IFD Library

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Goals

• Set the standard for object-based data exchange and sharing of virtual buildings:
  
  • IFC model
    – create a comprehensive information specification
  
  • Dictionary
    – use standard names and definitions of properties for IFC extensions
  
  • Exchange Requirements - IDM
    – define information requirements and rules for particular business processes

  • Reference Processes
    – establish standard process descriptions that can be extended for projects
Interoperability through standards

Aeronautics & Space
- RDL (ISO 15926-4)
- OASIS DEX
- ISO 10303-203, 209, 212, 214, 239,
  ASD 9300-110

Built Environment (AEC-BIM)
- IFD Library (ISO 12006-3)
- IDM (ISO TC59 SC-13)
- IFC (ISO 16739)

Defense
- PLCS (ISO 10303-239),
  ASD/AIA S1000D,
  ADL SCORM

EPM Technology

Oil & Gas
- RDL (ISO 15926-4)
- EPM Library
- ISO 15926-2

Terminology
- Process
- Digital Storage
IFD Library Description

• IFD Library provides:
  – Multilingual and translation capabilities
    • Important in a globalized world
  – Unique global reference to any concept – GUID
  – IFC model enrichment and link to product specific data
  – Database of terminology and definitions
  – A generic API and content
  – Support for business opportunities – market driven
Establishing a Controlled Vocabulary

- Give one concept multiple names in multiple languages
  - Concepts are classified as objects, activities, properties and units, not as verbs, substantives, adjectives, etc.
  - A dictionary based mapping does not necessarily refer to the identical concept.
  - An concept can have multiple names on the same language
  - A name can refer to multiple concepts
A wooden framework...

- **Definitions**
- **Concepts**
  - **truss**
  - **roof truss**
- **Names**
  - takstol
  - Dachstuhl
  - fermes
  - 屋根のトラス

**IFD ID**: 2WbbKAzWyHsW0001K0EGVI

**Translations**: A wooden framework...
Interlinking concepts through IFD

In briefing documents

In product catalogues

In classification systems

In building specifications

IFD dictionary/ontology

In CAD systems

In calculation systems

In Facility management systems

In IFC

Properties

Properties

Properties

Properties

Properties

Properties

Properties

Properties

Properties
Property Set Values

IFD Library

- Thickness
- Hand of door
- Width
- Height
- Material
- Surface finishing
- Colour
- Hinge

Product

- 92 millimeter
- Right
- 890 millimeter
- 2090 millimeter
- MDF
- Painted
- NCS S0502
- 2465 snap-in

Definite doorset

Graphic courtesy Arne Hammerstad, NOBB
IFD data, ISO 12006-3 (EDM Server™)

EXPRESS-X
Query Schema

IfcXML

API
(Java, Tomcat, WSDL)

Internett

Application A

Application B
Propertylizer – IFD Input Device
IFD Library Background

• IFD (ISO/DIS 12006-3) was developed by ISO/TC 59/SC 13/WG 6
• IFD is an EXPRESS model standardised in ISO 12006-3
• Several countries have been building dictionaries based on IFD
• IFC will have support for IFD information as of version Ifc2x4
• The Norwegian BuildingSMART project and STABU have developed a common WSDL interface (API) to a unified IFD library
• BARBi (Norway) and LexiCon (Netherlands) will be one unified library
• Alpha version of API was up running
Technical development

• Status:
  – New API (WS) beta release in Lisbon at the end of September
  – New IFD API 2.0 release on November 1\textsuperscript{st} – Washington
  – Since then testing and bug fixing
  – Started issuing usernames and passwords for testing in April 2007
Adding and maintaining content

• Status:
  – Procedure for adding content in Norwegian buildingSMART project established and approved by partner group
  – Terms and definitions in native language and international English
  – Software tool for adding and maintaining content developed – the IFD Library Propertylizer
  – IFD Library Propertylizer 1.0 released in Nov. 2006
  – IFD Library Propertylizer 2.0 released in June 2007
    • Using new API – used for testing and bug fixing
    • Upload and download fully functional
  – Pilot Projects beginning in North America
Resources

Presenters:
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More information:

www.ifd-library.org
http://dev.ifd-library.org/
   The IFD Wiki with introduction to IFD, the API documentation and step by step guides

www.omniclass.org
www.csinet.org