

4th VoCamp on “Integrating multiple domains and scales”

[La Salle Engineering and Architecture School](#)

Barcelona, 13-14 February 2014

General

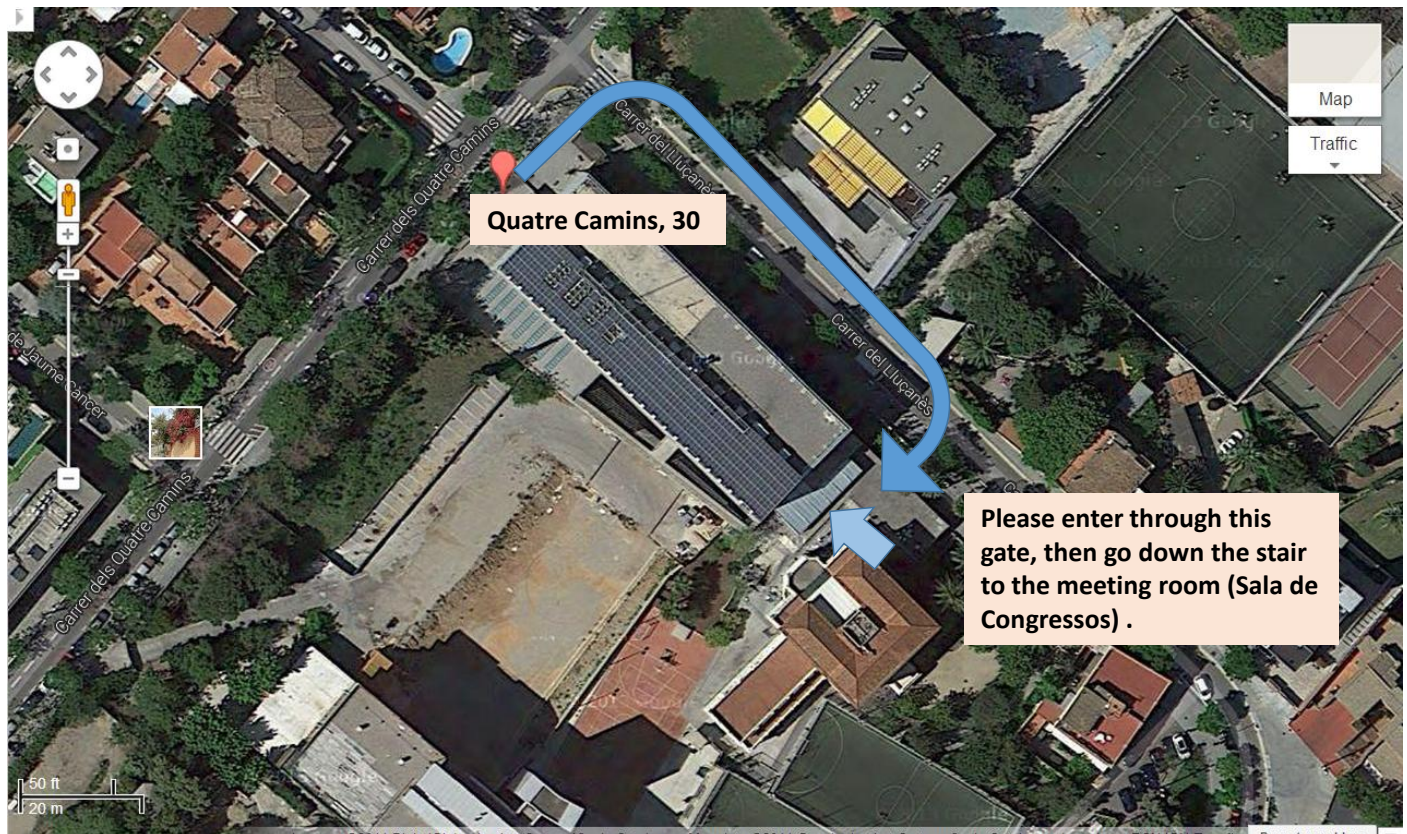
The 4th VoCamp of the series which are being carried out under the auspices of the European Commission will be organized by the FP7 research project [SEMANCO](#). To get more information about this workshop please contact Dr. Leandro Madrazo (madrazo@salleurl.edu), coordinator of the SEMANCO project.

