

Digital Item Identification

ISO/IEC 21000-3 and its applications

1st MPEG-21 Seminar, Poznan, July 2005

Niels Rump
Project editor ISO/IEC 21000-3

rightscom

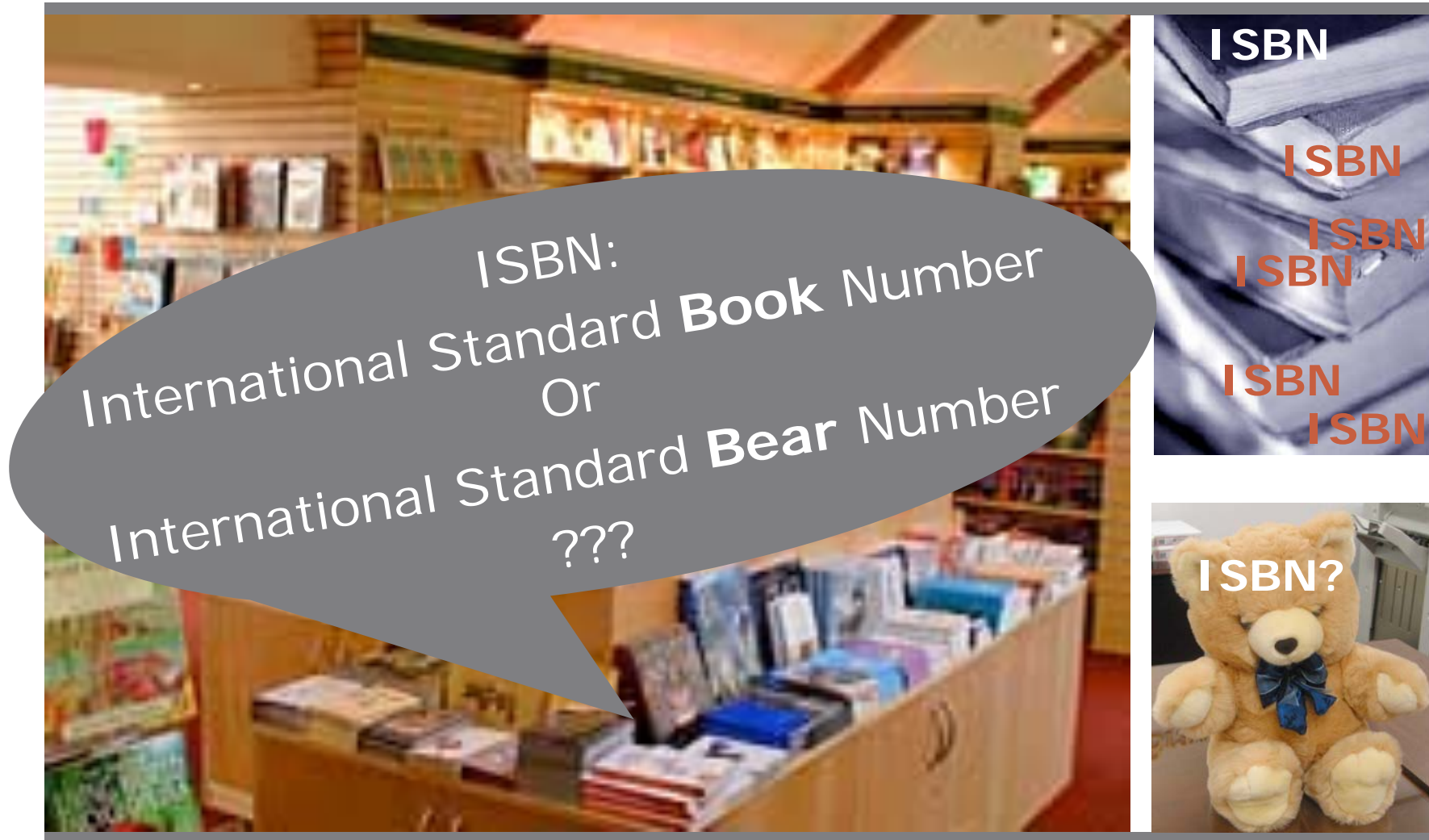
Agenda

- ▶ Why is identification such a big deal?
 - ▶ Using Identifiers in (e)Commerce
 - ▶ What to identify
 - ▶ Governance of identifiers
- ▶ Introduction to ISO/IEC 21000-3
 - ▶ Including amendments
 - ▶ Other related MPEG-21 standards

