Leipzig Data – the „Building Plan of the Leipzig House“

Presented at LSWT-18

https://www.leds-projekt.de/lswt2018.html

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The Netzprojekt – Networks and Social Collaborative Tools

- Long term low budget project to promote Semantic Web infrastructure development at different levels.
- In several aspects it relates to the data cemeteries left by short term high budget projects as heritage.
- "Long term low budget" means rare project funding; the main personal resources come from different teaching activities (seminars, practices, small students' projects).
- Leipzig-data.de is part of these efforts.

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Motivation

- Increasing role of cooperative forms of practice, where *independent* actors with *heterogeneous motivations* and backgrounds cooperate in *collaborative* structures.
- Such structures – networks – can be observed on different levels of social stratification;
  - territorially stratified at transnational, national, regional and communal levels,
  - structured by profession or by concern as, e.g., in modern science in a strict sense
  - or in the wider area of reproduction of the knowledge base of our society at large.

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Motivation

- Also in the business area the increasing importance of such structures compared to classical producer consumer relations can be observed both in the mass market ("Nachfragestruk-turen" in German, to avoid the word "consumer").

- Even in the management area, the classical area of hierarchi-cal structures organized by the principles of personalized leadership and responsibility, network structures together with reevaluation of elements of self-definition and self-development are advancing.

- To put it in one sentence, we address the relationship between forms of practice, of thinking and of knowledge organization within the ongoing "digital transformation processes".

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The Focus

- The **target** of our investigations and activities are the theoretical and practical dimensions of the ongoing transformation processes towards a "knowledge society".

- This requires an interdisciplinary approach linking together specialists in human sciences and computer scientists, i.e.

  - "hard core computer specialists" that understand the technical aspects of "social collaborative tools" on a sufficient detailed level, but also

  - specialists in the different application areas, that understand the technical aspects of the application area on a sufficient detailed level.

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The Focus

- Such a linkage **requires computer scientists** that have a view on computer science
  - not restricted to a "science about the systematic processing of informations – in particular about the automated processing of data using digital devices" (Duden Informatik),
  - but understand computer science as the "technological aspect of thinking" (Buchberger) and thus also as part of humanities without neglecting the technological aspects of their profession.
- The project focuses on **three big aspects**.

The Big Aspects

(1) A detailed analysis of the **increasing importance of infrastructural aspects** that can be observed within the ongoing transformation processes.

- The reproduction of infrastructure is increasingly an important condition of welfare and economic activities.
- That can be observed in both the private (customer and supply chain management, quality aspects, product lines) and also public domains.
- Typically, in both spheres evolve cooperative forms of practices, where independent actors with heterogeneous motivations and backgrounds are acting together in a collaborative way.

The Big Aspects

(2) A thorough analysis and classification **of the standards and the social and technical tools**, that are used within the organization of such collaborative structures.

- Open source approaches, new business models.
- Decentralized operating infrastructures without classical separation in "producers" and "consumers".
- Coherence, standardization and usage of compatible tools as essential prerequisites and aspects.
- Homogenization on the one side and free access without or with only small barriers as functional prerequisites for networking
- Economic conditions where the allocation of resources cannot be treated within classical frameworks of return on investment.

The Big Aspects

(3) The joint development and improvement of corresponding approaches and tools in selected areas of **Linked Open Data**.

- We practically contribute to the ongoing worldwide distributed development processes of the required tools and concepts addressed in (2) both
  - for gaining practical experience and input and
  - to contribute to the development of a common socio-technical infrastructure.

To contribute to the development and implementation of such a sustainable socio-technical Open Data infrastructure and to systematize experiences of best practices within the Leipzig region is the main focus of the Leipzig Data Project.

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Leipzig Data – Towards a Living Local Open Data Infrastructure

Ingredients:

(1) Semantic Web:
UTF-8, RDF, RDF Data Stores, SPARQL Endpoints etc.

(2) The building plan of the Leipzig house:
Commonly used URIs as textual representations of (all) important real players and things in the local environment. This is more a *social* than a technical challenge.

(3) Sustainably organized **data actualization processes:**
This is a big *political* challenge.

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Leipzig Data – Towards a Living Local Open Data Infrastructure

(1) Semantic Web:

- leipzig-data.de Wordpress based Website,
- ld: = leipzig-data.de/Data/Model/ namespace prefix
- leipzig-data.de RDF Data Store and SPARQL Endpoint
- github.com/leipzigdata – github organizational account

(2) The building plan of the Leipzig house:

- 65000 addresses (from the API Leipzig Project)
- Administrative structure
- Schools, universities, academic institutions
- Associations, enterprises
- Places and events
- Structure of the municipal administration

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Leipzig Data – Towards a Living Local Open Data Infrastructure

(3) Sustainably organized **data actualization processes:**

- 2010-2012: *API Leipzig*, EU funded until spring 2012 within „Creative Cities“ (Leipzig municipality, Aufbauwerk Leipzig). Sources at github. Project currently dead.
- 2012-2013: *Open Innovation*, short term project, funded within the same frame.
  - „… wie Sie ja schon selbst festgestellt haben, ist unser Projekt Open Innovation nicht auf die Resonanz gestoßen, die wir uns erhofft haben. Insbesondere aus Sicht der Unternehmen sind die Reaktionen sehr zurückhaltend. Insofern werden wir für dieses Thema auch keine weiteren Ressourcen zur Verfügung stellen können. Ich bitte hierfür um Verständnis.“

Leipzig Data – Towards a Living Local Open Data Infrastructure

(3) Sustainably organized **data actualization processes:**

- 2014: OpenData-OpenGovernment conception passed the council board.
  - Die Ratsversammlung nimmt das „Open Data“ Rahmenkonzept und somit die weiteren Schritte der Arbeitsgruppe „Open Data“ für das Jahr 2014 zur Kenntnis.
- 2018: Open Data Portal of the Leipzig municipality (700 datasets, 547 jpg, 130 csv, 0 rdf)
  - No strategy to maintain a qualitative set of URIs.
- Leipzig/Halle Open Streetmap community
- Since 2014: OK Lab and Codefor.de/leipzig
- Leipziger-ecken.de, a community project „Leipziger Osten“
- Nachhaltiges-leipzig.de, a community project within BNE and MINT