Introducing a new framework for generic Information Delivery Manuals

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Session F-2.1: Data & information management
Vienna, Austria, 17-19 September 2014
## Overview of Information Delivery Manuals independent of their status

<table>
<thead>
<tr>
<th>Local IDM ID</th>
<th>IDM Name</th>
<th>Owner</th>
<th>Project Manager</th>
<th>Internal IDM status</th>
<th>URL</th>
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</thead>
<tbody>
<tr>
<td>ATC-001</td>
<td>Structural Design to Structural Detailing (ATC-75)</td>
<td>Applied Technology Council, Thomas Liebich</td>
<td>Thomas McLane</td>
<td>Draft</td>
<td><a href="http://www.blie-project.org/IAI-MVD/reporting/listMVDs_4.php?SRT=Name&amp;MVD=">http://www.blie-project.org/IAI-MVD/reporting/listMVDs_4.php?SRT=Name&amp;MVD=</a></td>
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<td>BSA-001</td>
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<td></td>
<td>Proposal</td>
<td><a href="http://www.blie-project.org/IAI-MVD/reporting/listMVDs_4.php?SRT=Name&amp;MVD=">http://www.blie-project.org/IAI-MVD/reporting/listMVDs_4.php?SRT=Name&amp;MVD=</a></td>
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<td>North American Construction Operations Building Information Exchange Information Exchange (COBIE) standard</td>
<td>Bill East</td>
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<td><a href="http://idm.buildingsmart.no/confenue/display/IDM/COBIE+Project">http://idm.buildingsmart.no/confenue/display/IDM/COBIE+Project</a></td>
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2 | IDMs in current use appear complex
3  |  IDM in current use cover wide-ranging processes

IDMs in current use cover wide-ranging processes.
4 | IDM in current use cover wide-ranging processes
## 5 | IDM Framework for decomposed IDM Packages

<table>
<thead>
<tr>
<th>Architecture</th>
<th>Full Conceptual Design</th>
<th>Conceptual Outline</th>
<th>Coordinated Design</th>
<th>Production Information</th>
<th>Construction</th>
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<tr>
<td>IDM Package</td>
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</table>

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6 | IDM Packages focusing on IRMs and ORMs

Input Requirements Model (IRM) → Process Map (PM) → Output Requirements Model (ORM)

- **Space**
  - Global Unique ID
  - Owner History
  - Name
  - Elevation
  - 3D Space Geometry
  - 2nd Level Space Boundary
  - Occupancy Type
  - Occupancy Load
  - Lighting Load
  - Equipment Load
  - Etc...

- **Window**
  - Global Unique ID
  - Owner History
  - Name
  - Description
  - Object Placement
  - 3D Window Geometry
  - Thermal Transmittance
  - Solar Heat Transmittance
  - Etc...

- **Wall**
  - Global Unique ID
  - Owner History
  - Name
  - Description
  - Object Placement
  - 3D Wall Geometry
  - Thermal Transmittance
  - Etc...

- **Building**
  - Global Unique ID
  - Owner History
  - Name
  - Heating Requirements
  - Cooling Requirements
  - Etc...

- **Storey**
  - Global Unique ID
  - Owner History
  - Name
  - Heating Requirements
  - Cooling Requirements
  - Etc...

- **OUTPUT REQUIREMENTS MODEL (ORM)**

- **INPUT REQUIREMENTS MODEL (IRM)**
7 | Example of IDM Package

- Identification
- Geometry
- U-value
- g-value
- Etc.

ORM → IRM
8 | Example of IDM Package

WWR 55%

ORM

IRM

Identification
Geometry
U-value
g-value
Etc.
9 | Example of IDM Package

**Process Flow**

**Facade Performance Engineering**
- Use Case 1.0
- Acquire/Modify Site + Bld. Layout
- Acquire/Modify Space Layout
- Create/Assign Space Types
- Create/Assign Thermal Zones
- Create/Assign Constr. Types
- Validate BPS Model
- Set/Modify W-to-W Ratio
- Perform BPS
- Evaluate BPS Results
- BPS Results Acceptable?

**Input Requirements Model**
- IRM 2.0
- IRM 2.1 Site + Building Layout
- IRM 2.2 3D Space Layout
- Advisory Energy/IEQ Requirements

**Output Requirements Model**
- ORM 6.0
- Optimized Window-to-Wall Ratio Specifications

**Additional Information**
- ADD 2.3 Space Type Library
- ADD 2.4 Building System Library
- ADD 2.5 Construction Type Library
- ADD 4.1 Advisory Window-to-Wall Ratio Specifications
- ADD 4.2 Weather Data Library
## From generic use to project-specific use

<table>
<thead>
<tr>
<th>Outline Conceptual Design</th>
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<tr>
<td><strong>E</strong></td>
<td><strong>F</strong></td>
<td><strong>G</strong></td>
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19/09/2014
11 | Information flow management enhancement
12 | Potential of developed IDM Framework

- Software tools
- IDM integration
- Project manager

Software tools
IDM integration
Project manager
13 | Thank you for listening

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