Researchers as INFrastructure
Dave Parry: Digital Humanities should be the application of computing, or an inquiry as to how digital media has irrevocably changed the Humanities -> major practical consequences.

I have been entrusted with managing the development of a national research infrastructure for the Digital Humanities.

Even before logistic issues, we have major fundamental, political and theoretical challenges.

### DANISH ROAD MAP

<table>
<thead>
<tr>
<th>SOCIAL SCIENCES AND HUMANITIES</th>
<th>Considerations going forward concerning Danish participation in and funding of CESSDA will be included in the planned efforts to reorganise and strengthen Danish register research.</th>
</tr>
</thead>
<tbody>
<tr>
<td>CESSDA - Council of European Social Science Data Archives</td>
<td>Danish membership of CLARIN will be funded by the anticipated grant for the Digital Humanities Lab (DigHumLab) project.</td>
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<tr>
<td>CLARIN - Common Language Resources and Technology Infrastructure</td>
<td>Danish membership of DARIAH will be funded by the anticipated grant for the Digital Humanities Lab (DigHumLab) project.</td>
</tr>
<tr>
<td>DARIAH – Digital Research Infrastructure for the Arts and Humanities</td>
<td>Considerations going forward concerning Danish participation in and funding of ESS-Survey will be included in the planned efforts to reorganise and strengthen Danish register research.</td>
</tr>
<tr>
<td>ESS - European Social Survey Upgrade</td>
<td>Denmark will be participating in SHARE with a view to execution of phase 1 of the project. The cost of participation will be covered by the University of Southern Denmark. Considerations going forward concerning Danish participation in and funding of SHARE will be included in the planned efforts to reorganise and strengthen Danish register research.</td>
</tr>
<tr>
<td>SHARE - Upgrade of the Survey of Health, Ageing and Retirement in Europe</td>
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</tbody>
</table>

“research infrastructure” via ERIC

Legal framework for a European Research Infrastructure Consortium - ERIC Practical Guidelines

- facilities, resources and related services that are used by the scientific community to conduct top-level research in their respective fields and covers major scientific equipment or sets of instruments; knowledge-based resources such as collections, archives or structures for scientific information; enabling ICT-based infrastructures such as Grid, computing, software and communication, or any other entity of a unique nature essential to achieve excellence in research.

- Such infrastructures may be “single-sited” or “distributed” (an organised network of resources).
DIGIHUMLAB in brief

• DIGIHUMLAB is a national consortium of four Danish universities: Aalborg University, Aarhus University, the University of Copenhagen and the University of Southern Denmark. Together with the State and University Library and the Royal Library, the lab will work to promote access to digital research resources, the development of research tools and education as well as strengthening ties to international networks.

• The Ministry of Science, Innovation and Higher Education has contributed a grant of DKK 30 million to the development of the Danish Digital Humanities Laboratory (DIGIHUMLAB). The establishment of DIGIHUMLAB was named as a priority in the ministry's roadmap for research infrastructure in 2010, and is intended to promote research in the humanities and social sciences, education and knowledge exchange by providing access to digital resources and developing new research methods and practices.

• Learn more about the new digital humanities and find the programme for the official opening at www.dighumlab.dk
DIGHUMLAB Research Themes

Theme 1: Language-based materials and tools, CLARIN, see http://clarin.dk

Theme 2: Mediatools (the Net Archive, Net Lab) AU, (subcontractor: State Library) and Developing tools for audio and visual media AU, http://www.netlab.dk/

Theme 3: Interaction and Design Studies, AAU and SDU

http://www.worldmapmaker.com/countries-denmark/map
DIGHUMLAB partners

- **Original mission:**
  
  DIGHUMLAB will serve as the single virtual access point to all relevant digitised resources of relevance to the research areas of the humanities and social sciences in both Danish and European research infrastructures.

- ..the Danish node in, respectively, **CLARIN** (Common Language Resources and Technology Infrastructure) & **DARIAH** (Digital Research Infrastructure for the Arts & Humanities) as well as **TELEARC**.

- Researchers who were part of LARM may also be associated with DIGHUMLAB in the near future.
4 unis 2 libraries? and..

• Our government has asked that we include as many as possible, a noble goal, but in practice we have hit a major roadblock.
• How does one create a national focus while allowing academics and other researchers to pursue their own specific goals?
• What are the boundaries of the Digital Humanities pertinent to our researchers, beyond which we should not tread?
• How can we focus on key research areas important to our country in particular, without becoming cut off from international networks?
Durability
My first questions were

– What about the social sciences?
– What is a research infrastructure?
– What do we mean by a laboratory – is there only one?
– What kind of databases do we have?
– What about funding?
– Who is the audience?
– What should we deliver and when?
– What are the goals for success after the 5 year period and how do we measure it?
Preparing for the tomorrows

• How can one develop an infrastructure five years ahead, based on catering for technology that we are not yet using?
• How can a distributed network allow for unified identity and individual planning?
• Which resources are best managed centrally, and which are best distributed?
Not like typical DH in USA-Canada

