Softwaretechnologie für Fortgeschrittene
Wohce 2

Modellierung

(with contributions from Christian-Emil Ore, Jon Holmen, and other colleagues at the Unit for Digital Documentation, University of Oslo
and from Martin Dörr and Stephen Stead, CIDOC-CRM SIG)

Model of vs. model for

Sources:
Artesplorando. Venerdì 5 aprile 2013. Michelangelo URL: http://artesplorando.blogspot.de/2013/04/michelangelo.html
Five weeks in Florence. Friday, September 30, 2011. Michelangelo's David … Ingrid's "Davids Under Wraps" in Juried Photo Show in Texas. URL: http://fiveweeksinflorence.blogspot.de/2011/09/michelangelos-david-ingrids-davids.html

Modelling strategies: examples

- Modelling for production
  - Computer science – e.g. UML
  - Digital Humanities – e.g. TEI
- Modelling for understanding
  - Digital Humanities
  - (Humanities, natural sciences, …)
- Modelling for data integration
  - Computer science – e.g. Semantic Web
  - Digital Humanities – e.g. TEI
  - Cultural heritage – e.g. CIDOC-CRM

Introducing CIDOC-CRM
Historical Archives…

Type:	**Text**
Title:	**Protocol of Proceedings of Crimea Conference**
Title.Subtitle:	**II. Declaration of Liberated Europe**
Date:	**February 11, 1945**
Creator:	**The Premier of the Union of Soviet Socialist Republics**
	The Prime Minister of the United Kingdom
	The President of the United States of America
Publisher:	**State Department**
Subject:	**Postwar division of Europe and Japan**

Metadata

Documents

"The following declaration has been approved: The Premier of the Union of Soviet Socialist Republics, the Prime Minister of the United Kingdom and the President of the United States of America have consulted with each other in the common interests of the people of their countries and those of liberated Europe. They jointly declare their mutual agreement to concert…
….and to ensure that Germany will never again be able to disturb the peace of the world…… "

Images, non-verbose…

Type:	**Image**
Title:	**Allied Leaders at Yalta**
Date:	**1945**
Publisher:	**United Press International (UPI)**
Source:	**The Bettmann Archive**
Copyright:	**Corbis**
References:	**Churchill, Roosevelt, Stalin**

Metadata

About…

Photos, Persons

Places and Objects

TGN Id: 7012124
Names: Yalta (C,V), Jalta (C,V)
Types: inhabited place(C), city (C)
Position: Lat: 44 30 N,Long: 034 10 E
Hierarchy: Europe (continent) <– Ukrayina (nation) <– Krym (autonomous republic)
Note: …Site of conference between Allied powers in WW II in 1945; ….
Source: TGN, Thesaurus of Geographic Names

Places, Objects

About…

Title: Yalta, Crimean Peninsula
Publisher: Kurgan-Lisnet
Source: Liaison Agency

The Integration Problem (1)

