

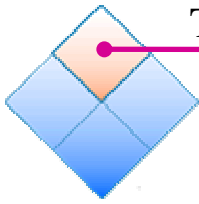
Toward an FEA Data Reference Model Ontology

Discussion Points

“Best Practice Process for Implementing
FEA Data Reference Model XML Profile”

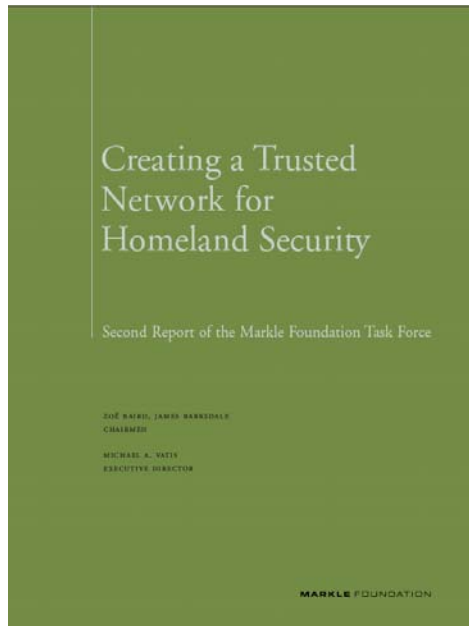
NSF, Arlington,
19th October 2004

Ralph Hodgson
Executive Partner
TopQuadrant



What is the DRM for?

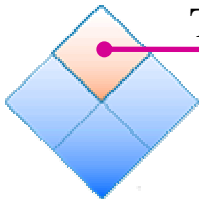
Examining the Vignettes from Appendix D of the Markle Report we arrive at some Generic Use Cases



□ Top 10 Generic Use Cases

- 1) Is X a Y?
- 2) How is X related to Y?
- 3) Tell me X about Y
- 4) Translate X into Y
- 5) Collect all X about Y across W in Context C
- 6) Can X be shared with Party P?
- 7) Does X have the right to do operation A on Y?
- 8) What obligations does X have on Y in Context C?
- 9) Is Information X in Context C relevant to Person P in Context Z?
- 10) Where did information X come from?

www.markle.org/downloadable_assets/nstf_report2_full_report.pdf



Thinking about Data

□ Data has

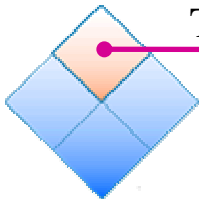
- 1) Structure
- 2) Type
- 3) Representation
- 4) Security
- 5) Provenance
- 6) Proof
- 7) Rights - Legal Aspects
- 8) Quality
- 9) Event Life Histories
- 10) Many Contexts

□ Data is

- 1) Informative - is about something
- 2) Intentional - is for some purpose
- 3) Meaningful - in a context

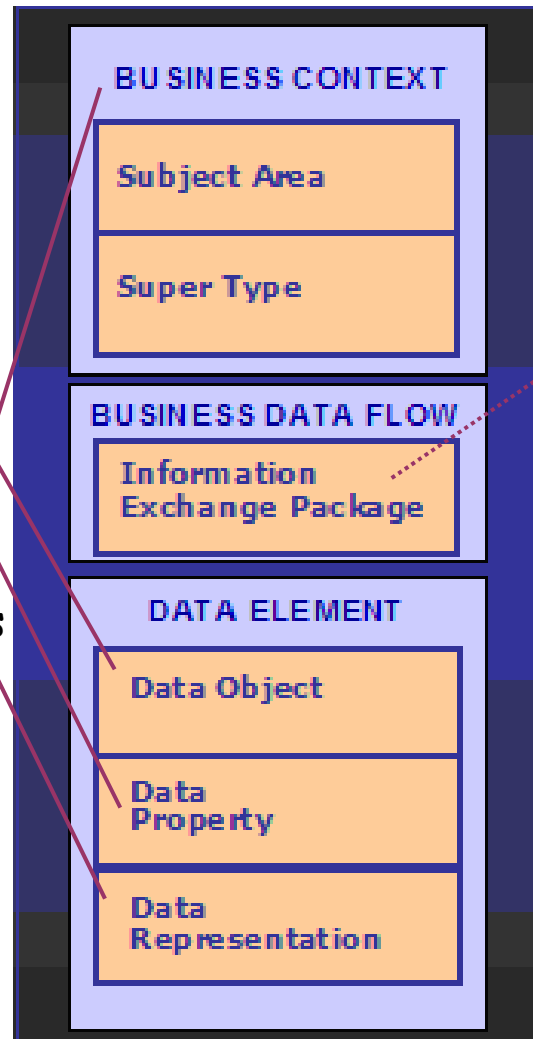


Separation of Concerns

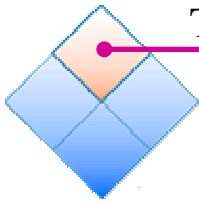


What's in the current DRM?

