



# Linking CIDOC CRM and FRBR

Paper delivered at the Conference:  
Intelligent Access to Digital Heritage  
October 18-19, 2007  
Tallinn, Estonia

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# [ A striking coincidence ]

- Conceptual models for information produced by 2 categories of cultural heritage institutions:
  - Library community:
    - IFLA: FRBR model, 1997
  - Museum community:
    - ICOM CIDOC: CIDOC CRM, 1998
- Why not join our efforts?

# [ By the way... ]

- This presentation is not about a project dedicated to digital heritage only or digitised version of cultural heritage
- but to any kind of cultural heritage
- So...
- “Intelligent Access to Digital Heritage” or “Digital Access to Intelligent Heritage”??

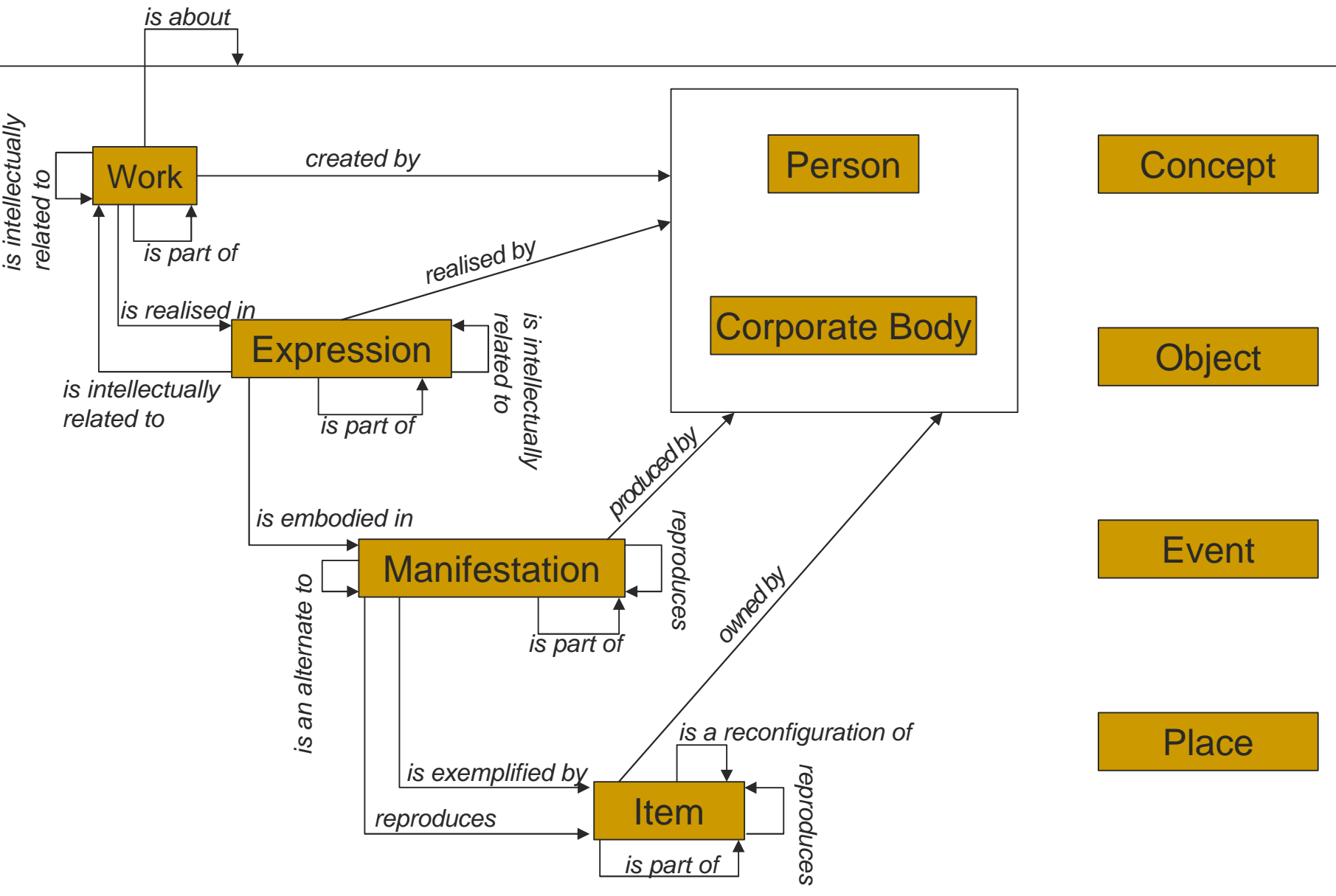


# 1. Background

## 1.1. FRBR

# [ FRBR ]

- stands for: *Functional Requirements for Bibliographic Records*
  - study conducted from 1991 to 1997 to address the issue: “Can cataloguing be considerably simplified?”
  - is a conceptual model for bibliographic information (i.e., the content of library catalogues)
  - will have 2 companions:
    - FRAD (authority data)
    - FRSAR (subject headings and classification indices)
  - pros: is a simple and elegant entity-relationship model
  - cons: is a simple and elegant entity-relationship model



