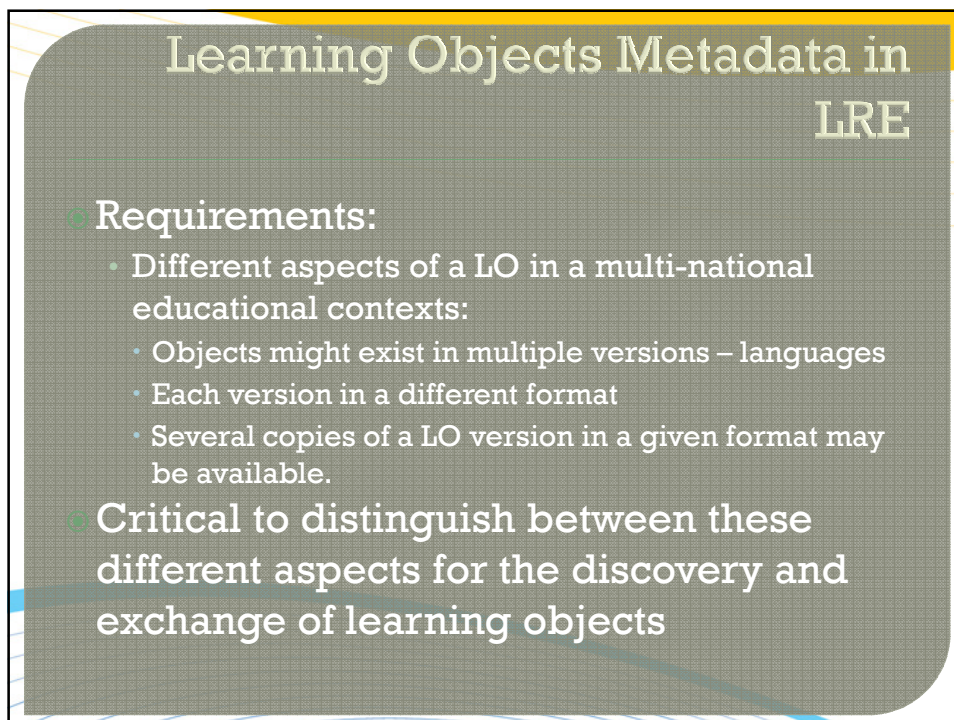




EUN
Learning Resource Exchange
(LRE)

Metadata Application Profile, v4.5.1

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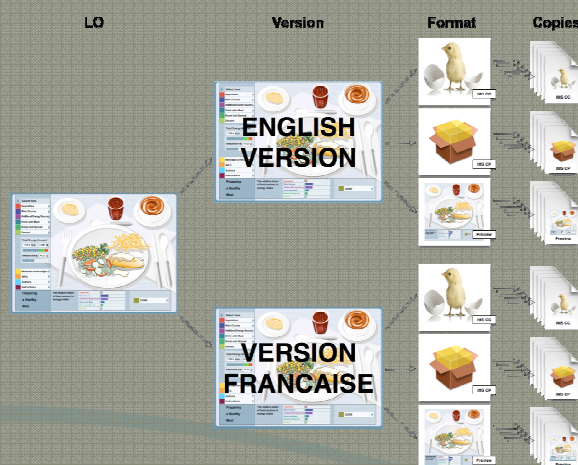
Learning Objects Metadata in
LRE

- Requirements:
 - Different aspects of a LO in a multi-national educational contexts:
 - Objects might exist in multiple versions – languages
 - Each version in a different format
 - Several copies of a LO version in a given format may be available.
- Critical to distinguish between these different aspects for the discovery and exchange of learning objects

Organizing Information for Distribution and Interoperability

- LRE Metadata Application Profile
- <http://lre.eun.org/node/6>
 - IEEE LOM standard
 - Provides for describing education specific aspects of digital objects
 - IMS LOD E Information for Learning Object Exchange (ILOX) specification
 - A metadata container and framework for organizing existing standards such as LOM