- Data has
 - 1) Structure
 - 2) Type
 - 3) Representation
 - 4) Security
 - 5) Provenance
 - 6) Proof
 - 7) Rights
 - 8) Quality
 - 9) Event Life Histories
 - 10) Many Contexts

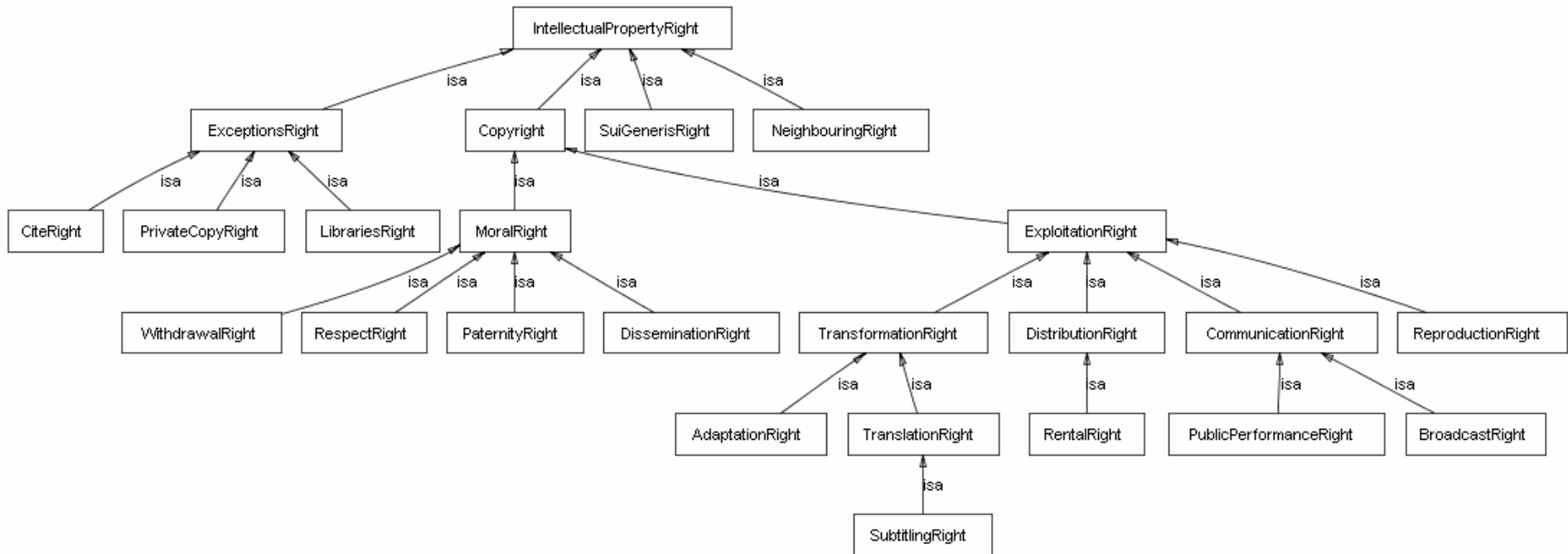


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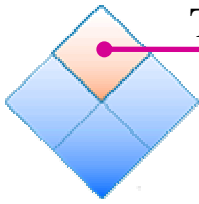


How is FEA DRM like IPR DRM?

The IPR world has "Rights"
Does the data in DRM have "rights"?