Topic

This VoCamp will focus on the application of ontologies to integrate multiple domains and scales in order to develop models of urban energy systems which help different actors –urban planners, consultants, policy makers, dwellers– to take better informed decisions to reduce energy consumption and carbon emissions in urban environments. In this context, the construction of a shared vocabulary can be understood as a process by which the knowledge from the different experts participating in the definition and solution of a problem is formalized by means of the ontologies. Likewise, an urban energy system encompasses multiple scales which become intertwined as a result of the system’s activity. The relationships of system’s elements across scales can be also formalized by means of ontologies.

When and where

The 4th VoCamp will take place on Thursday 13th and Friday 14th of February 2014, at the Engineering and Architecture School La Salle Campus, Barcelona, Spain. Address: c/ Quatre camins, nº 30. Room: Sala de Congressos.



Program

The workshop will start with a presentation of the work carried out in the FP7 project [SEMANTCO “Semantic tools for carbon reduction in urban planning”](#) on the subject of this VoCamp. Two experts from the areas of urban energy systems and geographic information systems have been invited to deliver the keynote presentations.

Claus Nagel, MSc. is Head of Software Development at the company virtualcitySYSTEMS GmbH in Berlin, one of the leading experts in 3D spatial data infrastructures for smart cities based on the OGC Standard CityGML. Previously Mr. Nagel worked as research assistant at the Technische Universität Berlin where he finalized his PhD thesis on the spatio-semantic modelling of indoor environments for indoor navigation (in review). Mr. Nagel is co-chair of the CityGML Standards Working Group at OGC and has been involved in various R&D projects in the field of Urban Information Modelling including the analysis of interdependencies in critical multi-utility networks and energy assessment based on semantic 3D city models.

Koen van Dam, PhD, is research fellow at Imperial College London where he works on the Digital City Exchange project linking data and predictive models from multiple city systems. Previously he was at Delft University of Technology where he received his PhD for a thesis on the use of ontologies for the development of agent-based models of socio-technical infrastructure systems, including energy systems and supply chains.

The Vocamp is structured in two sessions: Modelling Urban Energy Systems and Integration of Multiple Data Sources. The topics in each session will become interrelated through the presentations and discussions. The common denominator in the issues addressed in the two sessions is the application of shared vocabularies/ontologies to formalize to integrate the multiple data, capture the knowledge of stakeholders and modelling an urban energy system. What we would like to explore in the VoCamp is the role of ontologies in the integration of the three domains: urban energy systems, data integration and visualization. Conclusions and recommendations will be elaborated in the last section of the program.

SESSION 1. Modelling Urban Energy systems (Facilitator: Koen van Dam): determining the boundaries and objectives of urban energy systems.

1. Accessing data to create urban energy systems models: inputs and outputs, interactions, determining scales and boundaries,
2. Multiple representations of the system dynamics: evolution over time, projections, updating data,...
3. Application information models to represent 3d objects (CityGML standard, and other)

SESSION 2. Integration of Multiple Data Sources (Facilitator: German Nemirovski): representing objects and properties in urban energy systems.

1. Creating models of urban energy systems using ontologies (ontology matching)
2. Integrating multiple data sources from different energy related domains
3. Application information models to represent 3d objects (CityGML standard, and other)

AGENDA

DAY 1: Thursday, February 13th, 2014

08:30 – 09:00	Reception of participants
09:00 – 09:30	Welcome <i>Leandro Madrazo, Coordinator SEMANCO project</i>
	Introduction to the VoCamp series <i>Dimos Ioannidis, ADAPT4ee/Ready4SmartCities projects</i>
	Presentation of the 4th VoCamp: objectives and structure <i>Leandro Madrazo</i>
09:30 – 09:45	Participants' introduction
9:45-10:00	Presentation of the SEMANCO project <i>Leandro Madrazo</i>
10:00 – 10:45	Using ontologies to store, share and apply city data in simulation models <i>Koen van Dam</i>
10:45 – 11:00	Discussion
11:00 – 11:30	Coffee break
11:30 – 12:15	Urban Information Modelling <i>Claus Nagel</i>
12:15 – 12:30	Discussion
12:30 – 13:00	Introduction to working sessions
13:00 – 14:00	Lunch break
14:00 – 15:30	SESSION 1 Modelling Urban Energy Systems <i>facilitated by Koen van Dam</i> Presentation of participants (10 minutes each) followed by discussion <ul style="list-style-type: none">- Leandro Madrazo (SEMANCO)- María Poveda-Villalón (Ready4SmartCities)- Vincenzo Corrado (SEMANCO)- Gonzalo Gamboa (SEMANCO)- Maja Skrjanc (NRG4Cast) Conclusions and final discussion
.	Coffee break
16:00 – 17:30	SESSION 2 Integration of Multiple Data Sources (part 1) <i>facilitated by German Nemirovski</i> Presentation of participants (10 minutes each) followed by discussion <ul style="list-style-type: none">- Markus Look (COOPERaTE)- Michel Böhms (Odysseus)- Tomi Rätty (VTT)- Luz Maria Priego-Roche (INRIA) Conclusions and final discussion
18:00	End of first day
21:00	Dinner at the city (optional)