- [http://blog.humlab.umu.se/](http://blog.humlab.umu.se/) (Swedish, but a Nordic inspiration)
- [http://humanexperience.stanford.edu/digital_humanities](http://humanexperience.stanford.edu/digital_humanities)
- [http://www.cdh.ucla.edu/](http://www.cdh.ucla.edu/)
- [http://www.eecs.berkeley.edu/~aditi/dh/](http://www.eecs.berkeley.edu/~aditi/dh/)
- [http://www2.lib.virginia.edu/scholarlab/](http://www2.lib.virginia.edu/scholarlab/) The Scholars’ Lab
- [http://www.iath.virginia.edu/hcs/MDST.MA.html](http://www.iath.virginia.edu/hcs/MDST.MA.html) Masters in Digital Humanities
- [http://chnm.gmu.edu/](http://chnm.gmu.edu/) Center for History and New Media (CHNM)
- CANADA
  [http://www.philosophi.ca/pmwiki.php/Main/TheAcademicCapacityOfTheDigitalHumanitiesInCanada](http://www.philosophi.ca/pmwiki.php/Main/TheAcademicCapacityOfTheDigitalHumanitiesInCanada) Research Chairs etc
Not like typical DH in the UK

- UCL Centre for Digital Humanities “at the intersection of digital technologies and humanities.” [http://www.ucl.ac.uk/dh](http://www.ucl.ac.uk/dh)
- Oxford [http://digital.humanities.ox.ac.uk/](http://digital.humanities.ox.ac.uk/)
- Digital Humanities Centre
- [http://www.nottingham.ac.uk/humanities/digital/index.aspx](http://www.nottingham.ac.uk/humanities/digital/index.aspx)
- Cambridge [http://www.digitalhumanities.cam.ac.uk/](http://www.digitalhumanities.cam.ac.uk/)
- Sheffield [http://www.shef.ac.uk/hri/index](http://www.shef.ac.uk/hri/index)
- See also [http://www.arts-humanities.net/noc](http://www.arts-humanities.net/noc)
Distributed DIGITAL HUMANITIES CENTRES?

- Gottingen?
- Southampton?
- Oxford?
- Interactive Institute?
- HuNI Australia?
Digital Humanities Congress 2012

Simon Tanner

Axismaps

Do we dare to ask?

- Who benefits from our research?
- What do those benefits look like?
- Do the beneficiaries have any say in what the Humanities are or should be?
- Are there others out there who care but do not directly benefit?
- For whom are we responsible? When we benefit someone do we care?
- If we allowed our beneficiaries to define success what would that look like? Would we like their conclusions and are we capable of change?
- If we measure it, does that change it or us or them?
The users...the beneficiaries

National Museum of Science, Bergamo

Ethnographic Collection by user, National Museum of Science, Bergamo

Fostering inspiration and creativity
Digital humanities an electronic hearth: a clearing and gathering place for digitalists and humanists.
In this course we will be following Eric Champion's idea that New Media comprises the act of reshaping the user experience of exploring realms or worlds through the innovative use of digital media.

In this course students will explore and put into practice New Media technologies that have been used to investigate, share, and represent people, places, events, and things of the past. Our review and exploration of these technologies will focus on a critical evaluation of their theoretical implications and their practice in archaeology, history, cultural heritage management, and museum studies, as well as popular culture representations of the past. The class will review the broad array of New Media technologies including documentation (video, photography, laser scanning, geo-locating), database construction, archiving, information networking, visual analysis (GIS), 3D visualization (3D reconstructions, virtual worlds and gaming), communication and publishing (social networking, WWW1, WWW2), and narrative creation (video, hypermedia, database narratives, recombinant histories). The goal of the class is to understand that many of these technologies are not beyond the capabilities of the general public, and that they need to be used with a critical awareness of their implications...
Not problems just projects

1. Financing
2. Attract researchers, explain what we can do for you
3. Articulating the problems to achieve solutions can be difficult
4. Tent, umbrella or force field—should be exclusivist or inclusivist?
5. Generalist or Specialist digital humanists?
6. Distributed or centralized

1. Micro financing esp reusable..
2. Provide case studies and walkthroughs
3. Share and review across fields, thatcamps, mini workshops
4. Expose process, spread the knowledge, corrupt coders
5. Bottom up teaching, create clearings, hackspaces, train trainers at same time
6. Circulate ideas *like Vectors Fellowship
DIGHUMLAB problems projects

ISSUES
1. 1.5 staff, issues of data security maintenance
2. Quality Control? Where is theory, AR, GIS, 3D, InfoVis
3. Fair distribution across partners, research community, and synergy of resources, contract DH research manager or director required.
4. Keeping to the budget and when next budget is due.

SUGGESTIONS
1. Centralize Data with libraries, collate user req.
2. Develop guidelines, KPI, ROIs for new themes
3. Create 4 specialist nodes, each with technical staff, with postdocs, guest international scholars, RM ensures research communication and collation. Eg Vectors fellowship model.
4. Change to competitive funding, use in 4.5 years, bring in new grants, discuss.
Another problem, project
Denmark has a burgeoning industry in serious games and 3D technology.

Tribal trouble (left) is a Viking resource management and civilization building game from Denmark.