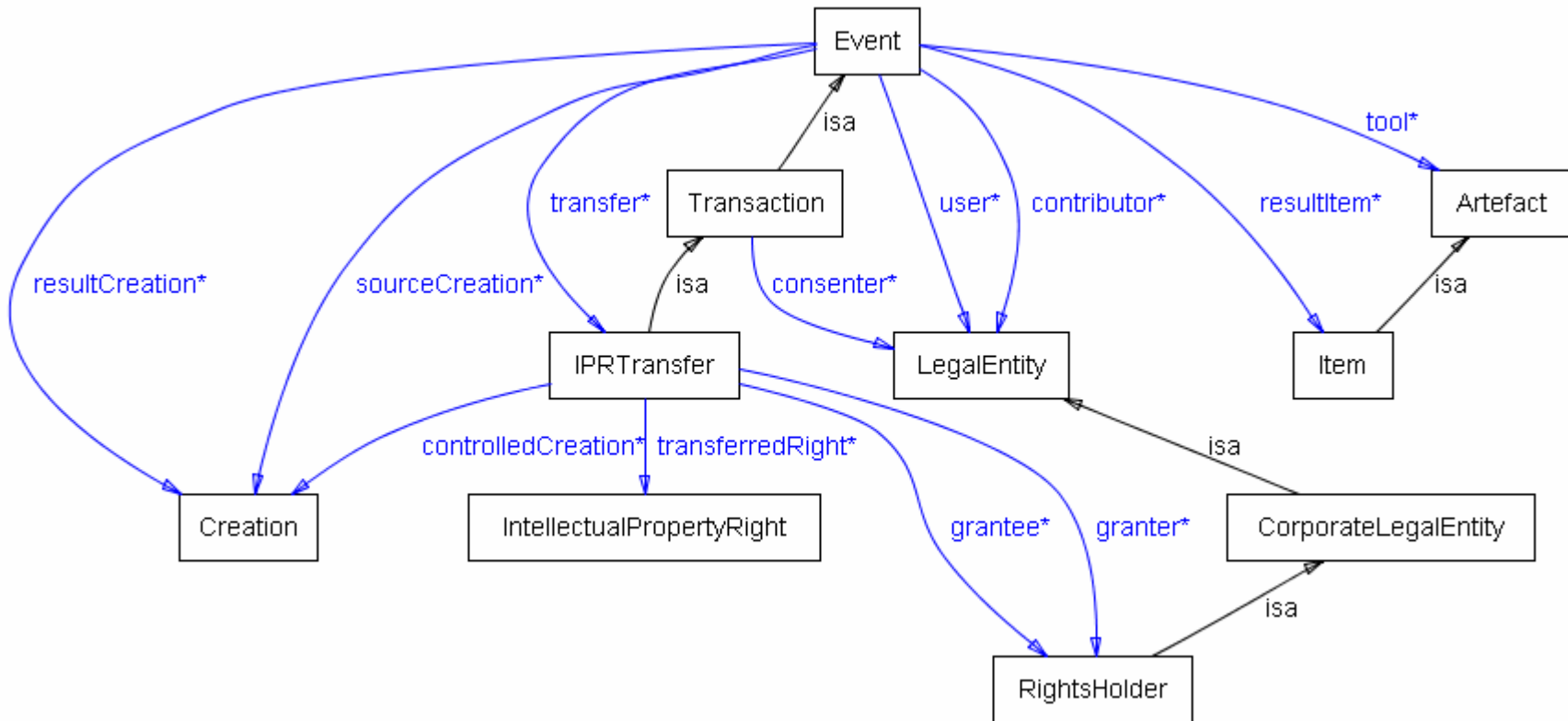
Source: ipronto - <http://dmag.upf.es/ontologies/2003/12/ipronto.owl>



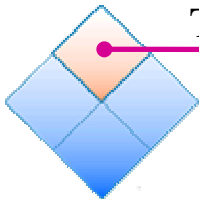
How is FEA DRM like IPR DRM?

The IPR world has events

Does the data in DRM have events?



Source: ipronto - <http://amag.upr.es/ontologies/2003/12/ipronto.owl>

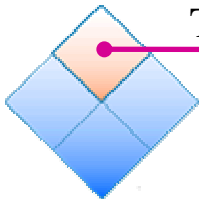


Does FEA DRM need Provenance?

Does the data in DRM need provenance?

What can we take/learn from the PRISM Standard?

- General Purpose Elements (creator, date, format, ...)
- Subject Description (subject, location, person, organization, ...)
- Provenance (receptionTime, source, ...)
- Timestamps (creationTime, modificationTime, ...)
- Resource Relationships (isVersionOf, hasComponent, ...)
- Rights Tracking (rightsAgent, releaseTime, #notReusable, ...)
- Controlled Vocabularies (code, label, broaderTerm, ...)
- In-line Markup (object, organization, location, person, ...)

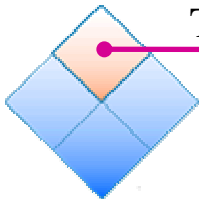


Does FEA DRM need anything from XMP?

