it from other entities.
	SDS suggested that wherever we have used Type that we
	establish a t number for each of these to deal with
	peculiarities of inheritance.

31. How to model an actor's "active place".

Decision	Proposed solution accepted. Scope note of E7 Activity
	should reflect this decision "Non targeted notions".

34. How to model sequences of events.

Decision	Covered under Issue 4
Decision	to be dealt with as part of Issue 14

36. How to model sequences of physical and conceptual objects

Action	Tony Gill to work this up with a real data example that is in
	scope.

38. Delete Gender

Discussion	There was concern expressed about the way that Type and
	Subtypes were dealt with.
Decision	Item to be moved into the discussion about Types

40. Physical features should have locations

Decision	The properties about location declared for Physical Object
	to be moved to physical stuff. P53, P54 & P55.

41. Missing motivation for Man-Made Object.

Decision	P18 "motivated the creation of "changes to" "was created"
	because of and has a range of E71.
	P17 changes its range to E71.

42. Technique application should be sub-property of "took into account".

Decision	The proposal was accepted.
Decision	New issue: What is the relationship between the property
	P17 "was motivation for " and P 15 "took into account"

44. Modelling States.

Decision	Discussion to be continued and proposals to be elaborated (supported by examples). ABC model to provide data examples.
Proposals	 Use Periods (move link "participated in" and "occurred in the presence of" to Period. Extend the notion of Condition States. Introduce untargeted activities and situations as subclasses of Period parallel to Event. Change the scope note of Event.

45. Causal relation between events.

Decision	If the need for causal relations can be demonstrated then we
	prefer to model it using a super property.
Action	Martin Doerr will check causality. A data example would be
	helpful.

How will the CRM be used?

Ideas	In the discussion it became obvious that there is the need for a comprehensive paragraph explaining use of the CRM • Data integration – Data warehouse applications ○ Data pump • Query mediation – integrated access • Data migration • Aids to good practice ○ Design – validation of data structures ○ Intellectual ○ Communication • Archiving and preservation CRM Use • Create a comprehensive document ○ Technical view – embedding in wider technological development trends ○ Domain view ○ End user benefits
Action	Nick Crofts is going to writean article on use and to circulate this on the CRM-SIG list

How to preserve the information about the provenance of information?

Discussion	In order to identify the source of any bit of information in
	the CRM instance one can use RDF constructs, in particular
	the RDF reification mechanisms
	Martin Doerr showed a diagram demonstrating the
	implementing of individual opinions.
Action	Martin Doerr is going to distribute documents to show how
	RDF already deals with this problem on the SIG list

Creating of test data set for validating CRM compliance Advertising the CRM

Idea	Creating something like a trademark for the CRM – a well
	defined compatibility attribute. This may be a compatibility
	data set – to allow testing and validation to be conducted.

Discussion	Discussion of the idea of being able to export data from a database in a CRM compatible format. Is a CRM compliance wanted to be part of the ISO standard? This raises the prospect of the CRM becoming a technical standard as well as a reference model. An alternative way to demonstrate compliance would be to do a mapping, demonstrating lack of ambiguity. Problem is the issue of granularity – to what level should a mapping go? Very interesting is the pointt that ISO provides the facility for ISO 9000 certification. Software could be tested for a fee allowing the application of a CRM compliant stamp of authority. A fee could be charged for this.
Action	NC to look into ISO certification structures.
Action	SDS and MD to form a working group to deal with the validation issue.
	MD & SDS to circulate proposals to list

Scope notes for properties

Action	Scope notes to be written	Scope notes to be written for properties as follows:	
	Martin Doerr	01-20	
	Christian Ore	21-30	
	Regine Stein	31-40	
	Siegfried Krause	41-50	
	Nick Crofts	51-70	
	Matthew Stiff	71-80	
	Tony Gill	81-90	
	Steven Stead	91 onwards.	
Work	-	d be completed by mid December	
	,	sion to clarify problems. Length of	
	_	3 sentences. Second draft required	
	by end of January. Use,		
Action	Martin Doerr will distrib	oute sample template	

Date of next meeting

Proposal	Proposed date: 19-22 February, RLG California (Mountain
	View). Final discussion of proposed scope notes will take
	place at this meeting.

