



# **muse**

**Visualizing the origins and connections of institutions based on co-authorship of publications**

**“ Studies have shown geographic proximity is important and does positively influence the intensity and frequency of scientific collaboration.**

J.S. Katz. Geographical Proximity and Scientific Collaboration. *Scientrometrics*, Vol. 31, No.1 (1994)

# Institution collaboration

- Proximity

Easier to have meetings / work in person

- Cultural similarities

Same language, historical reasons

- Former collaboration

Colleagues, advisors, students, prior projects, ...

# Overview

- Publication data (EC-TEL)
- Spatial data analysis
- Visualizations
- Interactions
- Collaborative and participative installation

**EC-TEL data**

## Top countries (based on papers)

country	papers
Germany	89
United Kingdom	45
France	38
Netherlands	35
Spain	35
Italy	28
Austria	25
United States	15
Switzerland	15
Canada	14
Belgium	13
Greece	11

## Top countries (based on authors)

country	authors
Germany	163
Spain	93
United Kingdom	92
France	83
Netherlands	53
Italy	48
Austria	37
Greece	28
Canada	27
United States	25
Switzerland	23
Finland	19
Belgium	17
Sweden	13

# Top institutions (based on papers)

count	name
10	Know-Center
8	German Research Center for Artificial Intelligence (DFKI)
7	L3S Research Center and University of Hanover
7	Dept. Computerwetenschappen, Katholieke Universiteit Leuven
6	Fraunhofer Institute for Applied Information Technology
6	KOM - Multimedia Communications Lab, Technische Universität Darmstadt
5	FON, School of Business Administration, University of Belgrade
5	OUNL – Open University of the Netherlands
5	Faculty of Mathematics and Computer Science, Eindhoven University of Technology (TU/e)
4	Ecole Polytechnique Fédérale de Lausanne
4	Laboratoire Informatique de Grenoble
4	Educational Technology Expertise Centre, Open University of the Netherlands
4	Department of Computer Science, The University of Warwick
4	Knowledge Media Research Center
4	Institute of Informatics and Software Engineering, Faculty of Informatics and Information Technologies,
4	Graz University of Technology, Knowledge Management Institute
4	University of Vienna, Center for Teaching and Learning
4	Giunti Interactive Labs S.r.l.
3	Katholieke Universiteit Leuven

# Collaboration based on co-authorship

country	country	count
DE	IT	15
DE	NL	12
DE	AT	11
DE	GB	11
IT	DE	9
DE	GR	8
DE	CH	8
CA	RS	8
DE	BE	7
GB	DE	6
AT	GB	6
GB	AT	6
NL	DE	6
IT	NL	5

# Data harvesting

Acquire and aggregate publication data

## View Related Documents

- Book Chapter  
Demands of Modern PLEs and the ROLE Approach Uwe Kirschenmann
- Book Chapter  
Improving the Use of Strategies in Computer-Supported Collaborative Processes César A. Collazos
- Book Chapter  
Intrinsic Geometric Modeling
- Book Chapter  
Searching for Rising Stars in Bibliography Networks Xiao-Li Li
- Book Chapter  
GWT UI Components

## COMPUTER SCIENCE

## SUSTAINING TEL: FROM INNOVATION TO LEARNING AND PRACTICE

Lecture Notes in Computer Science, 2010, Volume 6383/2010, 590-595, DOI: 10.1007/978-3-642-16020-2\_59



## Components of a Research 2.0 Infrastructure

Thomas Daniel Ullmann, Fridolin Wild, Peter Scott, Erik Duval, Bram Vandeputte, Gonzalo Parra, Wolfgang Reinhardt, Nina Helzlsouer, Peter Kraker and Angela Fests, et al.

Download PDF (392.2 KB)

Look Inside

Permissions &amp; Reprints

REFERENCES (8)

EXPORT CITATION

ABOUT

*Abstract*

In this paper, we investigate the components of a Research 2.0 infrastructure. We propose building blocks and their concrete implementation to leverage Research 2.0 practice and technologies in our field, including a publication feed format for exchanging publication data, a RESTful API to retrieve publication and Web 2.0 data, and a publisher suit for refining and aggregating data. We illustrate the use of this infrastructure with Research 2.0 application examples ranging from a Mash-Up environment, a mobile and multitouch application, thereby demonstrating the strength of this infrastructure.