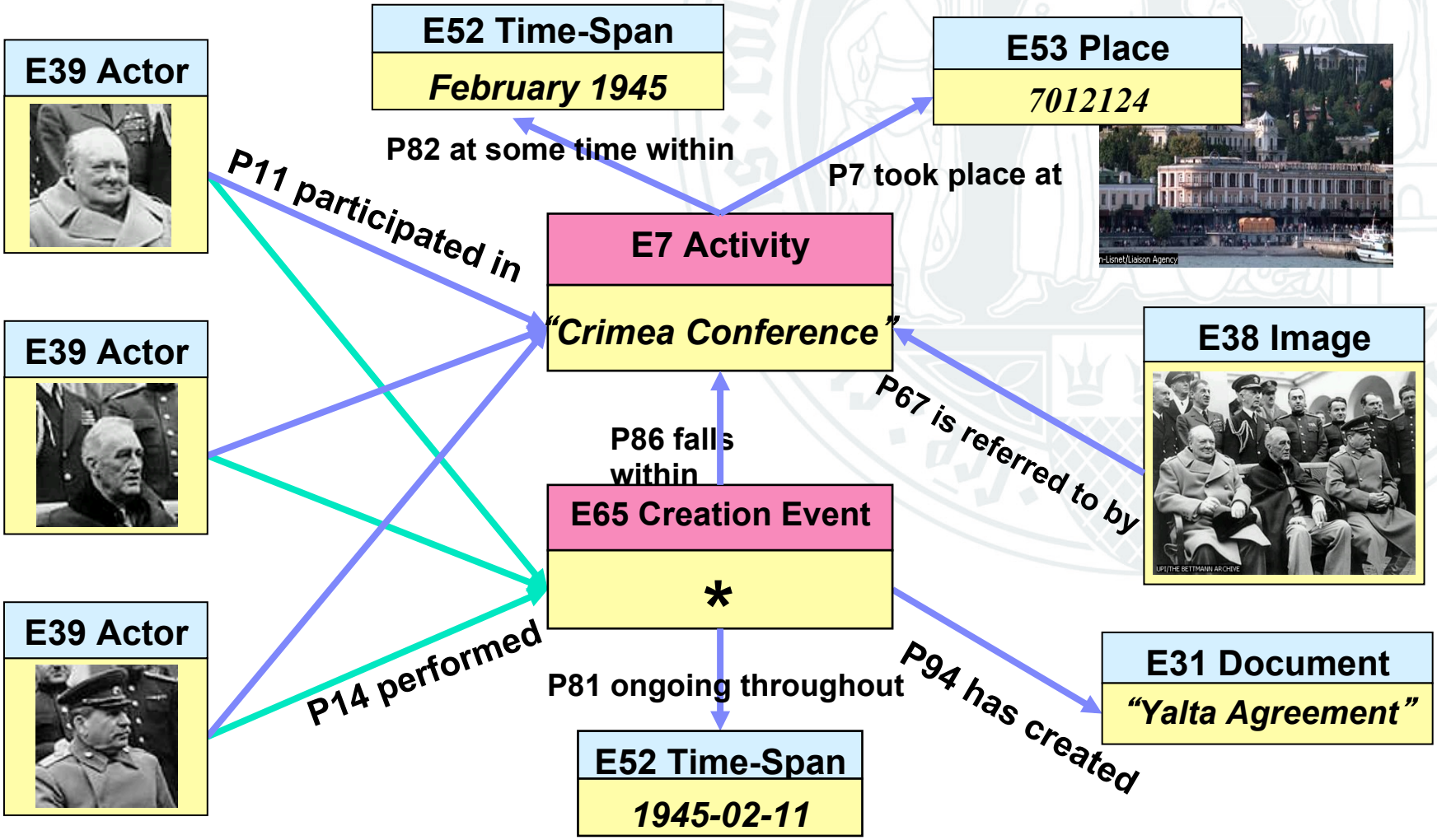
- Problem 1: identification of things
  - Actors, Roles, proper names:
    - The Premier of the Union of Soviet Socialist Republics
      Allied leader, Allied power
      Joseph Stalin….
  - Places
    - Jalta, Yalta
    - Krym, Crimea
  - Events
    - Crimea Conference, “Allied Leaders at Yalta”,“… conference between Allied powers” “Postwar division”
  - Objects and Documents:
    - The photo, the agreement text

The Integration Problem (2)