2 Make the Scope Note for Actor more explicit

Action	Tony Gill to redraft scope note for Actor
11001011	

10 Revise position of E27 Site

E26 Physical Feature

Action	MD to write the scope note for E26 Physical Feature
ACCION	with to write the scope note for E20 raysical reature

How to model change of classifications

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Discussion	Things growingThings changing radicallyThings changing slightly	
	Examples:	
	 Tutankhamun becoming a mummy Windmill becoming a house Piece of money becoming a piece of jewellery 	
	Functional changes:	
	 Three cases of transformation that the model deals with: Changes but preserves its nature e.g. replacement of a computer hard disc It ceases to exist because it has been destroyed or consumed completely – It is no longer the same thing at all It preserves its identity – It still has the same name but has changed its nature – e.g. Tutankhamun when he becomes a mummy. 	
	Two properties are required.	
	E? Transformation transformed (was transformed by) existence resulted in (was result of) existence	

Revision of scope note for existence

Issue	Request for a revision of the scope note for existence –	
	possibly the name	
Action	Nick Crofts to revise scope note Existence	

Revision of scope note Modification

Action	Martin Doerr & Tony Gill to revise scope note for
	Modification

16 Which terminology should we use?

Decission	Understanding by laypersons should be the driving	
	principle.	
Notice	Nick Crofts pointed out the prescribed vocabulary for ISO	
	standards. ISO 2382	
Action	Nick Crofts to review this vocabulary to see if it is suitable.	
	NickCrofts to send references to terminologies to Martin	
	Doerr.	

17 How to visually distinguish examples drawn from subclasses within scope notes of a superclass.

Decision	Examples included in the scope note of an entity should be	
	annotated with the number of the appropriate subclass, of	
	which it is also an instance	

37 Transforming activity terms into gerunds where possible.

Example	formation = forming
Action	Tony Gill to make a proposal for renaming activity terms
	into gerunds in the Event hierarchy.

Numbering of properties and entities in the document

Discussion	Steven Stead demonstrated an example of his numbering:
	Identifications
	P1 is identified by (identifies) : E41 Appellation (from E1
	CIDOC entity)
	Suggestions to include hyperlinking (difficult for published
	version).
Decision	SO Group has responsibility for formatting this document
	and, taking discussed issues into account, will make a
	recommendation to the SIG.
Action	Siegfried Krause to develop a XML-DTD and Style sheets

22. How to deal with implementation guidelines

Action	 Martin Doerr to publish any available documents on the website. Start list of FAQs. Start to envisage a companion document giving guidance to implementation including use of types, reification, transport formats and representation formats. Martin Doerr to produce page. Steven Stead to provide list of questions that need answering. Could also be part of the requirements document.
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23. Where does temporal validity fit in with short cuts and indirection?

Issue	Logical formulation of shortcuts.		
Decision	We need rules for defining the semantics of the shortcuts in		
	the property scope notes		
Action	Martin Doerr to provide guidance document for those		
	writing scope notes.		

28. How to organise outreach: collaboration, teaching and training, transfer of know-how

Issue	This issue is covered in the dissemination plan. To be added
	to website when complete

35. Guidance for museums etc. to distinguish between titles and other appellations.

Decision	Defer discussion of this issue. Reformulate the scope note		
	for Title.		
Action	Tony Gill to reformulate scope note.		

Other stuff

Issue	Updates to the SIS database will be posted to the website by	
	MD.	

