Product and system modelling using the web and linked data

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Outline

1. Linked Building Data
2. Analytical data from the manufacturer
3. Decentralized web of product data
Building Information Modelling (BIM)

Web of Data

- W3C Linked Building Data Community Group
  https://www.w3.org/community/lbd/

- 6th Workshop on Linked Data in Architecture and Construction (LDAC)
  http://linkedbuildingdata.net/ldac2018/
W3C Linked Building Data CG

Outline

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3. Decentralized web of product data
The duties of a product manufacturer

• Producing and selling products
  • Trade
  • Business processes

• Supplying precision technical data
  • Energy performance analysis
  • Life-cycle cost (LCC)
  • Life-cycle assessment (LCA)
  • BIM processes

BIM and Linked data!!

BIM Objects
BIM Object libraries

Tons of questions

• does a BIM object add value to my customers?
• for which products in my product range do I need to have BIM objects?
• how much detail will I need to specify and which software formats do I need to support?
• how do I handle different professional and process information requirements?
• will there be a return on my investment and subsequent increase in sales?
Tons of problems

- Products vs systems
- Nomenclature for properties and classifications
- Data ownership and responsibility
- 3D modelling skills
- Proprietary file formats
- Data overload

Outline

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Towards online product data

• Data ownership lies with the manufacturer
• Focus on analytical and technical data
• Focus less on parametric geometry
• A decentralized web of analytical product data

CEN/TC 442 WG 4 – Support Data Dictionaries

• CEN/TC 442/WG 1 Terminology
• CEN/TC 442/WG 2 Exchange information
• CEN/TC 442/WG 3 Information Delivery Specification
• CEN/TC 442/WG 4 Support Data Dictionaries
• CEN/TC 442/WG 5 Chairperson’s Advisory Group
W3C Linked Building Data CG

Semantic web technologies (RDF & OWL) promise to enable linking building data across various sources
⇒ improved information exchange with sources outside the traditional BIM environments, additional to the already existing techniques

Image courtesy: Jakob Beetz, TU Eindhoven

Thank you

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