9th International Workshop on Linked Data in Architecture and Construction

Belval, Luxembourg, 2021

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http://linkedbuildingdata.net/ldac2021/

#LDAC2021
Welcome
LDAC BreadCrumbTrail
LDAC Track

• LDAC2012, Ghent
• LDAC2014, Helsinki
• LDAC2015, Eindhoven
• LDAC2016, Madrid
• LDAC2017, Dijon
• LDAC2018, London
• LDAC2019, Lisbon
• LDAC2020, Dublin
• LDAC2021, Luxembourg
3rd International Workshop on

Linked Data in Architecture and Construction (LDAC)

July 15, 16 & 17 2015
Eindhoven University of Technology, The Netherlands

in conjunction with the ECCICE 2015 workshop

Please see the evolving meeting minutes for further information

Program

Please have a look at the program for a complete list of presentations.

About

Using VSN of Data technologies for building information management has been in the focus of recent developments in the different actors of the building life cycle. This includes, eg. the tools for the effective collection, management and sharing of linked data with a wide range of stakeholders. This workshop is an opportunity for the exchange of ideas and is the place for the discussion of the challenges and opportunities of building information management with data.

Topics

- Use case presentations (sensor data, building performance checking, building regulation integration, etc.)
- RDF, SPARQL, 3D
- Data Management for Energy Efficient Building Life Cycle Processes
- Interlinking BIM and other internal data sources (cross-media, BIM, etc.)

LDAC 2015, Eindhoven
Gonzalo Gil 10:02 AM
Hi everyone, it was a pleasure to attend the LDAC this year. Just in case you want to see the presentation in more detail, I attach it to you. It is also available at https://linkedbuildingsdata.net/ldac2020/#programme

Towards defining Data Usage Restrictions in the Built Environment

PDF

Send a message to #plenary1
LDAC2021 Organisation
Programme Committee

All submissions are reviewed by at least two members of the Program Committee, which consists of the following members:

Jakob Beetz
Jose Beirao
Calin Boje
Serge Chávez Feria
Andrea Cimmino Arriaga
Gonçal Costa
Aaron Costin
Daniela De-Luca
Iker Esnaola-Gonzalez
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Daniel Garijo
Al-Hakam Hamdan
Elio Hbeich
Tim-Jonathan Huyeng
Rui De Klerk
Thomas Krijnen
Sylvain Kubicki
Felix Larrinaga
Maxime Lefrançois
Haijiang Li
Kris McGlinn
James O'Donnell

Pieter Pauwels
María Poveda Villalón
Dimitrios Rovas
Ana Roxin
Georg Schneider
Madhumitha Senthilvel
Álvaro Sicilia
Walter Terkaj
Seppo Törmä
Anna Wagner
Jeroen Werbrouck
Organising Committees

**LDAC COMMITTEE**

- Ana Roxin
  University of Burgundy

- Pieter Paourels
  Eindhoven University of Technology

- Marie Poveda Villalén
  Universidades Politécnicas de Madrid

- Jakob Beetz
  RWTH Aachen

- Kris McGlinn
  Trinity College Dublin

- Anna Wagner
  PROSTEP AG

**LOCAL ORGANISATION**

- Sylvain Kubicki
  Luxembourg Institute of Science and Technology (LU)

- Annie Guerriero
  Luxembourg Institute of Science and Technology (LU)

- Calin Boje
  Luxembourg Institute of Science and Technology (LU)

- Yacine Razgui
  Cardiff University (UK)

- Alain Zarli
  ECTP and R2M Solution (FR)
Proceedings

http://ceur-ws.org/Vol-2159/

http://ceur-ws.org/Vol-2389/

http://ceur-ws.org/Vol-2636/
Online publication

- maintained over time
- single location: linkedbuildingdata.net
- updated throughout workshop(s)

http://linkedbuildingdata.net/ldac2021/#programme
Wednesday 17 June (14:00 – 16:00)

A GIS-based Ontology for Representing the Surrounding Environment of Buildings to Support Building Renovation

Maryam Daneshifar, Timo Hartmann, and Jochen Rabe

Abstract: This research focuses on developing an ontology for representing knowledge about the surrounding environment of a building in an urban context, considering the geospatial objects and processes such as built environment, vegetation, population and so on. The ontology can be useful to create a knowledge management system for different experts involved in the process of the building renovation, to extend the information and stretch the domain from the individual building to the environment. Knowledge about what entities and attributes to select is captured based on literature and investigating the pilot demonstration sites. Such an ontology can help to structure the surrounding data to support processes in different stages of the renovation. The final goal is to support planners in decision making process namely in site planning and pre-data collection phase, energy modeling, comfort analysis and so on to control cost and quality. Moreover, it can be valuable in further studies of integrating data of various sources for construction purposes.