What is a (good) Identifier?

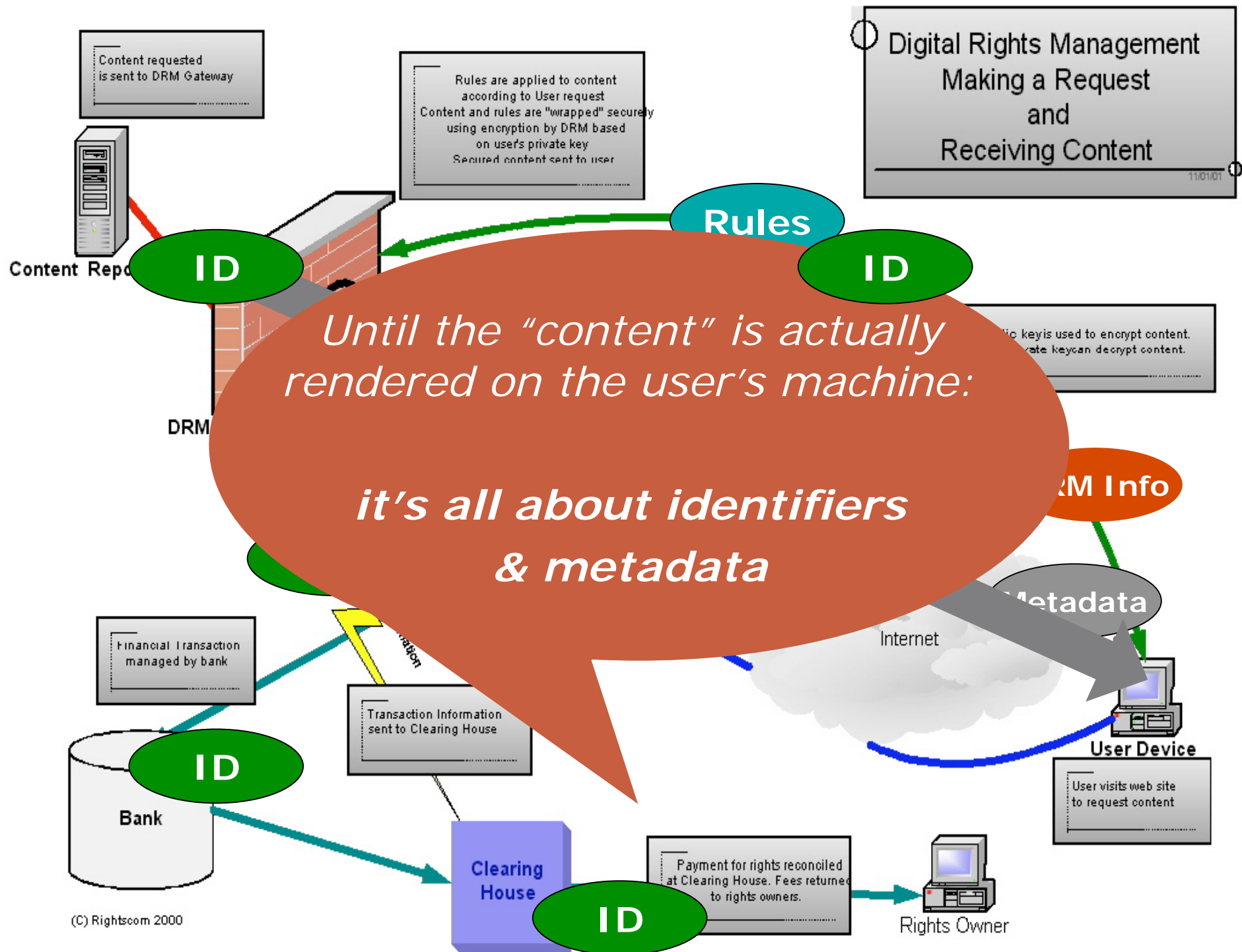
- ▶ Uniqueness (in a particular domain)
- ▶ Persistence (though not always)
- ▶ Reference metadata to distinguish one item from another
- ▶ Resolution
- ▶ Governance
- ▶ And **clarity of what it identifies**
 - ▶ What items
 - ▶ What level of granularity