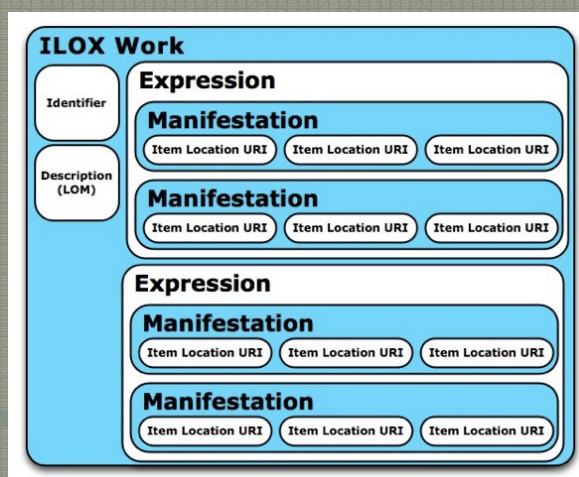
FRBR – ILOX Aspects of a Learning Object

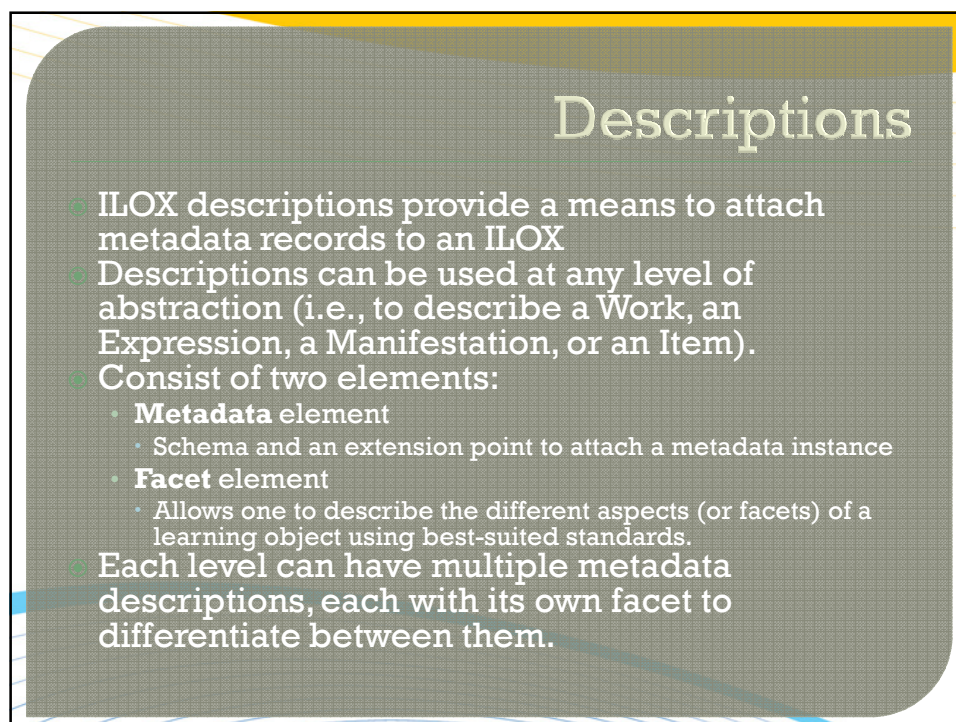
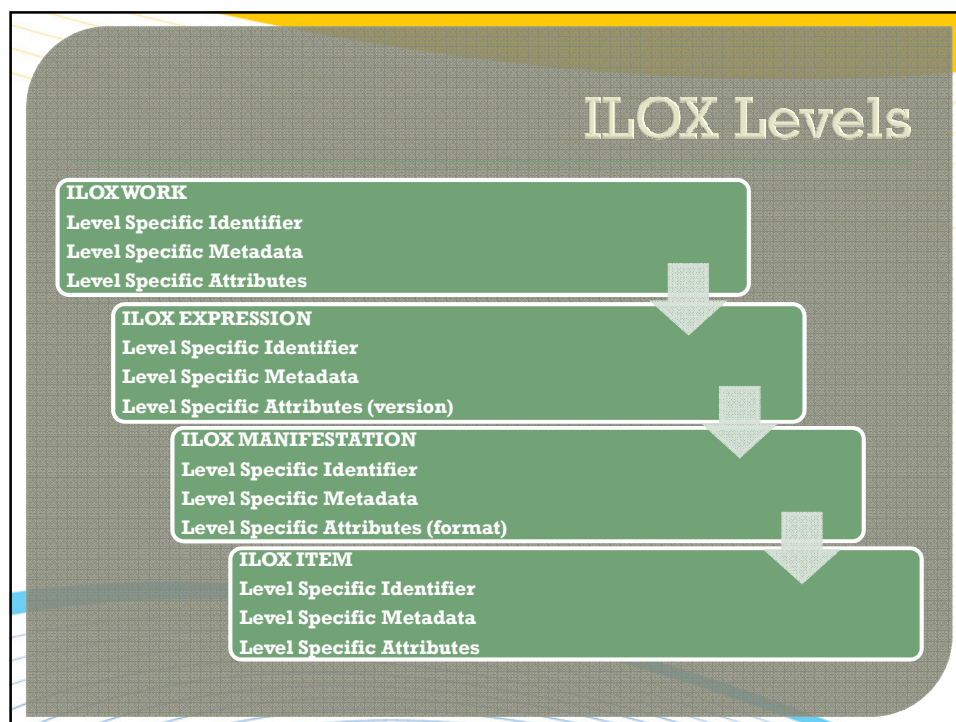


