



The CIDOC CRM

What Means Compatibility with the CRM?

Martin Doerr

***Center for Cultural Informatics,
Institute of Computer Science
Foundation for Research and Technology - Hellas***

Washington, October 25, 2009



The CIDOC CRM:

CRM Compatibility (1)

Types of systems in information integration environments:

- **Local** information systems:

are either collection management systems or content management systems

- **Integrated** access systems :

provide an homogeneous access layer to multiple local systems.

We distinguish:

- **Materialized Access Systems** : *import* data provided by local systems
- **Mediation Systems**: *send* out *queries* to multiple local systems and then collect and integrate the answers.



The CIDOC CRM:

CRM Compatibility (2)

Compatibility with the CRM pertains to one or more use cases:

- data falling within the scope of the CRM **can be exported** from an information system into an encoded form
- **data** falling within the scope of the CRM **can be transformed** into another encoded form
- **data** falling within the scope of the CRM **can be imported** from an encoded form into an information system
- **data** falling within the scope of the CRM that is contained in an information system **can be queried** and retrieved in terms of CRM concepts
.....**without loss of meaning** with respect to CRM concepts !

This can be assessed by a certification authority (CA)



The CIDOC CRM:

CRM Compatibility (3)

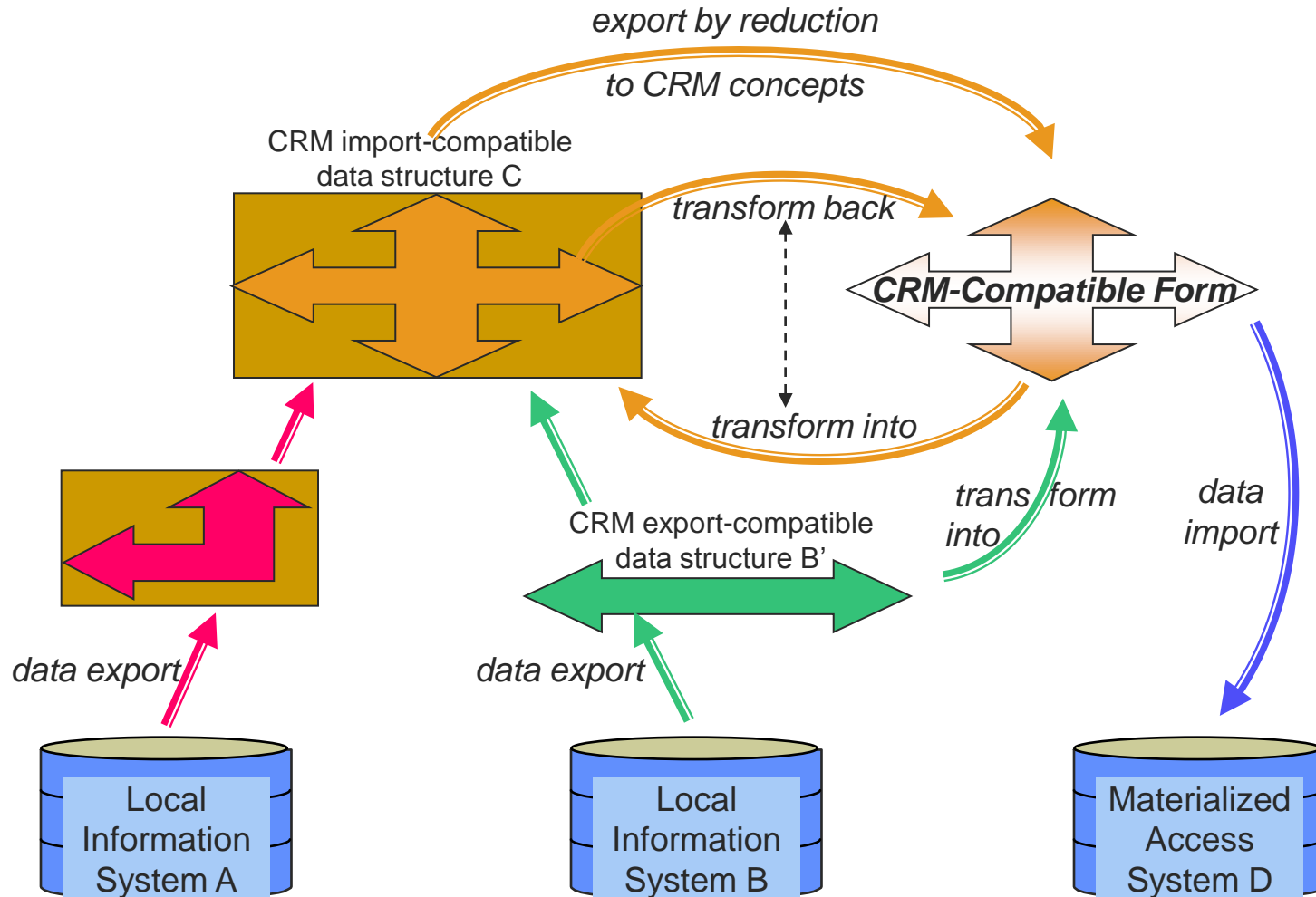
CRM Compatible Data Structures

- A **data** structure is **export-compatible** with the CRM
 - *if it is possible to transform any data **from** this data structure into a CRM-compatible form without loss of meaning.*
- A **data** structure is **import-compatible** with the CRM
 - *if it is possible to automatically transform any data from a CRM-compatible form **into** this data structure without loss of meaning, on the basis of knowledge about the data structure elements being used.*
- Any CRM-compatible form is automatically import-compatible with the CRM
 - *it may correspond to CRM concepts or specializations or contain elements that fall outside the scope of the CRM - it must not contain elements that overlap in meaning with CRM concepts*
- A **data** structure is **partially import-compatible** with the CRM
 - *if the above holds for **a reduced CRM-compatible form**.*



The CIDOC CRM:

Data-flow between different kinds of CRM-compatible systems





The CIDOC CRM:

CRM Compatibility (4)

Additional information of a compatibility claim declaration (possibly for a CA)

- For **export-compatible data structures**:
 - *the subset of CRM concepts directly instantiated after transformation into a CRM-compatible form.*
- For **export-compatible systems**:
 - *Declaration of configurable user data elements*
 - *User data elements or units that are not exported.*
 - *The subset of CRM concepts directly instantiated by data exported from the system after transformation into a CRM-compatible form.*
- For partially or dedicated **import-compatible systems**:
 - *The subset of CRM concepts under which data can be imported*
- For **access-compatible systems**:
 - *The query language by which the system can be queried.*
 - *The subset of CRM concepts directly instantiated by any possible query answers exported after transformation into a CRM-compatible form.*
 - *For partially access-compatible systems, the subset of CRM concepts by which the system can be queried.*