## Dirk Wintergrün

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## SUMMARY

My main focus on developing, coordinating and managing digital projects which support research in the history of science. I am researching the implication digital tools have on the work of the scholar in the field and which tools and skills are necessary for the optimal use of digital media in research.

I am involved in designing and implementing most of the current digital projects of the Max Planck Institute of the History of Science (which can be seen at the institutes homepage). My work covers design of databases, service development and more recently conceptual work on the structure of data and metadata for longterm accessibility and interoperability of databases as research outcomes in the history of science. A new field, which I am interested in, is the use of semantic modeling, network analysis and text mining tools to analyze historical data. I am also working in methods how to model historical processes utilizing semantic web standards like CRM. In this context I am working on a case studies in the context of the project on the History of the Max Planck Society and on the project of the administrative documents of the Opera Del Duomo.

## WORK EXPERIENCE

# Max Planck Institute for the History of Science - Information technology at the MPIWG 2006 -2105

This position covers three main aspects: Firstly, the administrative and strategic organization of the digital infrastructure of the MPI, this comprises the supervision of the technical staff which runs the network and is responsible for the workstations, laptops, and technical infrastructure of conference rooms etc. Secondly, the active development of websites and tools for digital work in the History of Science. Thirdly, contribution to strategic national and international projects implementing infrastructures and research environment for historical research.

The overall goal is to focus on innovative digital research and publication methods for the history of science supporting all three departments at the MPIWG and the research groups and the library.

In this position, I cooperating with other institutes within and outside the Max Planck Society, in particular the Bibliotheca Hertziana in Rome.

## Max Planck Institute for the History of Science Head IT group 2001-2006

Focus at this time was the development of an infrastructure which brings to together the heterogeneous existing digital infrastructure of the institute. The main outcome of this phase was the digital library platform of the institute which is visible from the outside under the umbrella of the Initiative ECHO at <u>http://echo.mpiwg-berlin.mpg.de</u> and the new website of the VL (<u>http://www.mpiwg-berlin.mpg.de</u>) and CDLI (<u>http://cdli.mpiwg-berlin.mpg</u>).

## Max Planck Institute for the History of Science Research Scholar 2000-2001

Organisation of the Ringberg Symposium of the Max Planck Society on Innovative Structures in Basic Research which took place in Octobert 2000. This conference brought together scholars from all parts of science and humanities and one of the starting points for a new digital strategy of the MPG which lead e.g. to the foundation of the Max Planck Digital Library

## Max Planck Institute for the History of Science Student Research Assistant 1998-2000

Support of Peter Damerow and Jürgen Renn in organizing an international summer school on the Material Culture of Calculation. In this position I was assisting Peter Damerow in the concept of the conference and responsible for administrative issues of the workshop.

## Wissenschaftsforum der Sozialdemokratie freier Mitarbeiter 1997-1998 Organisation of conferences with the focus on multimedia in research an education

Technische UniversitätStudent Research Assistant (Tutor) 1994-1997Support of teaching in Mathematics for Physicists and Engineers

## EDUCATION

**Technische Universität, Berlin** Dipl. Phys. 1998 with an thesis on Quantum Gravity in Low Dimensional Spaces

## Humboldt Gymnasium, Düsseldorf Abitur 1989

## **PROJECTS** (SELECTION)

Echo European Cultural Heritage Online (http://echo.mpiwg-berlin.mpg.de) : Eine digitale Bibliothek und Forschungsumgebung für Wissenschaftsgeschichte Echo serves as the basic building block of the digital infrastructure of the MPI. I was involved in the general technical design and the programming of the backend end front-end of the system, developing the internal and external search backends.

## Virtual Laboratory (of Physiology): Eine virtuelle Forschungsumgebung (<u>http://vlp.mpiwg-berlin.mpg.de</u>)

The VL is virtual research environment for the history of physiology. My function in this context was overseeing the re-design of the backend, the implementation of new services, experimental full-text OCR based on open source software.

## CDLI Cuneiform Digital Library Initiative (<u>http://cdli.mpiwg-berlin.mpg.de</u>)

Within CDLI, I set up the first version of the versionised storage backend for the transcribed texts and supported Peter Damerow and Julia Damerow in setting up the first version of the Web Site.

**ISMI** Islamic Scientific Manuscript Initiative (<u>http://ismi.mpiwg-berlin.mpg.de</u>) A digital library for islamic manuscript and prototypical project for modeling metadata in the history of science.

## GMPG - Project on the History of the Max Planck Society

The project contains a large digital humanties component which includes complex data modeling methods and data mining technologies

## XML-Workflow

A workflow for creating and publishing annotated full-text as basic for research

## Media Stations at the Einstein Exhibition (2005) and Virtuelle Einsteinausstellung (<u>http://einstein-virtuell.mpiwg-berlin.mpg.de/</u>)

ColorConText (<u>http://arb.mpiwg-berlin.mpg.de</u>)

Edition Open Access / Edition Open Sources

Presentation and analysis of the manuscripts of Thomas Harriot

## THIRD PARTY FUNDED PROJECTS

TextGrid (http://www.textgrid.de) – until 2015

DARIAH-DE/DARIAH-EU (http://www.dariah.eu) - since 2013

DM2E - Digital Manuscripts to the Europeana (<u>http://www.dm2e.eu</u>) - until 2015

## **EXPERIENCES**

## **History of Science**

Work in early modern mechanics and foundations of analytical mechanics (Euler) and History or Relativity

## **Digital Humanities**

Involved in the establishment of Digital Humanities since 2000, overview of the central methods in DH, text-annotations (TEI), data and text-mining techniques, data-modeling

## **Programming/Databases**

• Programming in different languagas PHP, Python and Java. Knowledge of data base design and implementation in SQL (Postgres) and Filemaker.