But: Some systems fall foul of list



Identifiers are Domain-specific

- ▶ Each domain (thus each identifier) has different needs for
 - ▶ Level of Granularity
 - ▶ Scope of uniqueness
 - ▶ Persistence
 - ▶ Reference metadata
 - ▶ Resolution
 - ▶ Governance



Principle of ISO/IEC 21000-3

- ▶ Be compatible with existing and new identification schemes
- ▶ Enable use of such identifiers in the context of MPEG-21 applications
- ▶ Thus: ISO/IEC 21000-3
 - ▶ **Does *not* specify an identification system**
 - ▶ Provides a standard mechanism to transport industry identifiers within context of MPEG-21

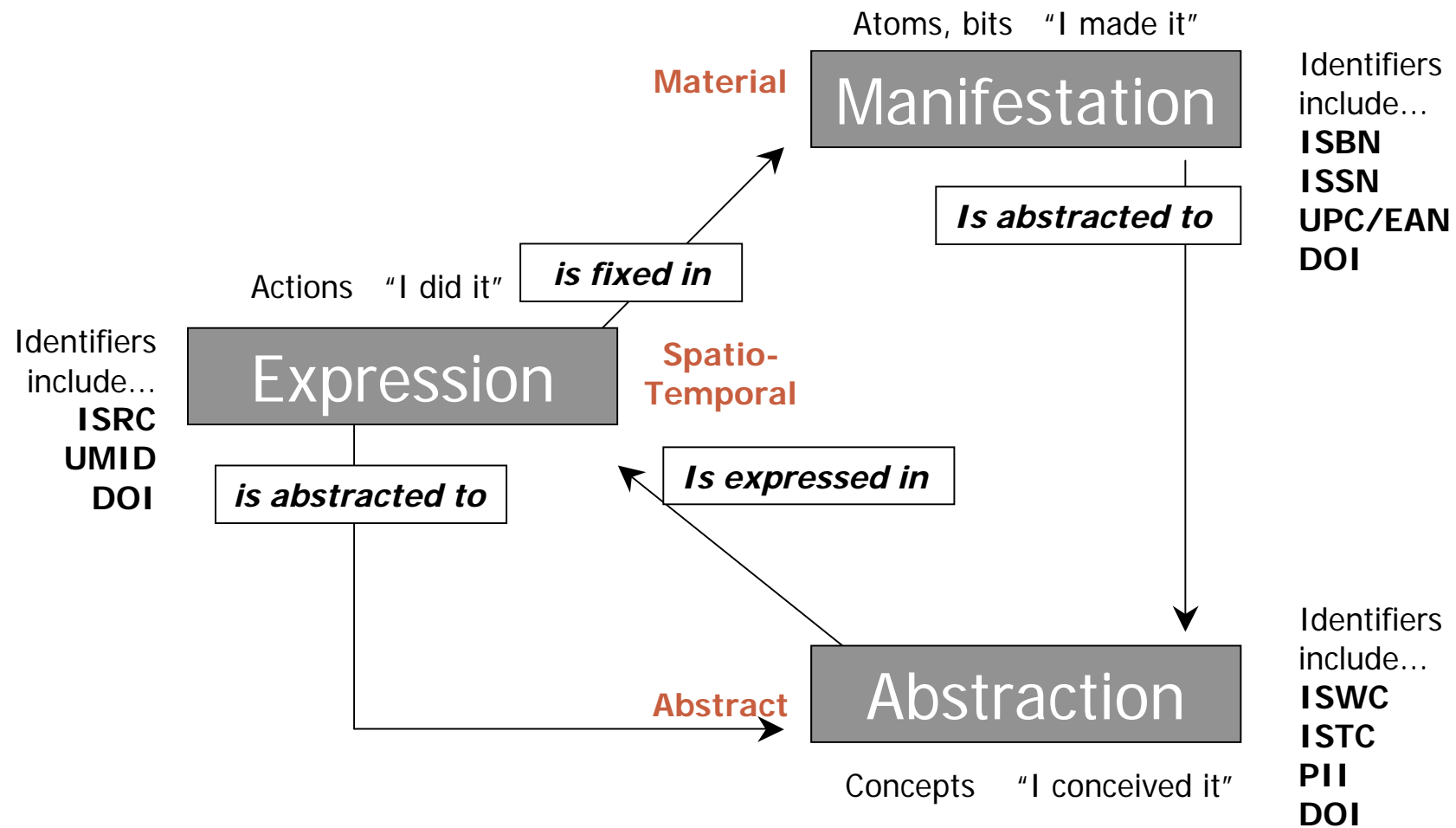
Overview of ISO/IEC 21000-3

“Digital Item Identification”

- ▶ Digital Item is “the fundamental unit of distribution and transaction” (ISO/IEC TR 21000-1)
- ▶ ISO/IEC 21000-3 defines how to identify DIs and their parts
 - ▶ `dii:Identifier` – associate the ID of Item with Item
 - ▶ `dii:RelatedIdentifier` – allows associate an ID that is “related to” the item (e.g. for Abstractions)
- ▶ Amendment 1 to ISO/IEC 21000-3
 - ▶ Defines method to make the nature of the relationship between an `Identifier` and a `RelatedIdentifier` explicit
 - ▶ Terms for typing the relationship provided by ISO/IEC 21000-6
 - ▶ Amd.1 is ready to be promoted to FPDAM this week

Creation Types and their IDs

(from the <Indecs> Analysis)