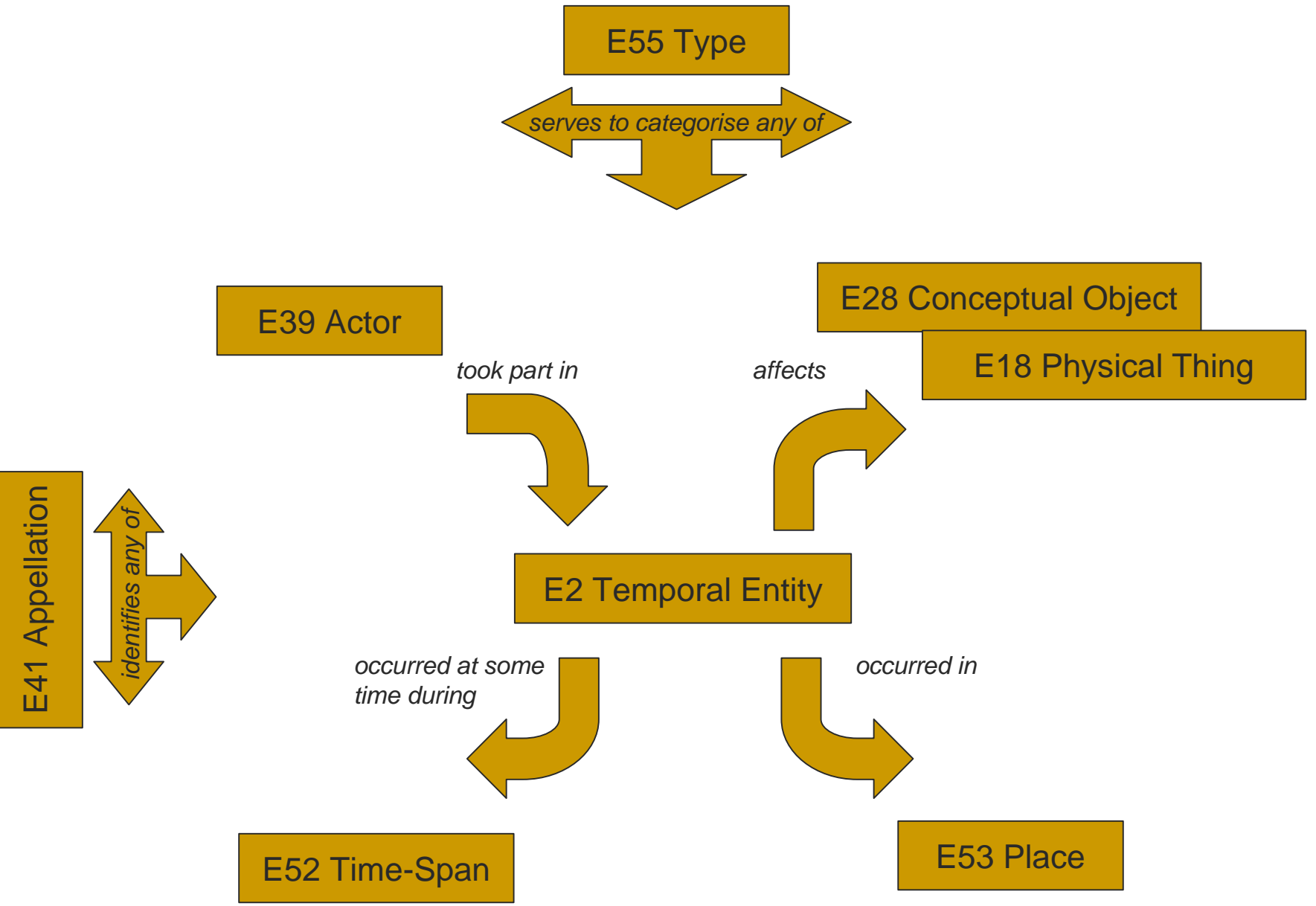


# 1. Background

## 1.2. CIDOC CRM

# [ CIDOC CRM ]

- stands for: *International Committee for Documentation's Conceptual Reference Model*
  - work begun in 1996 (ICOM-CIDOC Documentation Standards Working Group)
  - maintained since 2000 by CIDOC CRM Special Interest Group (CIDOC CRM SIG)
  - now an ISO standard (ISO 21127:2006)
  - pros: is a detailed and sophisticated object-oriented model
  - cons: is a detailed and sophisticated object-oriented model





# 1. Background

## 1.3. The International FRBR/CIDOC CRM Harmonisation Group

# [ FRBR + CIDOC CRM = ? ]

- 2003: the International FRBR/CIDOC CRM Harmonisation Group is formed
  - affiliated to the IFLA FRBR Review Group
  - affiliated to the CIDOC CRM SIG
  - co-chaired by Martin Doerr (CIDOC CRM SIG) and Patrick Le Bœuf (originally FRBR Review Group)

# [ FRBR + CIDOC CRM = ? ]

- Libraries & Museums = cultural heritage
- However, collections are very different:
  - Libraries: non-unique copies of “publications”
    - → focus on “abstract” characteristics supposed to be shared by all copies of a single publication
    - cultural context is not deemed particularly relevant
    - instead, focus on precise identification of authors, titles, topics...
    - no distinction between “subject relationships” and other kinds of relationships (such as “representation relationships”)

# [ FRBR + CIDOC CRM = ? ]

- Libraries & Museums = cultural heritage
- However, collections are very different:
  - Museums: “unique” items
    - → focus on the cultural circumstances under which they were produced and through which they are interrelated
    - cultural context is deemed extremely relevant
- One of the Group’s first tasks = to list the differences



## 2. A unified model

### 2.1. Methodology

# [ Methodology ]

- CIDOC CRM = our “reference point”
  - FRBR is not “finished”
  - OO was deemed more “trendy” than ER
  - some logical flaws in FRBR (?) while CIDOC CRM was deemed more “robust”
  - CIDOC CRM had already undergone a process of “extensions”
  - some FRBR concepts were deemed to need revision and refinement

# [ Methodology ]

- All FRBR attributes and relationships were examined one by one
  - Extract their semantics
  - Express their semantics through existing CIDOC CRM constructs
  - Express their semantics in a CRM-compatible form whenever no ready-made CRM construct was available
  - Express any attribute as a “property” (i.e., relationship)
- Changes made in FRBR: some classes were split
- Changes made in CIDOC CRM as well