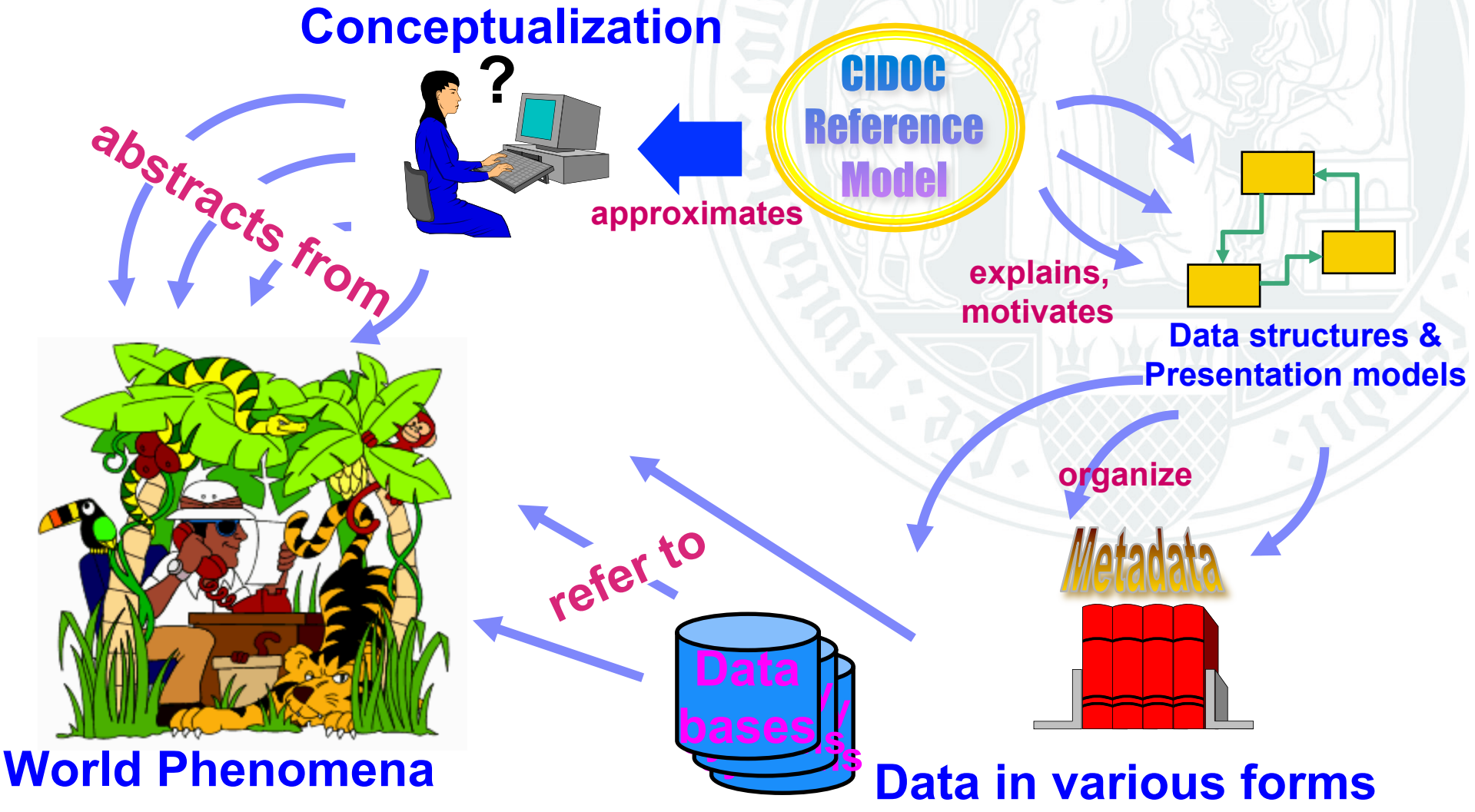
- Problem 2: hidden (implicit) entities (typically under “title”)
  - Actors
    - Allied leader, Allied power
  - Places
    - Yalta, Crimea
  - Events
    - Crimea Conference, “Allied Leaders at Yalta”,“… conference between Allied powers” “Postwar division”
- Solution:

  Make better metadata structures: but what are the relevant elements?