**Keywords** research 2.0 - infrastructure - mash-ups - #Res2TEL

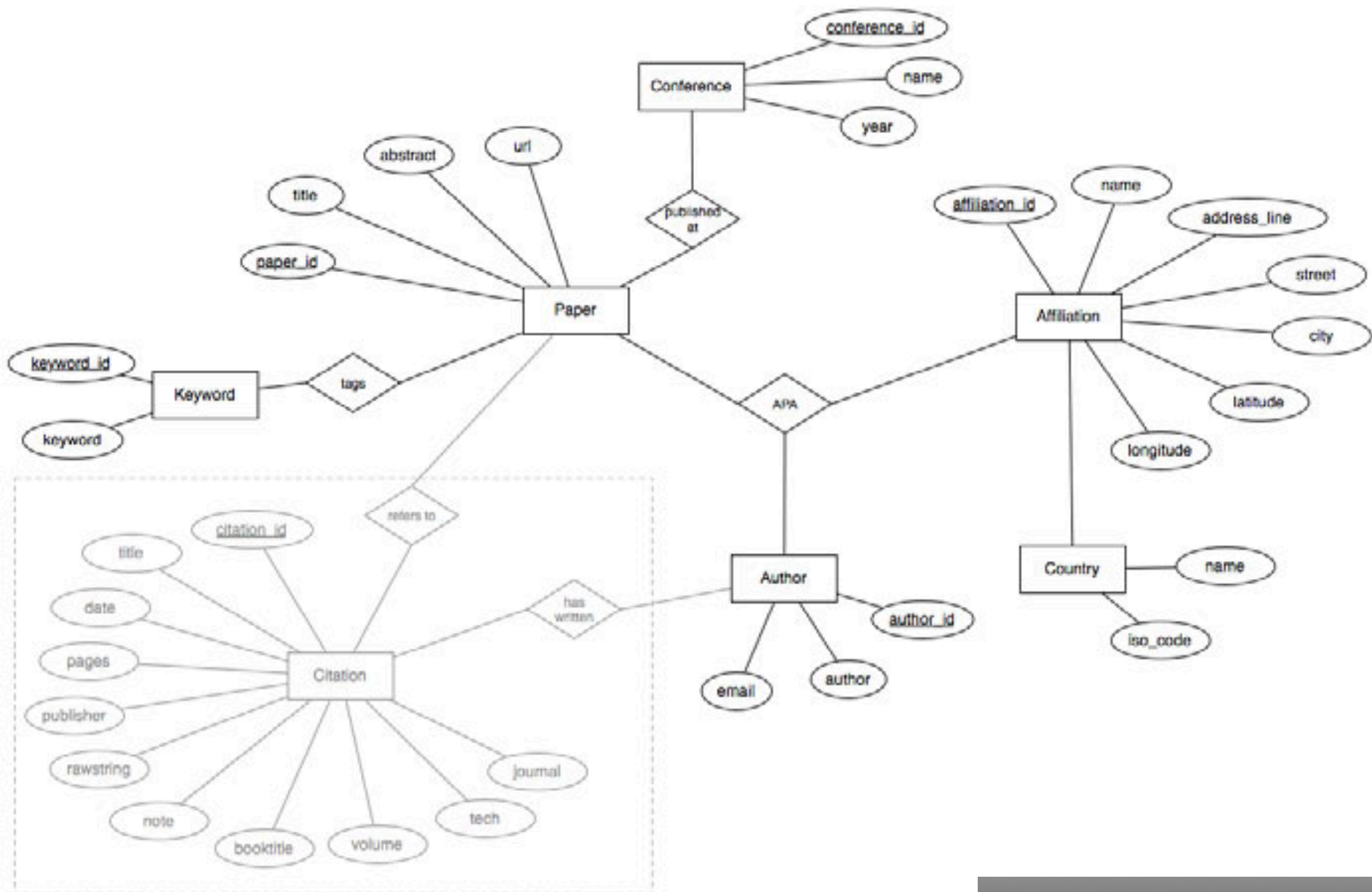
*Fulltext Preview*

Title	Components of a Research 2.0 Infrastructure
Authors	Thomas Daniel Ullmann <sup>(1)</sup> Fridolin Wild <sup>(1)</sup> Peter Scott <sup>(1)</sup> Erik Duval <sup>(2)</sup> Bram Vandeputte <sup>(2)</sup> Gonzalo Parra <sup>(2)</sup> Wolfgang Reinhardt <sup>(3)</sup> Nina Heinze <sup>(4)</sup> Peter Kraker <sup>(5)</sup> Angela Fessl <sup>(5)</sup> Stefanie Lindstaedt <sup>(5)</sup> Till Nagel <sup>(6)</sup> Denis Gillet <sup>(7)</sup>
Author Affiliations	<ol style="list-style-type: none"><li>1. KMi, The Open University, Walton Hall, Milton Keynes, United Kingdom</li><li>2. Departement Computerwetenschappen, Katholieke Universiteit Leuven, Leuven, Belgium</li><li>3. Computer Science Education Group, University of Paderborn, Fürstenallee 11, 33102 Paderborn, Germany</li><li>4. Knowledge Media Research Center, Konrad-Adenauer-Straße 40, Tuebingen, Germany</li><li>5. Knowledge Management Institute, Know-Center and Graz University of Technology, Austria</li><li>6. Fachhochschule Potsdam, Potsdam, Germany</li><li>7. Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland</li></ol>

