

Using an ontology-driven system to integrate museum information and library information

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1. Infodiversity

- “The nice thing about standards is that there are so many to choose from...”
- However, “infodiversity is good” (Tony Gill) for cultural heritage information
- ... Would end-users agree?...
- Our challenge:
 - To preserve institutions’ commitment in the information they produce about their collections
 - *and* to meet end-users’ information needs (integrated information, logical inferences from information stored in heterogeneous databases)

Integrated information: a wonderful dream...

I want...



2. The SCULPTEUR Project

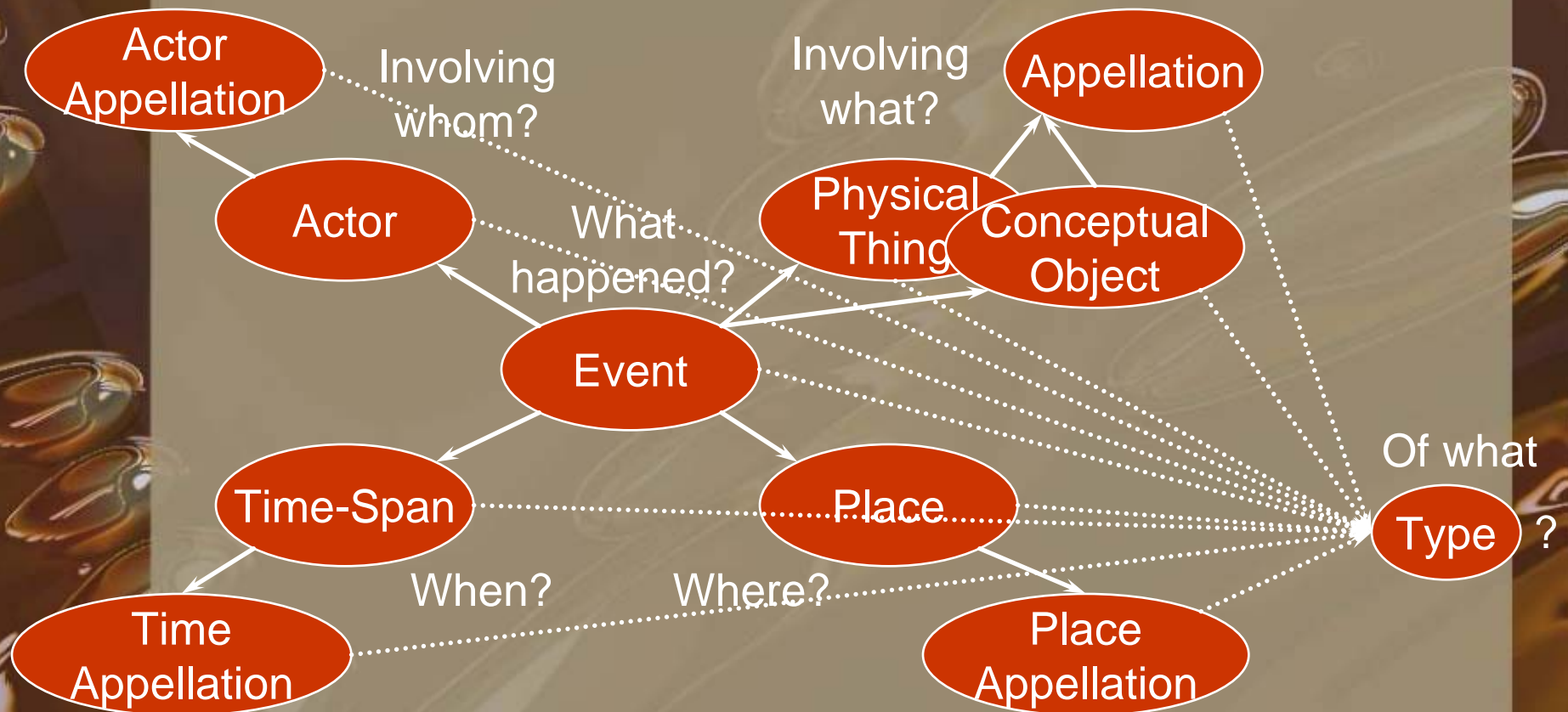
- European-funded (2002-2005)
- Partners: C2RMF, The National Gallery (UK), Victoria & Albert Museum, Galleria degli Uffizi...
- Technical infrastructure: University of Southampton (UK)
- Produced the "Concept Browser": a graphic interface to query heterogeneous museum databases
- Information is integrated through mapping to a common *ontology*: CIDOC CRM