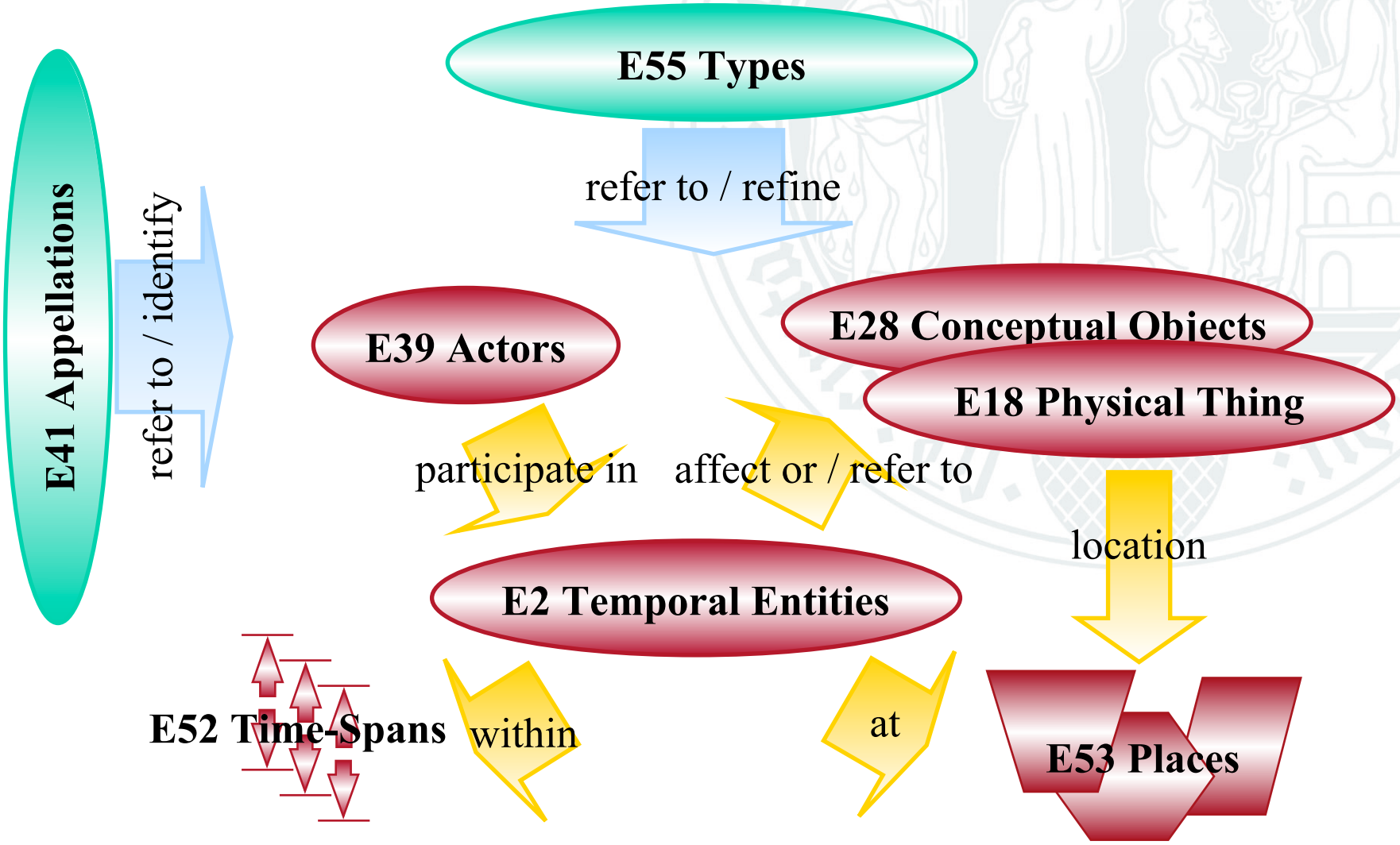
Explicit Events, Object Identity, Symmetry