http://linkedbuildingdata.net/ldac2021/abstracts.html
LDAC2021 Programme and Practicals
Program Monday

13:30 - 14:00: LDAC 2021 introduction and opening

14:00 - 15:30: plenary session 1 (Kris McGlinn)
- Ontology-based anamnesis and diagnosis of natural stone damage for retrofitting
  Al-Hakam Hamdan, Peter Katranuschkov and Raimar Scherer
- Conversion of legacy domain models into ontologies for infrastructure maintenance
  Anne Göbels and Jakob Beetz
- Queries on Semantic Building Digital Twins for Robot Navigation
  Rens de Koning, Elena Torta, Pieter Pauwels, Bob Hendrikx and Marinus van de Molengraft

15:30 - 16:00: coffee break

16:00 - 17:00: plenary session 2 (Maria Poveda Villalon)
- TUBES System Ontology: Digitalization of building service systems
  Nicolas Pauen, Dominik Schlütter, Jérôme Frisch and Christoph van Treeck
- Real-Time Building Performance Monitoring using Semantic Digital Twins
  Alex Donkers, Dujuan Yang, Bauke de Vries and Nico Baken

[18:00 - 19:00: LDAC Committee meeting (closed)]
Program Tuesday

09:00 - 10:00: keynote by Ed Curry, Maynooth Univ & BDVA: From Data Platforms to Dataspaces: Enabling Data Ecosystems for Intelligent Systems

10:00 - 10:30: coffee break

10:30 - 12:30: plenary session 3 (Ana Roxin)
- A Linked Building Data Approach to Site Planning and Managing Temporary Construction Items
  Alexander Schlachter
- A Minimal Workflow for interacting with Federated Linked Building Data
  Jeroen Werbrouck, Pieter Pauwels, Jakob Beetz and Erik Mannens
- BPMN-related Ontology for Modeling the Construction Information Delivery of Linked Building Data
  Philipp Hagedorn and Markus König
- Ontological approach for LOD-based BIM-data management
  Janakiram Karlapudi, Prathap Valluru and Karsten Menzel

12:30 - 14:00: lunch

14:00 - 16:00: plenary session 4 (Jakob Beetz)
- Interoperability between BIM and GIS through open data standards: An overview of current literature
  Eyosias Guyo, Timo Hartmann and Lucian Ungureanu
- BIM Format conversion as alignment
  Pierre Bourreau and Jyrki Oraskari
- bcfOWL: A BIM collaboration ontology
  Oliver Schulz, Jyrki Oraskari and Jakob Beetz
- Evaluation of the strict semantics of owl:sameAs in the field of BIM GIS Integration
  Fritz Beck, Jimmy Abualdenien and André Borrmann

17:00 - 23:00: Social gathering and Guided Tour in Belval
Program Wednesday – Industry Track

09:00 - 10:15: CIB opening and keynotes

10:15 - 10:45: coffee break

10:45 - 12:30: LDAC Industry track 1 (Mads Holten Rasmussen)
   • Simplifying the delivery of ICDD containers based on the ISO-21597
     Manos Argyris, Amberg Group
   • Enabling Multi-scale Energy Modelling through a Linked-Data Approach
     James O'Donnell, Tobias Maile, University College Dublin
   • Ontology-based Building Energy System Commissioning and Monitoring
     Hervé Pruvost, Fraunhofer IIS EAS

12:30 - 13:45: lunch

13:45 - 15:15: LDAC Industry track 2 (Mads Holten Rasmussen)
   • Integration of Geotechnical Investigation and Quality Control processes in the BIM methodology for Infrastructures
     Gloria Calleja-Rodriguez, CEMOSA
   • Why Asset Data Must Be FAIR: The SiDO Case
     Jan Voskuil, Taxonic

Friday, 15:00-15:30: Closing and award ceremony
Abstract: Digital transformation is driving a new wave of large-scale datafication in every aspect of our world. Today our society creates data ecosystems where data moves among actors within complex information supply chains that can form around an organization, community, sector, or smart environment. These ecosystems of data can be exploited to transform our world and present new challenges and opportunities in the design of intelligent systems. This talk presents my recent work on using the dataspace paradigm as a best-effort approach to data management within data ecosystems. The talk explores the theoretical foundations and principles of dataspaces and details a set of specialized best-effort techniques and models to enable loose administrative proximity and semantic integration of heterogeneous data sources. Finally, I share my perspectives on future dataspace research challenges, including multimedia data, data governance and the role of dataspaces to enable large-scale data sharing within Europe to power data-driven AI.
Thank you