Title	Components of a Research 2.0 Infrastructure
Authors	Thomas Daniel Ullmann <sup>(1)</sup> Fridolin Wild <sup>(1)</sup> Peter Scott <sup>(1)</sup> Erik Duval <sup>(2)</sup> Bram Vandeputte <sup>(2)</sup> Gonzalo Parra <sup>(2)</sup> Wolfgang Reinhardt <sup>(3)</sup> Nina Heinze <sup>(4)</sup> Peter Kraker <sup>(5)</sup> Angela Kollmann <sup>(5)</sup> Stefanie Lindstaedt <sup>(5)</sup> Till Nagel <sup>(6)</sup> Denis Gillet <sup>(7)</sup>

**Just look at your EC-TEL badge!**

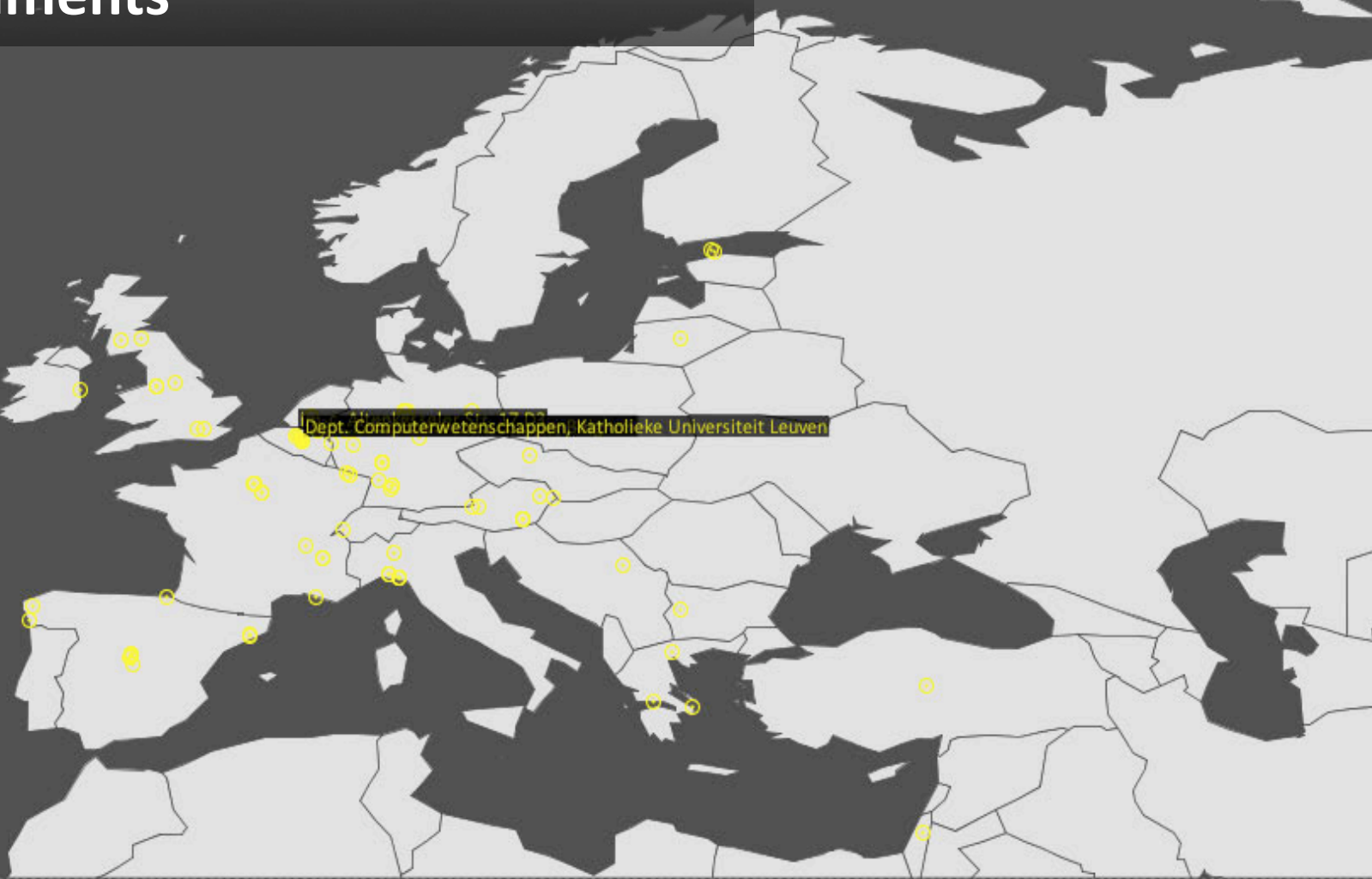
Author Affiliations	<ol style="list-style-type: none"><li>1. KMi, The Open University, Walton Hall, Milton Keynes, United Kingdom</li><li>2. Departement Computerwetenschappen, Katholieke Universiteit Leuven, Leuven, Belgium</li><li>3. Computer Science Education Group, University of Paderborn, Fürstenallee 11, 33102 Paderborn, Germany</li><li>4. Knowledge Media Research Center, Konrad-Adenauer-Straße 40, Tuebingen, Germany</li><li>5. Knowledge Management Institute, Know-Center and Graz University of Technology, Austria</li><li>6. Fachhochschule Potsdam, Potsdam, Germany</li><li>7. Ecole Polytechnique Federale de Lausanne (EPFL), Lausanne, Switzerland</li></ol>
---------------------	---