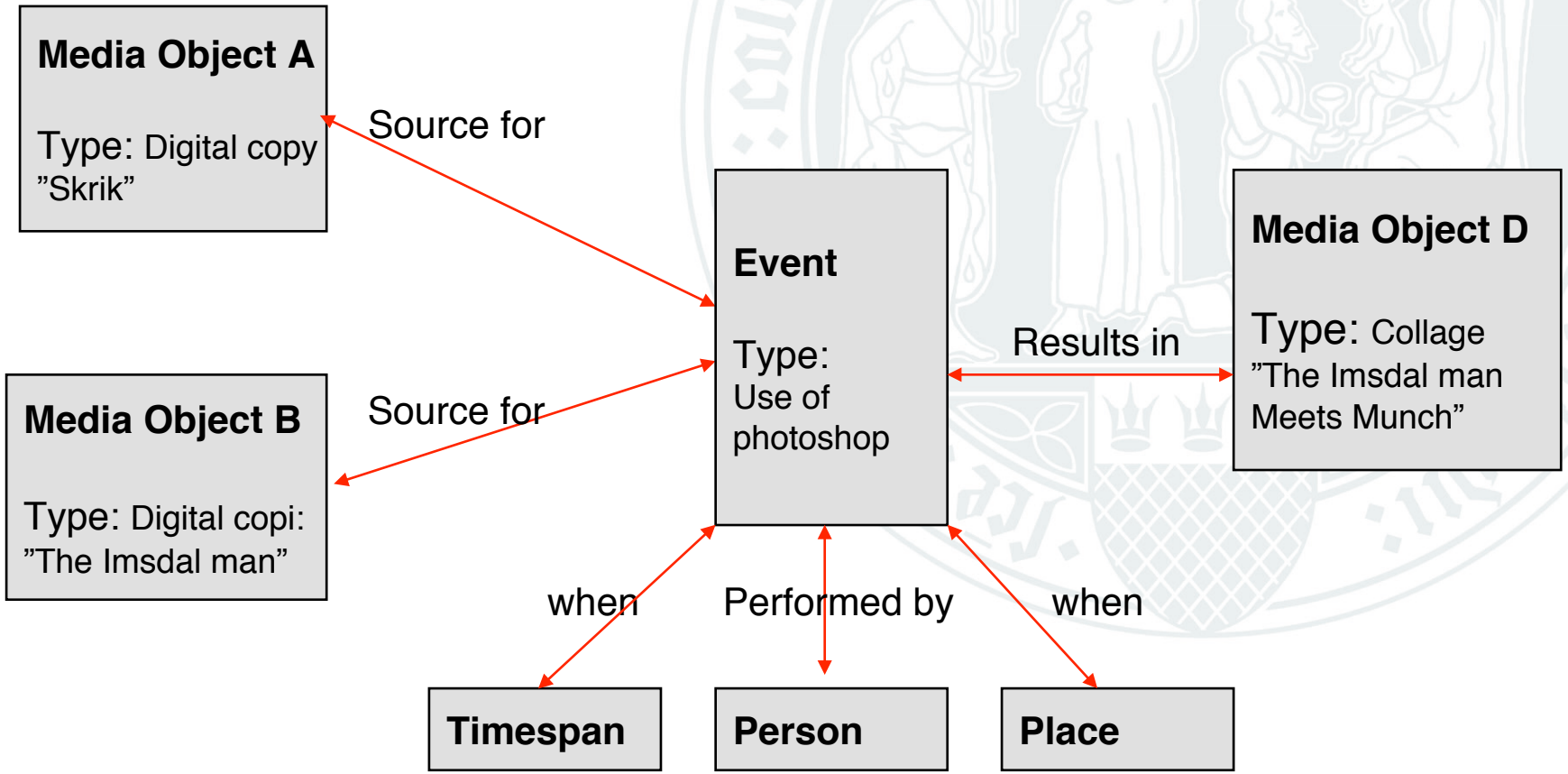
The Intellectual Role of the CRM