Discussion of the type issue

Discussion	What are the rules for consistent use of the Type entity in the CRM? Martin Doerr expressed the opinion and believe that there is						
	no place for Type in an ontology because types are universal in the sense of philosophy. There is no distinction between entities in the sense of the CRM and types. Everything to be found in an object thesaurus (e.g. AAT) is an entity in terms of the CRM.						
	In the CRM we deliberately throw out 100s of thousands of entities. Those that remain are the concepts that we can standardise. We attach a "has type" link to the data – these should be compatible with the entity hierarchy of the CRM.						
	Displayed through a specific example "dimes"!.						
Proposal for numbering Type hierarchy	1. Types that are in the type hierarchy that are simply duplicates of those in the entity hierarchy should be prefixed with the letter T instead of the letter E. e.g E21 Person becomes T21 Person.						
	2. Types that don't have a corresponding entity in the entity hierarchy (e.g. Language, Material, Measurement Unit, etc.) need to be numbered so as to avoid conflicts with the entity hierarchy. How this is done is yet to be decided.						
Gender question	Should we delete Gender? Too ambiguous a question to arrive at a decision at this time. Decision postponed ntil next meeting.						
Example	E54 Dimension						
	"Martin's height from foot to head"						
	has type: Person height (T54 Dimension) has value: 179 (E60) has unit; cm (T						

New Issues

Relating materials and techniques Open and in scope.

Materials could not be used in events without using a procedure.

Used object → used kind of object or material: Type

Explanations about the relationship between materials and procedures implying the use of certain materials.

How to describe the technique that connects parts

open and in scope

A technique that connects parts is either documented in production of the whole or in the part addition event

More examples and alternatives

Existing issue. Editorial problem.

Use of "has type" properties.

Open and in scope

Regine is clarifying the scope note.

Mappings may depend on object type Open and in scope

A good practice question. To write a document explaining this issue and giving more details on dependencies of mappings.

Digital surrogates

Open and in scope

Possibly being dealt with under multimedia issues. Creating models for multimedia objects. Tony & Kati providing background material. "documents" (P70) used to connect objects and surrogates. FAQ.

Museum and library information differences

Discussion to be put on more objective ground. Possibly subject of a MOU. (2)Memorandum of (1)Understanding

Objects which have a specific characteristic (of prototype)

Open and in scope

Prototypical objects

Objects maybe the prototype for the formation of a type/class. Also objects may be used as an archetype of a type or class.

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Deprecated attributes

Open and in scope

Is covered by a general extension to add temporal validity to attributes and/or transformation. It's closed!

Dissemination and Use

Analyse the effort to teach the CIDOC CRM in terms of conceptual modelling, data integration technique and the contents of the CRM itself. Connect this to use cases and kinds of audiences.

How to organize translation of the model into other languages. – MD

Check Copyright issues set by ISO. Translation to be done MS-EXCEL on lists of entity- and property names and scope notes. There may be copyright questions regarding translations once the document becomes ISO copyright – We may have to ask permission if we translate it after it becomes a standard. Martin Doerr asked if this is a good reason to maintain two different documents with the same content. Martin Doerr want first to translate property names and entity names.

Multiple inheritance must be in the same superclass.

Define exclusivity between CIDOC CRM entities

Model Updates

Updates of the SIS version of the model will be put on the website.

Error in Document (Steven Stead) Questions about Birth E67

There are errors in the formatting of the document: Is it P63 or P64 in E67? In the document CRM version 3.2

Naming problem

What do we call the standard?

Use of the CRM

Identify new communities to collaborate with for validation or harmonization. (MD)

Amendment to CRM

Do we need copy of property?

Amendment to CRM

Do we need an actor appellation class?

Appellation

to reflect in the scope note the >> Apellation << itself. The appellation is the string itself and should be normalized. Should be a note in the guidelines.

Dimension

Steven writes a note (Mansel Colour Problem)

Extend the notion of number to values to support computing more complex values.

Compounds

Implementation guidelines dealing with compounds