- Yes if we include unstructured data
 - ❖ there will be a lot of PDF around
- And maybe "yes" also for structured data

<http://partners.adobe.com/asn/tech/xmp/pdf/xmpspecification.pdf>





How should DRM make use of ISO 11179?

ISO 11179

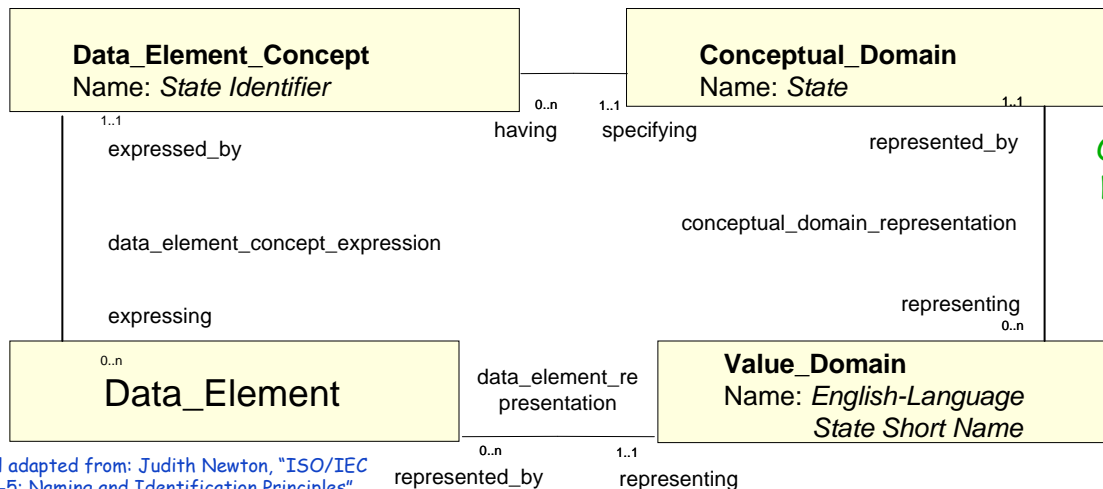
- Part 1: Framework for the Specification and Standardization of Data Elements
- Part 2: Classification for Data Elements
- Part 3: Basic Attributes of Data Elements
- Part 4: Rules and Guidelines for the Formulation of Data Definitions
- Part 5: Naming and Identification Principles for Data Elements
- Part 6: Registration of Data Elements

Similar Parts
➔

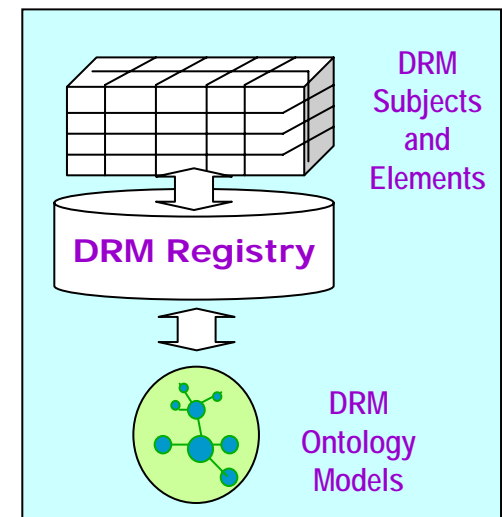
FEA DRM

- Part 1: Framework for the Specification and Standardization of DRM
- Part 2: Classification for DRM Elements
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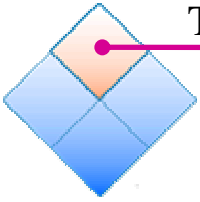
data_element_concept_conceptual_domain_relationship



OWL Models +
Namespaces +
Data typing

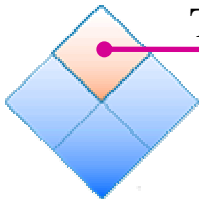


Model adapted from: Judith Newton, "ISO/IEC 11179-5: Naming and Identification Principles", NIST, Open Forum Metadata Conference, Santa Fe, 2003



What to do next about DRM

- ❑ By its very nature and intended use DRM is complex
- ❑ We should "Divide and Conquer" by partitioning DRM into Separate Concerns
 - ❖ This is the way to "Keep it Simple"
- ❑ Take Small Steps in implementing it - theme at a time



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Q & A



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