Classes of Categories

- ILOX is a hierarchy with four main classes of categories
- The most abstract class is at the Root (top) of the hierarchy
 - Work
 - Expression
 - Manifestation
 - Item
- Each class is a construct and each becomes more concrete with every step down in the hierarchy until the “Item” level which is the most concrete (actual retrievable copy of the object)
- Each class is described using four types of elements:
 - An identifier
 - A general description
 - Construct-specific information (if needed)
 - One or more concrete constructs

ILOX as Metadata Container





LRE 4.5.1:

Work, Versions and Formats

- ILOX Work
 - LOM
- ILOX Expression (version)
 - Languages
 - Coverage
 - Accessibility
 - Versions
- ILOX Manifestation (format)
 - Experience (play directly on the web)
 - Packages (Common Cartridge)
 - Landing pages
 - Web feed
- Mechanism to attach metadata in a variety of standards at any level of the ILOX, (LOM, DC, etc)

Mandatory Facets:

'Main' and 'License/Rights'

- *main - mandatory*
 - The main description of a learning object.
 - This main description at the Work level must consist of an IEEE LOM instance
- *license/rights - mandatory if LO has cost and/or rights restrictions (other than Creative Commons)*
 - The description of the license and/or rights that applies to the learning object at the Work level.
 - There can be different rights attached at all levels and different schemas attached to describe these rights.
 - If CC then can be found in LOM

Learning Object Metadata (LOM)

- Education specific elements using controlled vocabularies shared by all aspects of a LO
 - All vocabularies managed in the Vocabulary Bank for Education (VBE)
 - Mandatory and Recommended Elements
 - Learning Resource Type
 - “lesson plan”, “assessment”, etc.
 - Educational context
 - “compulsory education”
 - Age Range
 - Intended End User
 - “teacher”, “parent”
- LRE Thesaurus for subject
- Rights (reuse, remix, distribute)

Interoperability Issues

- **Manifestations**
 - Used to capture information specific to the way a given expression of a learning object is encoded and presented such as, for example, the file formats of different aspects of the learning object.
 - ILOX and LOM
 - Provides for ‘format’ – MIME types
 - Provides for resource type – ‘assessment’
- Provides for packaging information – IMS Common Cartridge
- Version 1.1
- Problem for the LRE – how to get this level of specificity when mapping other profiles