Content

Client Problem

buildingSMART Data Dictionary
  • The Opportunity
  • Common Object Platform

Conclusion
Client Problem
How to manage product data information consistently?
Enable a single method of providing digital product information

- Open, non-proprietary information
- Agreed, documented transparent product data templates
- Consistent flow of information from manufacturers through the whole life cycle
- Consistent plain language dictionary for product parameters
- Product parameters exchanged through open standards based on IFC
- An independent accreditation method
The Opportunity

What is the grand vision, what can it do?
Common Object Library

the Strategy

Unique #1234

Entrance Width

Türbreite

Largeur de la Porte

Element  Unique #  English  Deutsch  Français

IFD#1234  Entrance Width  Türbreite  Largeur de la Porte

Concept by: Professor Rasso Steinmann, IABI
# Common Object Library

## Building the Library

<table>
<thead>
<tr>
<th>Element</th>
<th>Unique #</th>
<th>English</th>
<th>Deutsch</th>
<th>Français</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>IFD#1234</td>
<td>Entrance Width</td>
<td>Türkbreite</td>
<td>Largeur de la Porte</td>
</tr>
<tr>
<td></td>
<td>IFD #1235</td>
<td>……</td>
<td>……</td>
<td>……</td>
</tr>
<tr>
<td></td>
<td>IFD #1236</td>
<td>……</td>
<td>……</td>
<td>……</td>
</tr>
</tbody>
</table>

- Unique #1234
- Unique #1235
- Unique #1236
<table>
<thead>
<tr>
<th>Unique #</th>
<th>English</th>
<th>Deutsch</th>
<th>Français</th>
</tr>
</thead>
<tbody>
<tr>
<td>IFD#1234</td>
<td>Entrance Width</td>
<td>Türbreite</td>
<td>Largeur de la Porte</td>
</tr>
<tr>
<td>IFD #1235</td>
<td>........</td>
<td>........</td>
<td>........</td>
</tr>
<tr>
<td>IFD #1236</td>
<td>........</td>
<td>........</td>
<td>........</td>
</tr>
</tbody>
</table>

Common Object Library to the Cloud
Common Object Library
Door Factory

Object Database
Common Object Library
Object Data to Door Factory

Object Database

Door Factory
Door 1
Door 2
Door 3
Common Object Library
Merge Object Data into Product Data

Object Database

<table>
<thead>
<tr>
<th>Door</th>
<th>Unique #</th>
<th>M</th>
<th>Unique #</th>
<th>M</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>IFD #1234</td>
<td>0.9</td>
<td>IFD #1235</td>
<td>..</td>
</tr>
<tr>
<td>2</td>
<td>IFD #1234</td>
<td>1.0</td>
<td>IFD #1235</td>
<td>..</td>
</tr>
<tr>
<td>3</td>
<td>IFD #1234</td>
<td>1.1</td>
<td>IFD #1235</td>
<td>..</td>
</tr>
</tbody>
</table>
Common Object Library

Architect Needs a Door

Object Database

Product Database

Architect CAD-BIM Program

Entrance Width: IFD#1234 = 1.0M

Architect: I need Entrance Width 1.0M
Common Object Library
Architect BIM Program Search

Object Database
Product Database

Search doors: IFD#1234 = 1M

Architect: I need Entrance Width 1.0M
Architect: Who makes 1.0M Doors?
Successful Search!

We make great doors with IFD #1234 = 1M

Architect: I need Entrance Width 1.0M

Architect: Who makes 1.0M Doors?
Common Object Library

Summary

Object Database

Product Database

Agreement on Common Terms

Multilingual Translations

Assigning each property a unique #

Helping to find Building Products

Helping to sell Building Products

Concept by: Professor Rasso Steinmann, IABI
Common Object Platform

How does the Concept work in practice?
Common Object Platform

Development

Object Makers

Object Library

Platform Rules and Tools

Object Users

Common Object Platform

Open Exchange Layer

Platform Rules and Tools

Object Makers

Object Users

Platform Rules and Tools

Common Object Platform

Industry Foundation Classes

Purpose: Supports Open Data Exchange

Status: Created and Ready

International Framework for Dictionaries

Purpose: ISO Standard for the mapping of terms

Status: Created and Ready

buildingSMART Data Dictionary

Purpose: IFD Mapping Tool

Status: Created (on Google Infrastructure)

Feature: Interface with other standards such as PLCS

Feature: Supports classification system of choice

Application Protocol Interface

Purpose: Link objects to Open Exchange Layer

Status: Created and Ready

Security: Access management, future needs TBA

Object Makers

Object Users
Common Object Platform

Development

Object Makers

Object Library

Object Users

Property Set Management Tool
Purpose: Create Product Data Template Tool
Rule set: In progress
Status: TBD