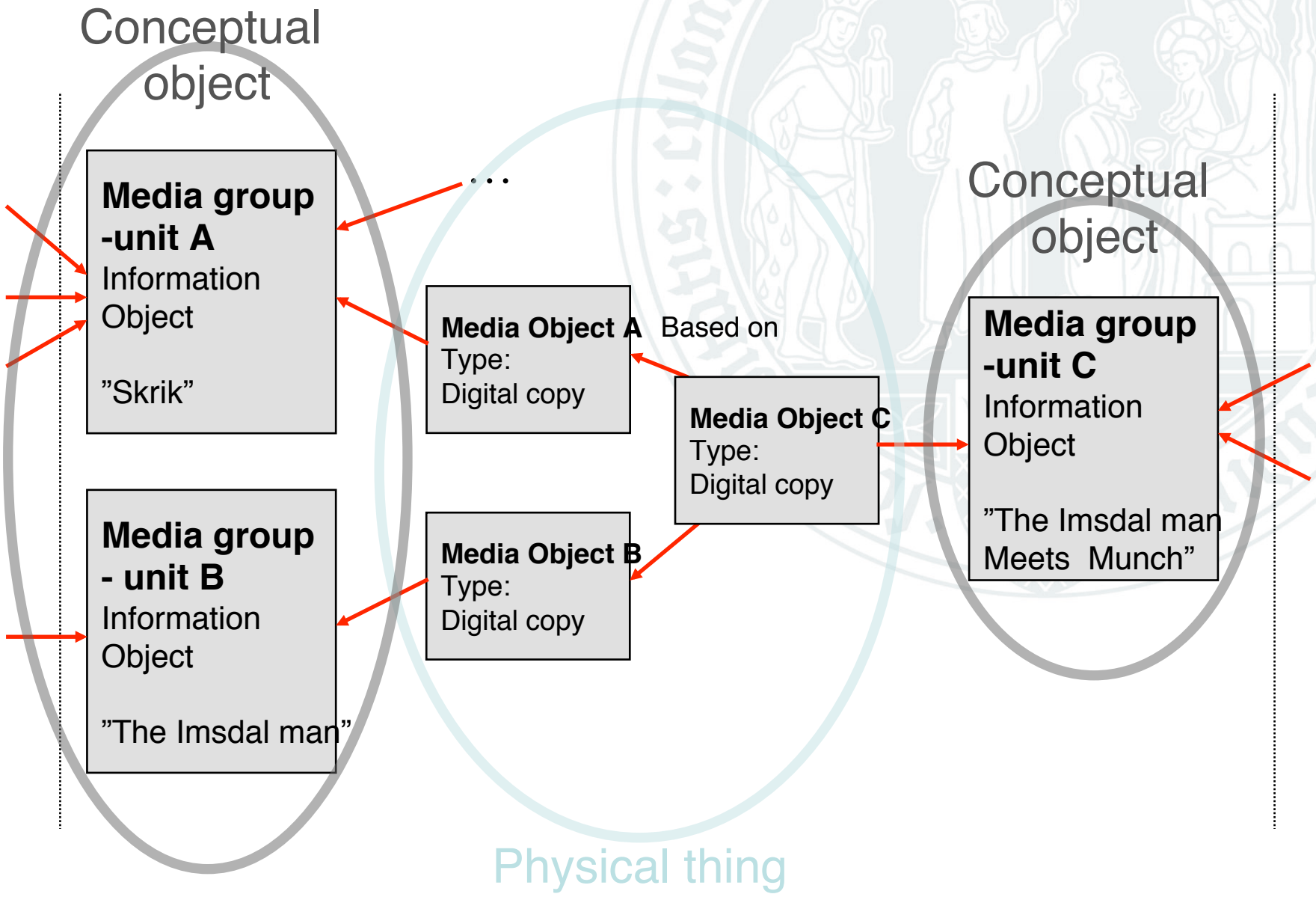
Top-level classes useful for integration