DAY 2: Friday, February 14^h, 2014

09:00 – 10:30	SESSION 2 Integration of Multiple Data Sources (part 2) <i>facilitated by Claus Nagel</i> Presentation of participants (10 minutes each) followed by discussion <ul style="list-style-type: none">- Álvaro Sicilia (SEMANCO)- German Nemirovski (SEMANCO)- Maja Skrjanc (NRG4Cast)- Fabian Cretton Conclusions and final discussion
10:30 – 11:00	Coffee break
11:00- 13:00	WORKING SESSION <ul style="list-style-type: none">- Identifying and connecting ontologies across scales and domains- The role of ontologies to address the interoperability of data and tools- Strategies and recommendations based on good practices Conclusions
13:00	Lunch (optional)

PARTICIPANTS

Title	Name and last name	Institution	Project
Mr	Markus Look	RWTH Aachen University - Software Engineering, Germany	COOPeRaTE
Dr	Jean-Laurent Hippolyte	Cardiff University, UK	Resilient
Prof	Anna Osello	Politecnico di Torino, Italy	Dimmer
Dr	Thomas Liebich	AEC3, Germany	Ready4SmartCities
Dr	Michel Bohms	TNO, Netherlands	Odysseus
Prof	Asunción Gómez-Pérez	Universidad Politécnica de Madrid, Spain	Ready4SmartCities
Dr	Raúl García-Castro	Universidad Politécnica de Madrid, Spain	Ready4SmartCities
Mr	Alberto Abelló	Universitat Politècnica de Catalunya, Spain	Ready4SmartCities
Dr	Pieter Pauwels	Institute for Logic, Language and Computation (ILLC) University of Amsterdam (UvA), The Netherlands	
Dr	Matthias Weise	AEC3, Germany	
Dr	Jérôme Euzenat	INRIA & LIG, France	Ready4SmartCities
Mr	Bruno Fies	CSTB (French research center of the Building/Construction sector)	Odysseus
Mr	Dimosthenis Ioannidis	Center For Research and Technology Hellas / Information Technologies Institute	Ready4SmartCities
Mrs	María Poveda-Villalón	Ontology Engineering Group	Ready4SmartCities
Mr	Claus Nagel	virtualcitySYSTEMS GmbH	
Mr	Alexandre Cotting	HES-SO Valais, 3960 Sierre, Switzerland	
Dr	Tomi Rätty	VTT - Technical Research Centre, Finland	
Dr	Leandro Madrazo	Engineering and Architecture School La Salle (FUNITEC), Spain	SEMANCO
Mr	Álvaro Sicilia	Engineering and Architecture School La Salle (FUNITEC), Spain	SEMANCO
Mrs	Luz Maria Priego-Roche	INRIA, France	
Prof	German Nemirovski	Albstadt-Sigmaringen University, Germany	SEMANCO
Mr	Fabian Cretton	High Schools of Switzerland - HES-SO Valais, Switzerland	
Dr	Koen van Dam	Imperial College London, UK	
Mrs	Maja Skrjanc	Josef Stefan Institute, Slovenia	NRG4Cast
Mr	Kerem Beygo	Istanbul Technical University, Faculty of Architecture, Department of Urban and Regional Planning, Turkey	
Prof	Vincenzo Corrado	Politecnico di Torino, Italy	SEMANCO
Dr.	Gonzalo Gamboa	CIMNE, Spain	SEMANCO
	Charbel El Kaed	Schneider Electric, Strategy & Innovation	
Mr.	Bejay Jayan	Cardiff University	
Mr.	Gonçal Costa	Engineering and Architecture School La Salle (FUNITEC), Spain	
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Mrs.	Anna Florea	Tampere University of Technology, FAST.-Lab	URB-Grade
Mr.	Ammar Aljer	"University of Lille 1 Politech-Lille Engineering school LGCgE Laboratory"	