# Visualization

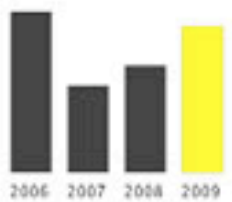
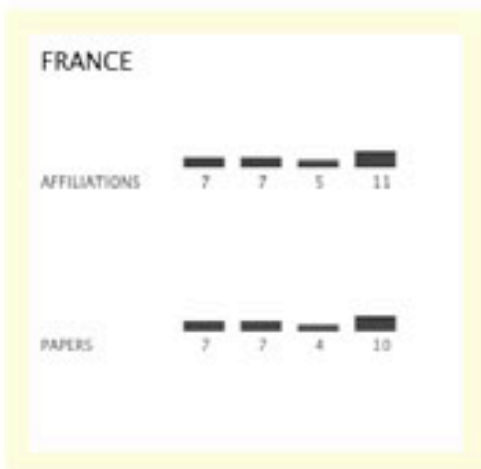


# Experiments

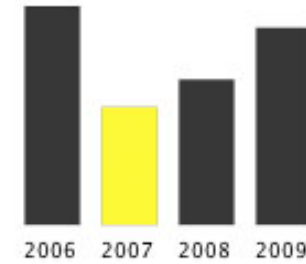
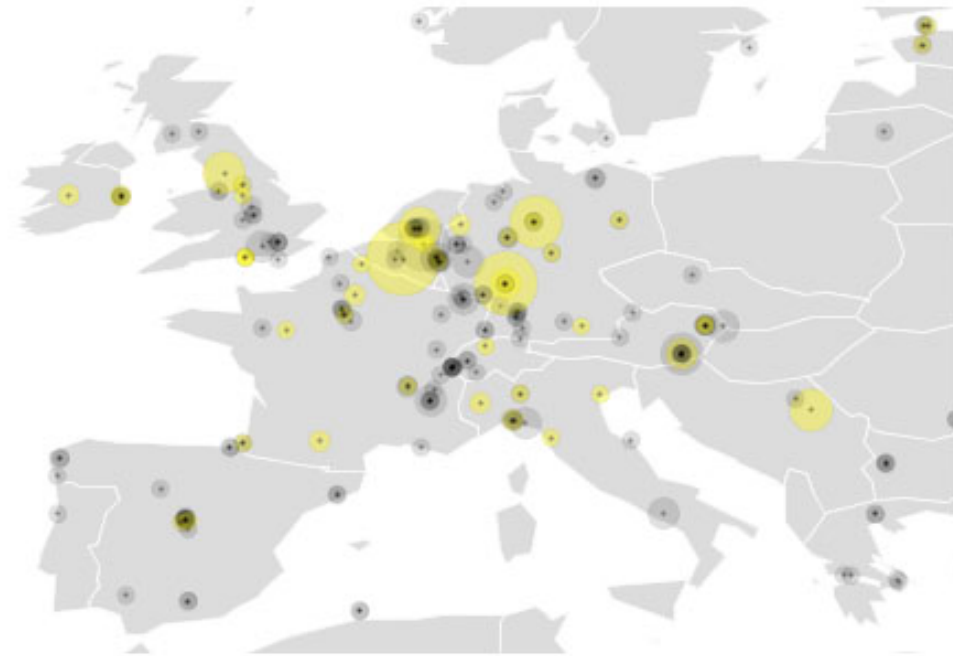
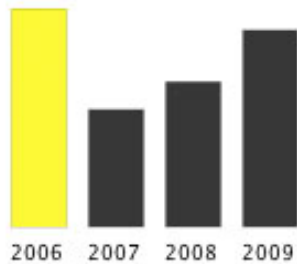
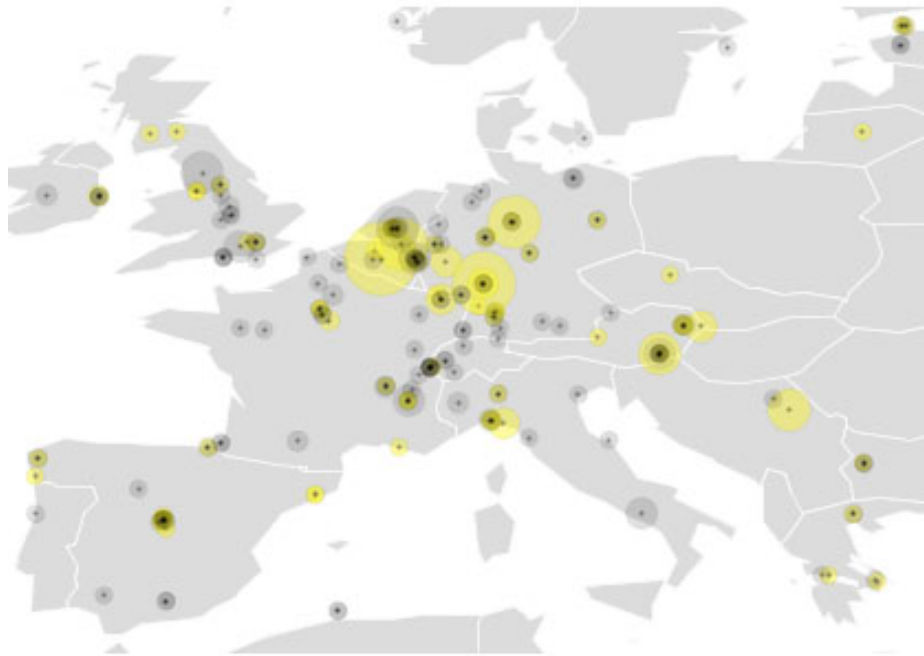


# Muse - first prototype

- .. ALGERIA
- .. AUSTRALIA
- ... AUSTRIA
- ... BELGIUM
- .. BRAZIL
- .. BULGARIA
- ... CANADA
- .. CHINA
- .. CZECH REPUBLIC
- .. DENMARK
- ... EQUADOR
- .. ESTONIA
- ... FINLAND
- ... FRANCE
- ... GERMANY
- ... GREECE
- .. IRELAND
- .. ISRAEL
- ... ITALY
- .. JAPAN
- .. KOREA, REPUBLIC OF
- .. LITHUANIA
- .. MEXICO
- ... NETHERLANDS
- .. NEW ZEALAND
- .. NORWAY
- .. PAKISTAN
- .. PORTUGAL
- ... REPUBLIC OF SERBIA
- .. ROMANIA
- .. SLOVAKIA
- ... SLOVENIA
- ... SPAIN
- .. SWEDEN
- ... SWITZERLAND
- .. TAIWAN, PROVINCE OF CHINA
- .. TURKEY
- .. UNITED ARAB EMIRATES
- ... UNITED KINGDOM
- .. UNITED STATES