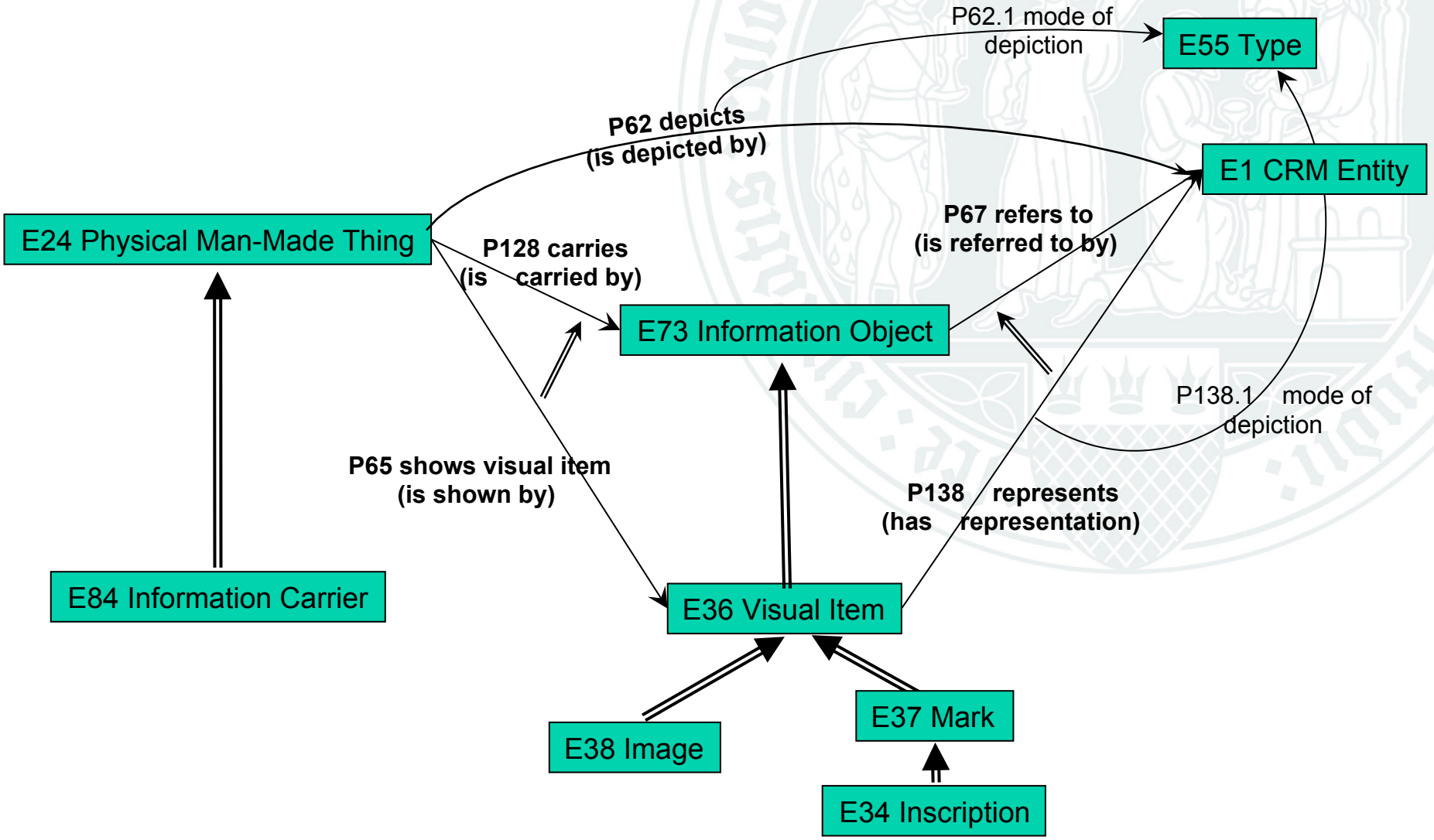
Event centric data model



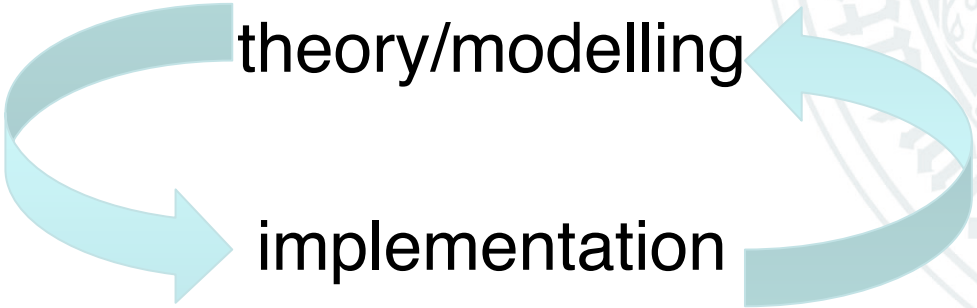
Date model, concepts and things



Visual Content and Subject



Development and modelling



comparison
calibration
verification

Theoretical model
model for

Empirical model
model of

deduction

induction

Generating knowledge

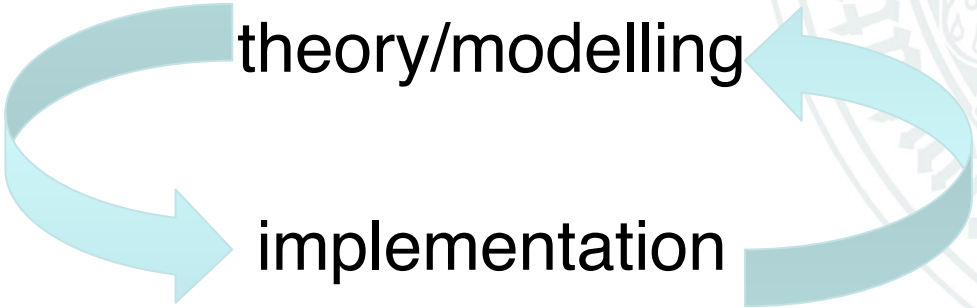
created object

comparison
evaluation

modelled object

Thanks to Oliver Nakoinz for inspiration

Development and modelling



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II 0. UML 2.0 (2003 / 04 ff.)

UML ist eine Sammlung von "*graphischen Sprachen*", d.h. Regelsystemen für die Konstruktion graphischer Schemata, die:

- ❖unterschiedliche Perspektiven von Anforderungen an Systeme und Entwürfen von Systemteilen, sowie deren Zusammenwirken darstellen,
- ❖einander dabei überlappen können und
- ❖unabhängig voneinander verwendet werden können.

Am wichtigsten:

- ❖Klassenmodelle beschreiben den strukturellen Aufbau eines Systems,
- ❖Anwendungsfallmodelle (Use Cases) beschreiben die Interaktion mit dem System aus Benutzersicht.

The role of UML

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