3. The CIDOC CRM

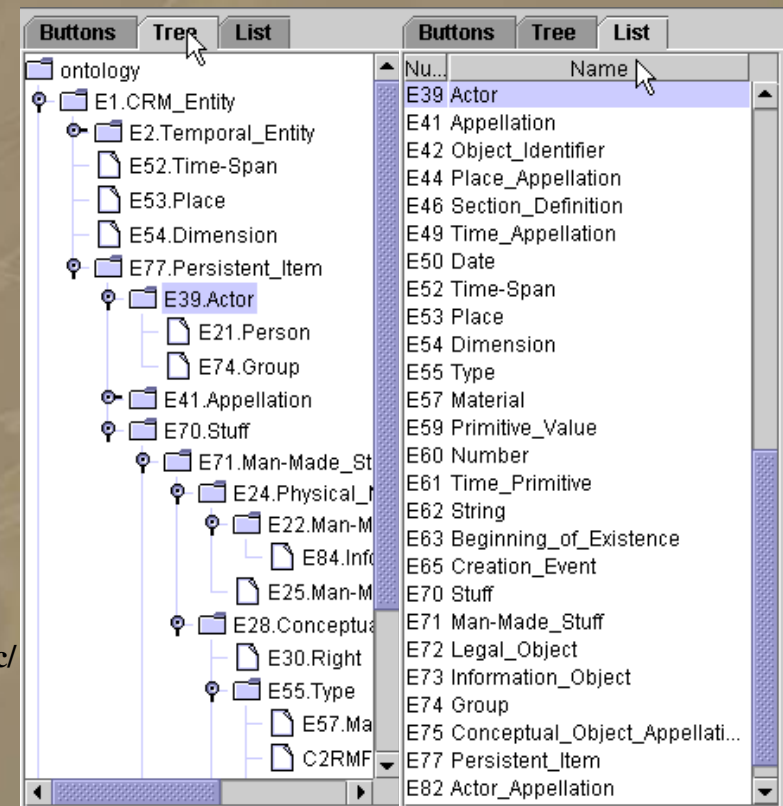
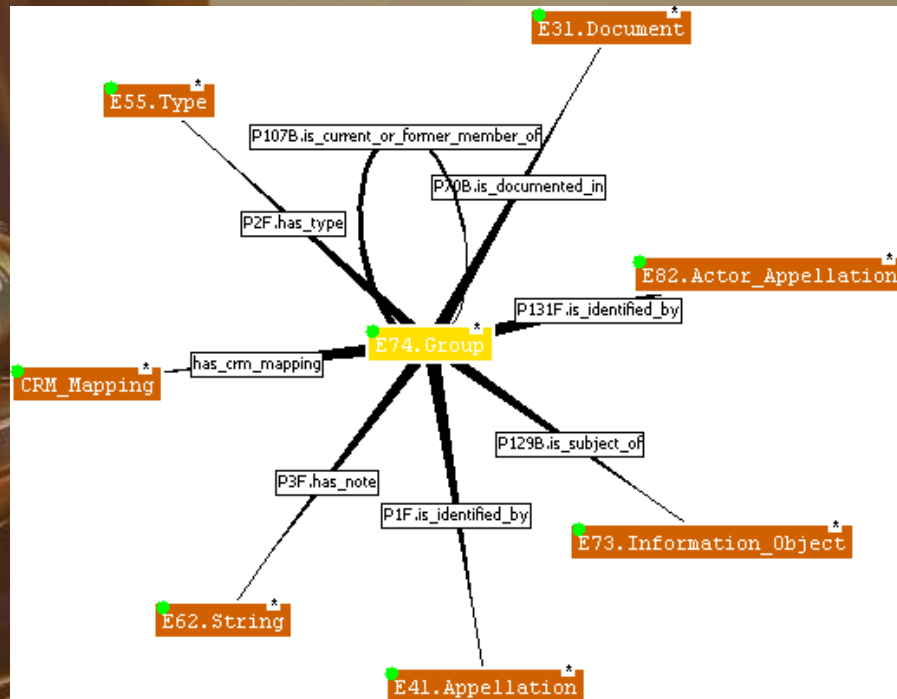
- CRM = “Conceptual Reference Model”
- Developed by ICOM CIDOC from 1996 on
- Leader = Martin Doerr
- ISO standard 21127
- CRM = a basis for data exchange and for building integrated query tools

3. The CIDOC CRM

- 81 classes, 132 properties
- Key concepts =



The CIDOC CRM in the Concept Browser



<http://www.sculpteur.ecs.soton.ac.uk/software/concept/doc/>

The CIDOC CRM in the Concept Browser

- Simplified ontology, in the mSpaces browser:



Addis, M., et al., New Ways to Search, Navigate and Use Multimedia Museum Collections over the Web, Figure 4, in J. Trant and D. Bearman (eds.). *Museums and the Web 2005: Proceedings*, Toronto: Archives & Museum Informatics, published March 31, 2005 at <http://www.archimuse.com/mw2005/papers/addis/addis.fig4.html>

4. Bibliographic information

- CIDOC CRM focuses on museum information
- => Possible to use it for bibliographic information as well???
 - Museum info: mainly about “unique” physical objects
 - Bibliographic info: mainly about “publications”, an abstract notion instantiated in holdings

4. Bibliographic information

- Is there an ontology for bibliographic information, comparable to CIDOC CRM?
 - Not an “ontology”, but a conceptual model: FRBR (Functional Requirements for Bibliographic Records)
 - Developed by IFLA, published in 1998
 - Current work to align it on CIDOC CRM
 - Planned to have a harmonised ontology covering both FRBR’s scope and CIDOC CRM’s scope
 - Not yet available, therefore not available at the time the Concept Browser was being developed...

4. Bibliographic information

- Eventually, mapping UNIMARC Bibliographic format to CIDOC CRM proved feasible...
- ... but time-consuming... (2004-April 2006!)
- The SCULPTEUR Project is closed now... Is it too late?
- However, we need to check the mapping and the ability of the Concept Browser to integrate museum and library information

5. Possible next steps

- Test the integration of bibliographic records with museum information in the Concept Browser
- ? Map thesauri, classification schemes, subject authority files to the CIDOC CRM
 - Objective: allow end-users e.g. to navigate from studies on a technique to artefacts produced by that technique

Other objects
of same
technique



Books about
that technique