**Serious Games Interactive** is Danish and creator of “**Playing With History**”

**Unity** is a world famous interactive 2D and 3D creation tool with educational discounts.
EXAMPLES
Integrate library resources with 3D visualization

NTNU Uni. Library MUBIL project@Trondheim
Create dynamic linkages between the public and its collections and spread knowledge.
Gather data on how people interact with 3D technology and virtual objects in a library environment.
computer game mod designed to teach about Depression-era Ybor City, Florida history and culture titled the Turkey Maiden Educational Computer Game (Underberg, 2008). The area is known for its historic cigar industry and Latin immigrant population. The game itself is based on a Spanish folktale collected from Ybor City, Florida and was adapted into a video game mod using the popular Role Playing Game (RPG) Neverwinter Nights.
http://paulbourke.net/miscellaneous/demimirror/iDome/

http://vimeo.com/10837812
http://orbis.stanford.edu/#

http://mashable.com/2012/04/26/anthropocene-video/
Videoconference with Second Life characters via mixed reality

Thanks to special glasses and magic trackers virtual characters can appear in real worlds or vice versa. This is not expensive or difficult to do. These characters can also use free text to speech engines and free seemingly intelligent AI to engage people in conversations or events.

http://ael.gatech.edu/lab/research/arsconde_life/using-the-ar-second-life-client/
Work with or train via heritage partners

V-MusT Virtual Museum Transnational Network: an EU FP7-funded network of excellence that aims to provide the heritage sector with the tools and support to develop virtual museums that are educational, enjoyable, long-lasting and easy to maintain. Offers internships, courses and seminars.
Sagas in voice & camera tracked games

**Skyrim** game can host virtual recreations (of Nordic stories or any other), the player can control the avatar, and issue voice commands recognised by the game). Inhabitants can be easily reprogrammed to share stories. Trading, praying, conversing healing etc are possible, not just violence.

(Bottom picture c/o Eric Fassbender)
Integrating communities / media

CLARIN + survey
CAVI + Aalborg VR
Digital ethnography (Odense) > courses
Net Lab and info visualization
LARM tools, + VR + NediMAH
personography

MEDIA SPACE 2016
http://vimeo.com/41688140
MY PAST WORK
Integrating culture in the 2nd language curriculum thru a 3D VRE

Sachiyo Sekiguchi
Faculty of Environmental Information
Keio University

Paul Gruba, Abdul Rahman Al-Asmari
School of Languages and Linguistics
The University of Melbourne

Networked computer technologies have a strong potential for enhancing second language (L2) learning in the modern classroom. Three-Dimensional Virtual Reality Environments (3D VREs), in particular, provide features to support student motivation, socialization and interaction. These include, for example, the ability for L2 learners to present as avatars, build virtual structures and interact with others in conversational modes. In this preliminary qualitative case study, we examine the perception of culture through online exchanges between both Japanese and English learners within the Virtual Babel project. Critical reflections and an agenda for further research conclude our paper.

Keywords: culture and technology, teaching and learning strategies, learning communities
EXAMPLES OF CREATIVE DH

Biofeedback

emotiv

neurosky
Calligraphy, painting, music and cultural games can be playfully instructive

Shown at Vsmm2012 conference
Chinese Taoism Touch Screen by Neil Wang and Erik Champion
Journey to the West

Why is the Weather so Hot?

Day 01, Month 06, 1372 [13:01]

You have entered the area known as the Fiery Mountains. It doesn't have spring or autumn; it's hot all year round. The mountains are about twenty miles away from the old man's house, to the west. In order to continue the journey to the West, the Fiery Mountains must be passed. However, no one has ever crossed the Fiery Mountains, as it is a barren area and there are over 250 miles of flames along the way.
Daoism (Taoism) is an ancient Chinese combination of religion, philosophy, and folk beliefs, including ritual healing. Its different strands of belief date far back in history. Daoism is deeply entwined with Chinese culture and history.

Touch Screen Taoism
Hybrid user input VR System

• Prototype system allowing input via camera tracked movement of participant to left, connected split screen virtual worlds can be edited and re-designed in real-time via smart tablet by participants at desk.
• This system shows short-throw rear projection.
DIGHUMLAB launch

http://dighumlab.dk

- Rector Lauritz B. Holm-Nielsen
- Danish Minister for Science, Innovation and Higher Education, Morten Østergaard
- Dean of Arts, Aarhus University and Head of DHL Steering Group Mette Thunø
- DIGHUMLAB 1: Professor Bente Maegaard: Language Tools and CLARIN
- DIGHUMLAB 2: Professors Niels Ole Finnemann & Niels Brügger: NetLab
- DIGHUMLAB 3: Professor Johannes Wagner: Interaction and Design Studies
- Sally Chambers, Secretary General, DARIAH-EU Coordination Office
- Steven Krauwer, Executive Director, CLARIN ERIC
- Professor Patrik Svensson, HUMlab, Umeå University
- Professor Lorna Hughes, University of Wales
- Associate Professor Palmyre Pierroux, InterMedia, University of Oslo
- Professor Lily Díaz-Kommonen, Media Lab, Aalto University

- Erik Champion  
  echa@adm.au.dk