# Time-based data: Conference years



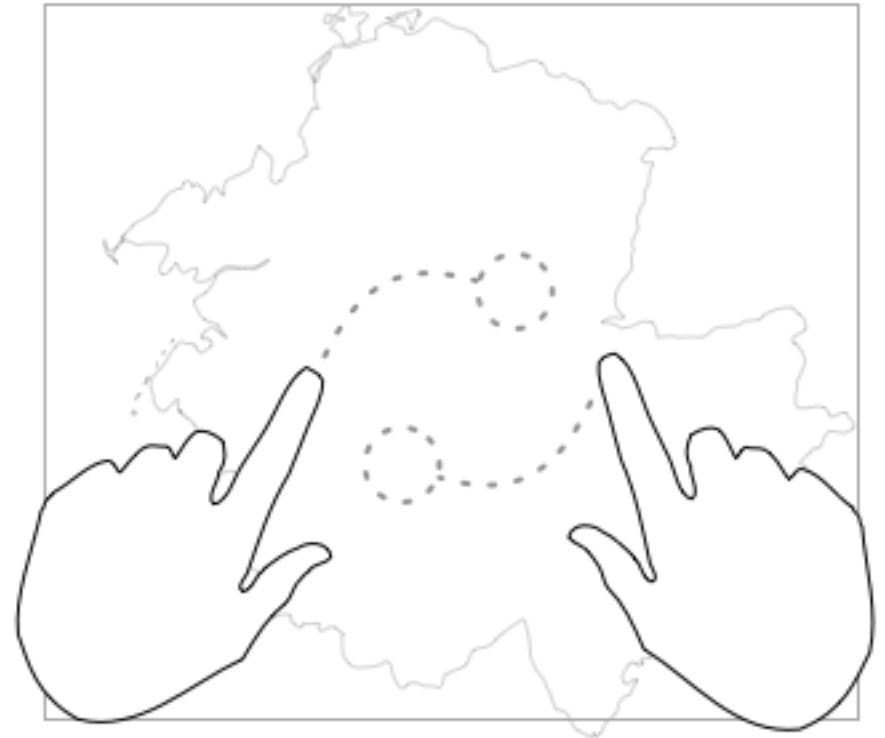
# Interaction

Overview & Detail, Select & Filter

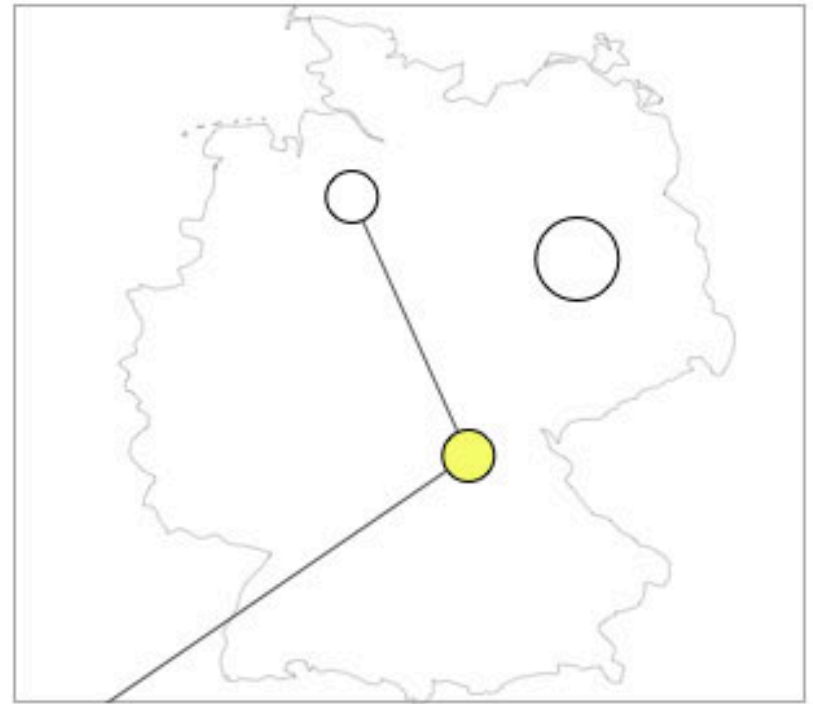
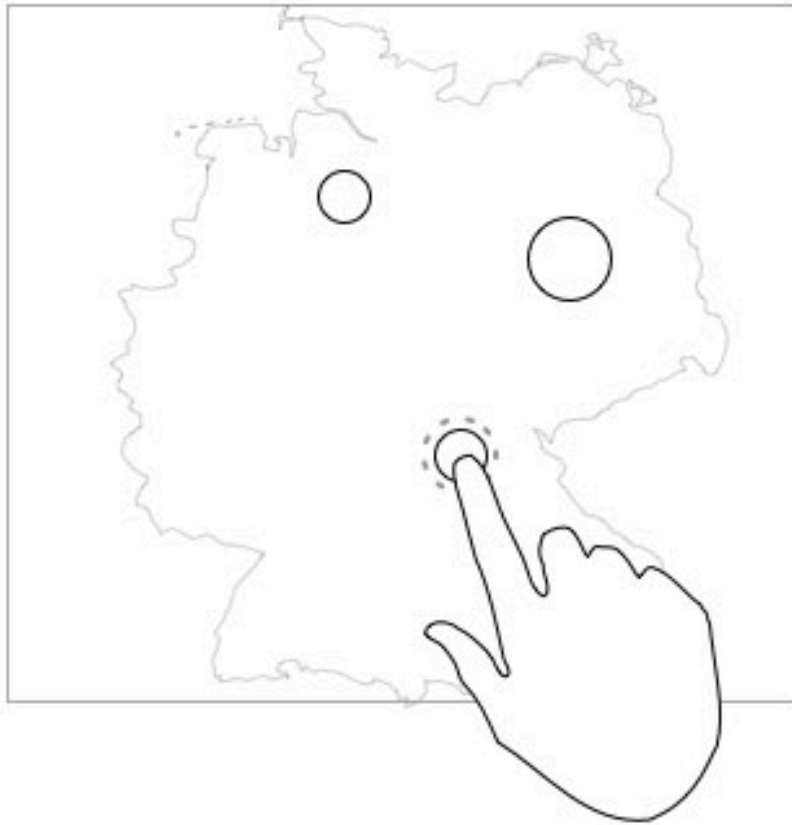
# Pan