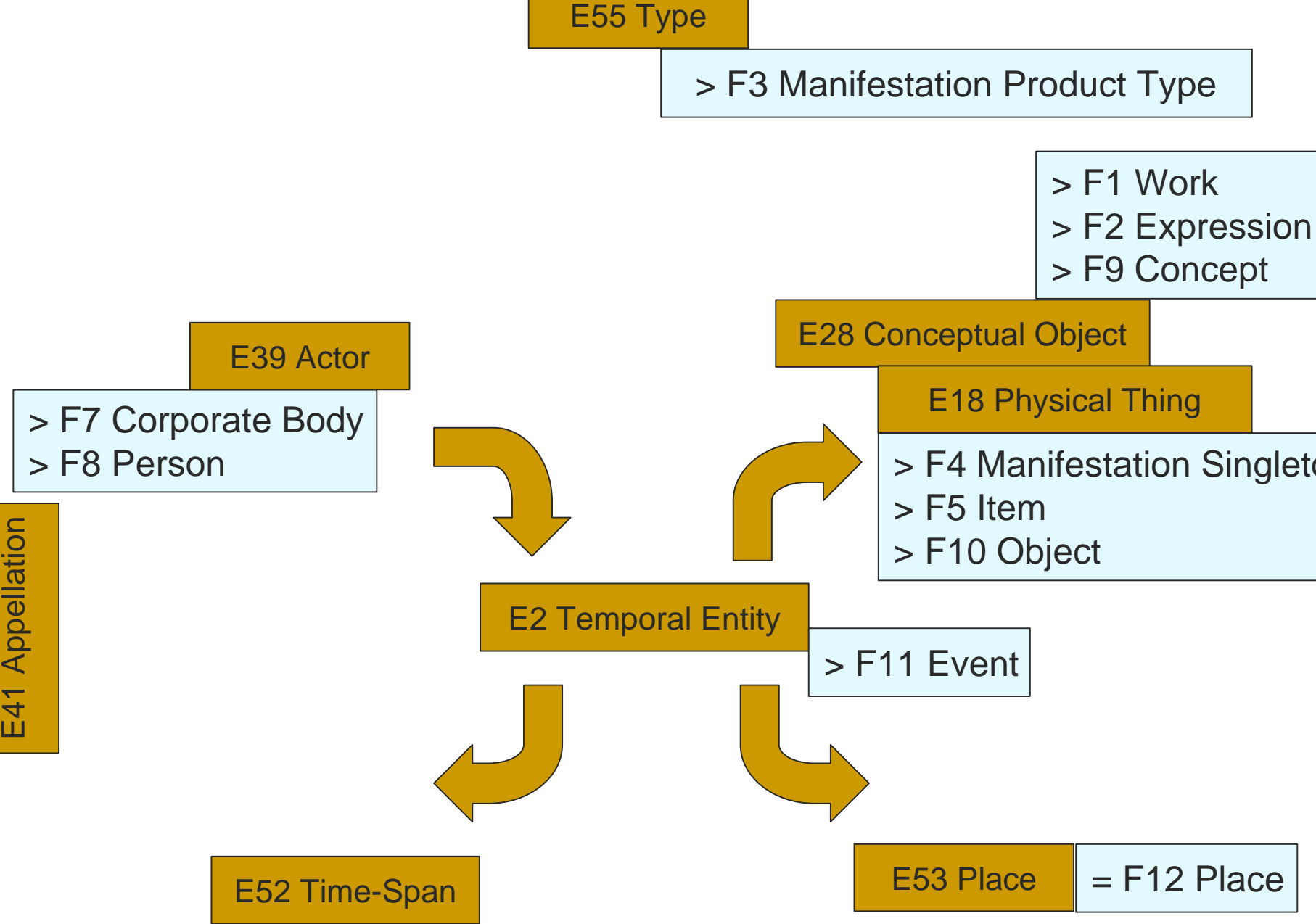


## 2. A unified model

2.2. Some features of the resulting model

# Some features of the resulting model

- 39 classes
- 55 properties
- re-uses 44 classes and 45 properties from CIDOC CRM
- Next step: delete everything that is not strictly needed!



# Some features of the resulting model

- Provides a more detailed analysis of creation and production processes
- Refines the original definitions, which were too vague and sometimes problematic (Work, Manifestation)
- Separates distinct conceptualisations that had been pressed together



## 2. A unified model

### 2.3. Next steps

# [ Next steps ]

- “Translate” the FRAD model
- “Translate” the FR SAR model (once it is available)
- Have the resulting model approved by IFLA
- Have the changes made in CIDOC CRM approved by the rest of the CIDOC CRM SIG

# [ Next steps ]

- FRBR<sub>OO</sub> should be available by Spring or Summer 2008
- FRBR<sub>ER</sub> and FRBR<sub>OO</sub> will co-exist
  - FRBR<sub>ER</sub> for pedagogical purposes
  - FRBR<sub>OO</sub> for applications with RDF, ontology-driven systems, etc.
- Perhaps also develop a metadata schema based on FRBR<sub>OO</sub>?

# [ Next steps ]


- Provide a core model for FRBR<sub>OO</sub>
  - The “full” model was necessary in order to develop a complete clarification of the conceptualisation
  - Once all details of the conceptualisation are clear, it is possible to reduce and simplify the model
  - The complete model will remain available for reference (what was originally meant? why was that point suppressed? etc.)



# 3. Expected benefits

# [ Expected benefits ]

- We do believe that both communities will benefit from a unified model for bibliographic and museum information
- Potential for so-called “Semantic Web technology?”
- Potential for heterogeneous information integration



Thank you for your attention

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