JeDEM 8(2): i-iv, 2016
ISSN 2075-9517
http://www.jedem.org

Editorial

Thomas J. Lampoltshammer*, Michael Leitner**, Noella Edelmann*

*Department for E-Governance and Administration, Danube University Krems, Dr.-Karl-Dorrek-Straße 30, 3500 Krems, Austria. Email: {thomas.lampoltshammer|noella.edelmann@donau-uni.ac.at}

**Louisiana State University, E-104 Howe-Russell-Kniffen Geoscience Complex, Baton Rouge, LA 70803, USA. Email: {meitne@lsu.edu}

JeDEM Vol 8, No 2 (2016)

Welcome to this issue, comprising the submissions to the special issue on "Open and Visual Access to Information" at the Journal of E-Democracy and Open Government.

Today, data-driven approaches influence all aspects of daily life. The fast and effective handling of these data is a crucial point of keeping our society working. Yet, the sheer amount of data being produced even at this very moment is often too big to be interpreted and understood in a correct and timely fashion. It is this complexity and criticality that renders the usability and accessibility of data and the inherent information even more important. This becomes even more obvious, when considering that most of today's approaches to data analytics and interpretation focus on experts and their requirements rather than on non-experts. This does not only lead to a limitation regarding the usefulness of data but also critically impacts the foundations of our society regarding open access to data and information - data democracy so to say.

At the same time, citizens are demanding more access to information and transparency regarding their data handling and want to use new data based services. Yet, only opening data and providing tools to interact with them does not automatically lead to new knowledge or understanding. Efforts to open the meaning of information by introducing new access layers, such as visual representations, as an easier interface to hardly readable texts and numbers, are also gaining in popularity. Still, these efforts are risking to introduce new problems as well: Opening information with a multitude of different technologies can create a new tower of Babel, whereas visualizing information with different techniques is inevitably highlighting certain parts or meanings of this information and "low-lighting", so to say, others.

As experience accumulates, it becomes clear that open and/or visual access to information cannot effectively be treated as an add-on, which comes of interest only after this information has been produced. On the contrary, open/visual access requirements ideally need to pervade the entire information life-cycle, from final dissemination up to initial design. In this respect, design of

 CC: Creative Commons License, 2016.

information emerges as an issue on its own right, especially under the need to guide design processes by provisions for the openness and visualization ability of the information finally produced. This need, at the same time, creates important echoes for the eventual (re)design of large corpora of information that already exist.

Scassa & Diebel (2016), for example, evaluate in their paper " Open or Closed? Open Licensing of Real-time Public Sector Transit Data" how real-time data are made available as "open data" using municipal transit data as a case study. Many transit authorities in North America and elsewhere have installed technology to gather GPS data in real-time from transit vehicles. These data are in high demand in app developer communities because of their use in communicating predicted, rather than scheduled, transit vehicle arrival times. While many municipalities have chosen to treat real-time GPS data as "open data", the nature of real-time GPS data requires a different mode of access for developers than what is needed for static data files. This, in turn, has created a conflict between the "openness" of the underlying data and the sometimes-restrictive terms of use which govern access to the real-time data through transit authority Application Program Interfaces (APIs). The authors explore the implications of these terms of use and consider whether real-time data require a separate standard for openness. Scassa & Diebel see a potential impact for these implications regarding open real-time data in the emerging 'smart cities' environment.

Staying in the domain of smart cities and its emerging open data, Degbelo et al. (2016) study in their paper the design of a semantic API for open city data. Many countries currently maintain a national data catalog, which provides access to the available data-sets – sometimes via an API. These APIs play a crucial role in realizing the benefits of open data as this is the way how data are discovered and accessed by applications that make use of them. The authors propose semantic APIs as a way of improving access to open data. A semantic API helps to retrieve datasets per their type (e.g., sensor, climate, finance), and facilitates reasoning about and learning from data. Several categories of open datasets from 40 European open data catalogs were examined to gather insights into types of datasets which should be considered while building semantic APIs for open government data. The results show that the probability of inter-country agreement between open data catalogs is less than 30 percent, and that few categories stand out as candidates for a transnational semantic API. Degbelo et al. furthermore stress the need for coordination - at the local, regional, and national level - between data providers of Germany, France, Spain, and the United Kingdom.