# Zoom & Rotate



# Tap to select



# Hints for non-obvious interactions



**Prototype**

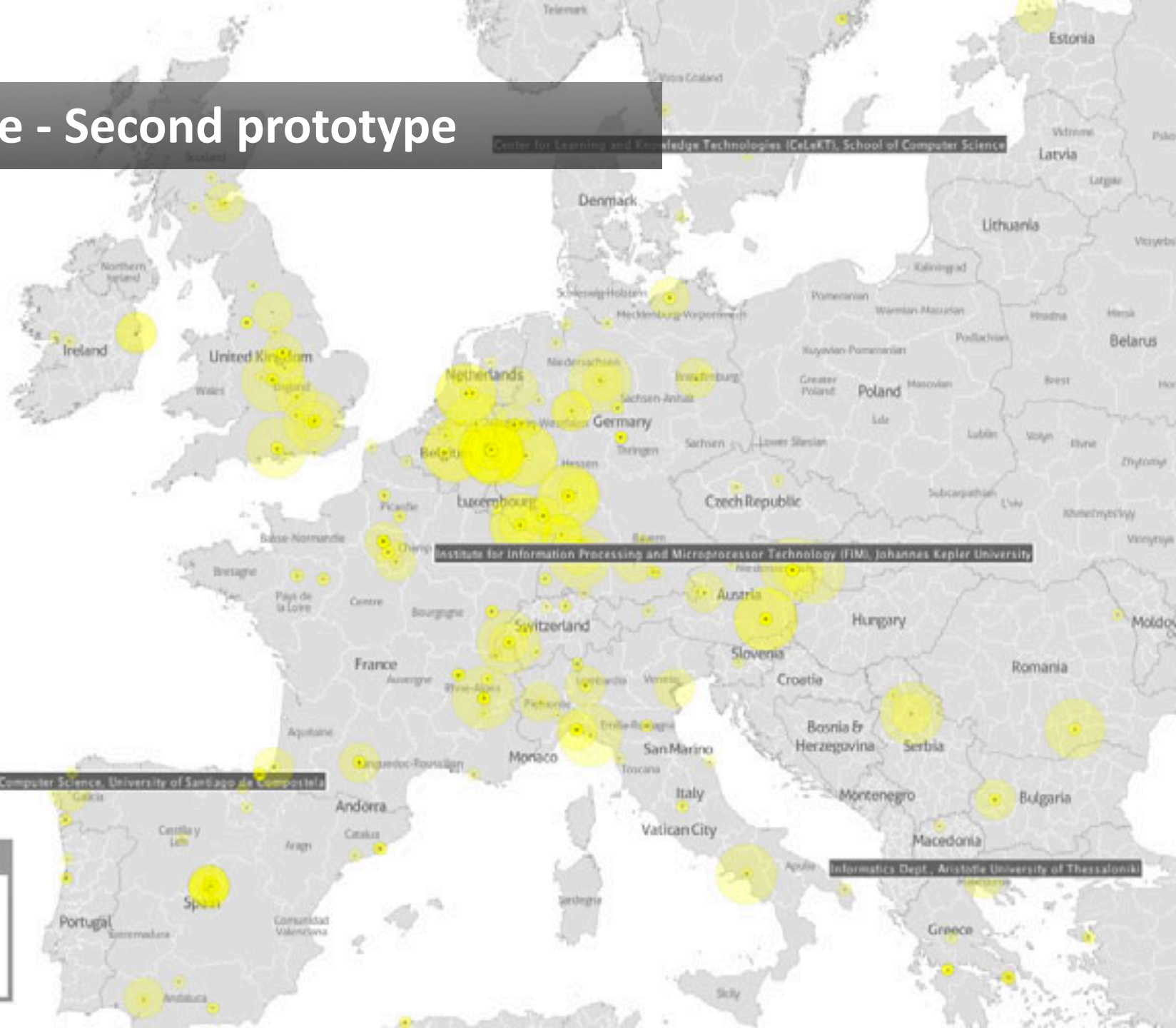


**muse on interactive table**



**muse at EC-TEL 2010**

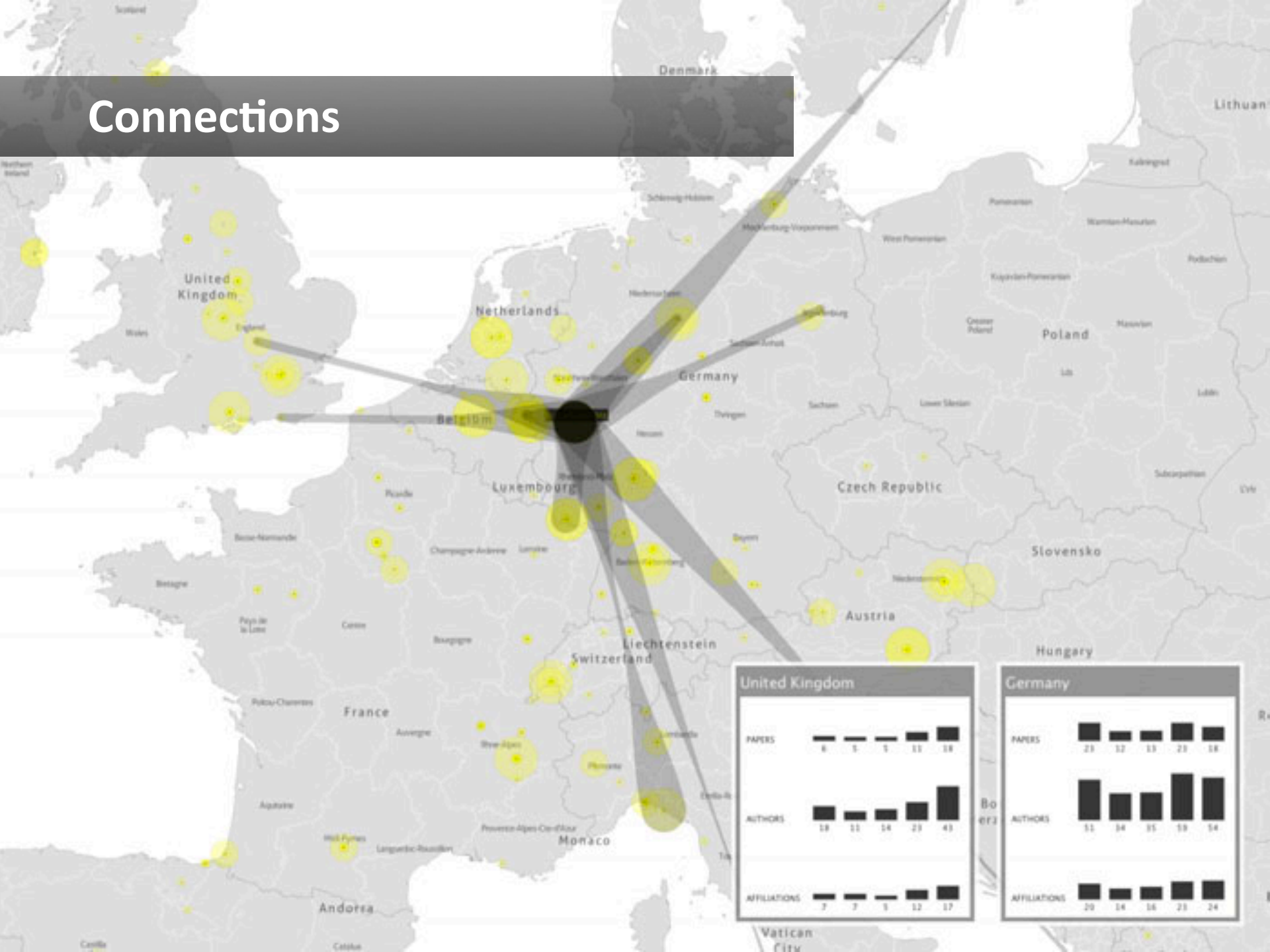
# Muse - Second prototype



Number of papers



# Connections



# Connections



# Outlook

- Formative evaluation
- Ongoing iterative development of muse
- Usage of BuRST data and the pub.fm API
  
- Suitability for other domains
- Feedback & learnt lessons

# Thank you! Questions?