Testing and Quality Assurance
Purpose: Assure Consistent Quality
Status: TBD

Open Multilingual Connectivity
Purpose: Open Connectivity in many languages
Status: Available

IFC
IFD
bSDD
Common Object Platform

French Example

Context Capability

Purpose: Enable different users groups to create purposeful and sharable data sets
Status: available
Common Object Platform

French Example

Government Manufacturers

Vendor Adoption

Purpose: Enable Users Full Access to Object Library
Status: For future

Owners Operators AEC Industry

Employer Information Required

Purpose: BIM Client Specification
Status: for future / TDB

Product Data Templates

Purpose: Enable consistent product information flows
Status: e.g. TDB AIMCC in France

Common Object Property Sets

Purpose: Enable AEC workflows
Status: for French determination

Vendor Adoption

Purpose: Enable Users Full Access to Object Library
Status: For future

Host Context

Property Set Mgt Tool

Quality Testing

Open Multilingual Connectivity

IFC

IFD

bSDD

Software Vendor Adoption
Purpose: Policy to digitize building & infrastructure Industry
Status: for Future

Digital Plan of Works

Design & Specification
- Product needs definition
- Product sourcing etc.

Tendering and order fulfilment
- Product needs definition
- Product sourcing etc.

BIM Data Fulfillment
- Design to construction
- As Built handover to client

Facility & Asset Management Activities

Workflow Support

Government Manufacturers Industry Groups

Common Object Platform

French Object Library

Workflow Support

Quality Testing
Open Multilingual Connectivity

IFD bSDD
Common Object Platform
Value Add Services

French Object Library

- Employer Information Required
- Product Data Templates
- Common Object Property Sets
- Software Vendor Adoption

Digital Information Service Providers
- Example: CoBuilder

Digital Information Service Providers
- Example: Product Manufactures

Purpose: Comply with French, EU, CE Standards in Product Information Requirements
Status: Ready

Purpose: Product Catalogues and value added services
Status: For Future

Purpose: Support open BIM operations
Status: TBD

Digital Information Service Providers
- Example: Product Manufactures

Purpose: Product Catalogues and value added services
Status: For Future

Digital Information Service Providers
- Example: CoBuilder

Purpose: Comply with French, EU, CE Standards in Product Information Requirements
Status: Ready

Purpose: Support open BIM operations
Status: TBD
Common Object Platform
Full Service Proposition

Government Manufacturers Industry Groups

French Object Library
- Employer Information Required
- Product Data Templates
- Common Object Property Sets
- Software Vendor Adoption

Owners Operators AEC Industry

Host Context Property Set Mgt Tool Quality Testing Open Multilingual Connectivity

IFC IFD bSDD
Conclusion
Solution Summary

Enable a single method of providing product information

Open, non-proprietary information

Agreed, documented product data templates

Consistent workflow information

Consistent plain language dictionary

Product parameters exchanged through open standards based on IFC

An independent accreditation method

Open exchange standards

Industry Association managed library contexts

Enable construction workflows using buildingSMART Common Object Service

buildingSMART Common Object Service

bSDD based on open standards

buildingSMART Compliance Program
# Service Propositions

<table>
<thead>
<tr>
<th>Services</th>
<th>Clients</th>
<th>End Users</th>
<th>Commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Common Objects Service</td>
<td>Owners Government BIM Initiatives</td>
<td>Owners Facility Managers AEC Industry</td>
<td>Free to use Pay to modify IPR protected via license</td>
</tr>
<tr>
<td>Common Objects Service</td>
<td>Product Manufacturers Software Companies</td>
<td></td>
<td>License fee</td>
</tr>
<tr>
<td>Data Aggregation Support</td>
<td>Information Publishers i.e.: CoBuilders, etc.</td>
<td></td>
<td>License fee</td>
</tr>
<tr>
<td>Online Dictionary Hosting</td>
<td>Owners Government BIM Initiatives Product Manufacturers Software Companies</td>
<td></td>
<td>Free to use Pay to modify IPR protected via license</td>
</tr>
</tbody>
</table>
How to get involved

buildingSMART is a membership organisation

Our work is **only** done with the support of our members

Details of our membership options are on our website

- Strategic
- International
- Standard
An Industry Community

This is your industry
Governments are providing the lead
Only Users can define the detail
Clients are part of the industry!

Get involved personally - Involve your company/organization
Open
Neutral
Not for Profit
International

Process led

World wide community of professionals
Hub for technical experts

We want to be like these!

In the end this is not about buildingSMART, its about our industry!
Thank You
Richard Petrie, Chief Executive

www.buildingsmart.org