Varying Functional Granularity

▶ User A

- ▶ Creates Digital Item
- ▶ Assigns a unique Identifier

▶ Other Users

- ▶ Use Identifier to identify the DI

The solution for this is expected to utilise the same mechanism as used in Amd.1

▶ But

- ▶ Another User B may need to distinguish between “variants” of a single DI
- ▶ Even if it is identified by a single DII

▶ Thus

- ▶ A single DII may not be sufficient for all Users even if – for the creator – all variants represent exactly the same DI

ISO/IEC 21000-3 and Governance

- ▶ DII does not interfere with the governance of identifier standards and systems
 - ▶ IDs and their governance are domain-specific
- ▶ The identifier systems themselves
 - ▶ Provide their own semantics
 - ▶ Provide their own conformance scheme
 - ▶ May provide the means for resolving an Identifier to its reference metadata

Related MPEG-21 Standards

- ▶ ISO/IEC 21000-11
 - ▶ Evaluation Methods for Persistent Association Technologies
 - ▶ **Technical Report** describing how to test audio watermarking and fingerprinting algorithms
- ▶ ISO/IEC 21000-17
 - ▶ Fragment Identification of MPEG Resources
 - ▶ “identification of a **part of a Resource** by providing a format for [a] **reference**”

Digital Item Identification

ISO/IEC 21000-3 and its applications

Niels Rump

mail: niels.rump@rightscom.com

phone: +44 20 7620 4450

rightscom