- Developing and running applications and websites within the web application framework ZOPE.
- Solid knowledge of HTML and Java Script, maintaining services in apache tomcat, DJANGO
- SOLR

#### Semantic Web /Markup Languages

- Experiences in setting up an running Triple Stores (Sesame, Virtuoso).
- Solid Knowledge of standard ontologies (CRM, EDM) and data modelling
- Solid Knowledge of XML, RDF, OWL

#### **Development Tools and IDE**

- JIRA, TRAC
- Eclipse
- UML

#### Languages

- German (mother tong)
- English (fluent)
- Ancient Greek (Graecum)
- Latein (großes Latinum)

## TALKS/ CONFERENCE CONTRIBUTIONS

- 2015 DARIAH Summer school, Villa Vigoni, Preconditions and Tools for Digital Publications in the Humanities
- 2015 DHd Konferenz, Graz, methodische und technische Herausforderung durch "Big Data" in den Geschichtswissenschaften
- 2015 Workshop der Akademie der Wissenschaften zu Göttingen zu Elektronischen Editionen – *Expectation on Electronic Editions and Summary of the Workshop*
- 2014 HSS Conference, Chicago Mapping interdisciplinarity and the expansion of scientific organization a project in the making
- 2014 DARIAH, Pre-conference bei DHd, Konferenz Passau Vorstellung von Tools und Herausforderungen für Geisteswissenschaften
- 2013 Berliner Gespräche zur Digitalen Kunstgeschichte Von E4D mit GeoTemCo zum DARIAH-Geobrowser und PlATiN - ein Arbeitsbericht
- 2013 Oklahoma University, Library, September 2013 From exhibition support to the virtual exhibition : a workshop report

- 2013 Digital History and Philosophy of Science Meeting, Indiana University *IT* Developments at the MPIWG and DARIAH
- 2013 Villa Vigoni Workshop, June 12th, 2013 Digital Humanities at the MPIWG
- 2013 Digital Humanities Kompetenzzentren in Deutschland, Berlin Podiumsdiskussion: Ein DH-Kompetenzzentrum in Berlin? Ein Gespräch zum Wie und Wozu.
- 2013 Junges Wissenschaftsforum Dahlem, June 20th, 2013 *Round Table: Teaching and New Media*
- 2012 HPS Consortium, Cambridge, UK, September, 2012 *How to do simple things simple- Creating networks*
- 2012 HPS Consortium, Cambridge, UK, September, 2012 *Towards an infrastructure for Digital Humanities at the MPIWG*
- 2012 L'image-document face au numérique : mise en crise ou mise en lumière ?, Institut national d'histoire de l'art, Paris *From TextGrid and ECHO to the electronic scrapbook new ways of collaborative publications in the humanities*
- 2011 HPS Informatics Workshop, MBL, Woods Hole Event-Based Concept Models
- 2011 First International DARE Conference, Cologne ISMI Challenges and Genesis of a Digital Project: a Field Report
- 2011 Digital Humanities Seminar, Univ. Nürnberg-Erlangen Vom digitalen Quellenarchiv ECHO zum digitalen Scrapbook

## PUBLICATIONS AND POSTERS

Oona Leganovic, Viola Schmitt, Juliane Stiller, Klaus Thoden & Dirk Wintergrün (2015): Requirements and needs of scholars in the humanities on virtual Research environments (in German). Accepted at DHd-Tagung in Graz, 2015.

Sebastian Kruse, Florian Schmaltz, Dirk Wintergrün, Juliane Stiller (2015): The challenges of big data in historical research. (in German). Accepted at DHd-Tagung in Graz, 2015.

Robert Casties, Dirk Wintergrün. (2015). Bilder als Quelle in TextGrid. In TextGrid: Heike Neuroth, Andrea Rapp, Sibylle Söring (Ed.). Von der Community – für die Community

Claudia Müller Birn, Alexa Schlegel, André Breitenfeld, Dirk Wintergrün (2014): Rethinking Annotations in Humanities and Arts, in Digital Humanities in Berlin (http://edoc.hu-berlin.de/oa/articles/reulo7iRFkvc/PDF/22OGIt0MQgz9s.pdf).

Wintergrün, Dirk (2010). "Book Review: SORAYA DE CHADAREVIAN and NICK HOPWOOD (eds) Models: The Third Dimension of Science. Stanford, CA: Stanford University Press, 2004. ISBN 0804739722." Visual Communication 9, no. 3 (August 1, 2010): 363–66.

Jürgen Renn, Urs Schoepflin, Milena Wazeck, Dirk Wintergrün. (2002). The classical image of science and the future of science policy. In M.-P.-G.-z.-F. der Wissenschaften (Ed.), Innovative structures in basic research: Ringberg-Symposium, 4 - 7 October 2000 (pp. 11-21). München: MPG.

#### **ACTIVITIES IN BOARDS**

Member of the steering committee of TextGrid until 2015

Executive Board of DARIAH-DE since 2013

Co-Head of the Virtual Competence Centre 4 (Advocacy, Impact and Outreach) of DARIAH-EU as such member of the Joint Research Council (JRC) of DARIAH-DE since 2013

Co-Head of the Working Group on Sustainability within the Interdisziplinärer Forschungsverbund Digital Humanities Berlin (ifDHB)

Berliner Antike Kolleg ("großes Kamingespräch")

IANUS Project of the DAI, Working Group "Delegation"

## **DH COMMUNITY ACTIVITIES**

Part of the group initiating the "Einstein Zirkel on Digital Humanities" in Berlin, which got funded by the Einstein Foundation, Berlin. In this function co-organizing a series of workshops on DH in Berlin in 2012-2014

**REFEREE** DH Conference Sydney