While accessibility of data is for sure an important aspect, visualization and improvement of comprehensibility is as well. Gupta, Sampat, Sharma & Rajamanickam (2016) focus in their paper on the visualization of election data via interaction design and visual discovery for communicating complex insights. State elections results in India yield variegated and unique set of insights. Often it is hard to grasp the nuances of local electoral dynamics, and harder to communicate it to an audience not deeply engaged in the local political process, or to an audience from outside the state. While national news outlets do a good job of analyzing and communicating federal elections, state elections in contrast have largely remained devoid of rigorous analysis and insightful communication. Gupta, Sampat, Sharma & Rajamanickam therefore used data from the assembly elections that took place in the state of Tamil Nadu in May 2016 to develop a process and a set of interaction design and visualization methods to present inherent complex insights. Gupta, Sampat, Sharma & Rajamanickam see the developed principles not only as a support for analysts and journalists to

 CC: Creative Commons License, 2016.

present their insights more effectively, but also as empowerment for potential readers, depending on their level of interest and civic engagement, to go beyond what is presented and to discover new insights for themselves.

Finally, Windhager, Mayr, Schreder & Smuc (2016) demonstrate in their paper, how linked information visualization techniques can be applied to linked open government data. Open government data initiatives provide citizens with access to the knowledge that governments have about their countries (such as data about people, resources, infrastructure, or services) upon which they act. Information visualizations can help to make sense of these complex data and knowledge collections, but are mostly used to shed light on sub-selections of data only, without coordinated efforts to connect them to bigger pictures up to now. In analogy to linked data initiatives, Windhager, Mayr, Schreder & Smuc discuss methods and strategies to link information visualizations in the government data realm and thereby to connect widely available local pictures and insights into more coherent global mental models. The authors see their suggested approach to support communication professions like civic education and political journalism, as well as to open enhanced methods for cross-domain exploration and reasoning for (linked) open government data.

We carefully prepared this issue of JeDEM through our rigorous review process and hope you find this issue as inspiring and interesting as we do. Maybe you would like to submit a paper to JeDEM too? We look forward to hearing from you!

References

Scassa, T., & Diebel, A. (2016). Open or Closed? Open Licensing of Real-time Public Sector Transit Data. JeDEM-eJournal of eDemocracy and Open Government, 8(2), 1-20.

Degbelo, A., Trilles, S., Kray, C., Bhattacharya, D., Schiestel, N., Wissing, J., & Granell, C. (2016). Designing Semantic Application Programming Interfaces for Open Government Data. JeDEM-eJournal of eDemocracy and Open Government, 8(2), 21-58.

Gupta, K., Sampat, S., Sharma, M., & Rajamanickam, V. (2016). Visualization of Election Data: Using Interaction Design and Visual Discovery for Communicating Complex Insights. JeDEM-eJournal of eDemocracy and Open Government, 8(2), 59-86.

Windhager, F., Mayr, E., Schreder, G., & Smuc, M. (2016). Linked Information Visualization for Linked Open Government Data: A Visual Synthetics Approach to Governmental Data and Knowledge Collections. JeDEM-eJournal of eDemocracy and Open Government, 8(2), 87-115.

About the Author

Noella Edelmann

Noella Edelmann is a researcher at the Center for E-Governance at the Danube University, her main research interests are the psychological aspects of behaviour and communication on the internet, eparticipation and Open Access. Besides conducting research, Noella is Co-chair of the Conference for Edemocracy and Open Government (CeDEM) and Managing Editor of the international Open Access eJournal

 CC: Creative Commons License, 2016.

for E-Democracy and Open Government (JeDEM). She completed her Psychology and English Literature Degree at the University of Strathclyde and Master's Degrees at the University of London and the Danube University Krems.

Thomas J. Lampoltshammer

Thomas J. Lampoltshammer holds a doctoral degree in Applied Geoinformatics in addition to his Master's degrees in the fields of Information and Communication Technology, Embedded and Intelligent Systems, as well as in Adult Education. Prior to his current position, he has worked as a Researcher and Lecturer in Applied Informatics at the School of Information Technology and Systems Management at the Salzburg University of Applied Sciences Salzburg/Austria. His research experience covers national and EU-funded projects in ICT-related topics, such as Geoinformatics, Semantics, Social Media, Legal Informatics, and Open Data. He has a strong background in the design and implementation of expert and decision-making systems, data analytics, as well as semantic-based reasoning.

Michael Leitner

Michael Leitner is a Full Professor in the Department of Geography and Anthropology at Louisiana State University in Baton Rouge, USA. He received his B.A. (1987) and M.A. (1990) degrees in geography and cartography from the University of Vienna, Austria and a second M.A. (1993) and Ph.D. (1997) degrees in Geographic Information Systems (GIS) and computer cartography from the Department of Geography at the State University of New York at Buffalo, USA. His main research interests are in geospatial visual analytics, geospatial privacy, and the research and application of Geographic Information Science and Technology (GISc & T) to public safety, public health, disaster management, and forensic analysis.

 CC: Creative Commons License, 2016.