

Realising and Supporting Collaboration in e-Research

Alex Voss¹, Rob Procter¹, Meik Poschen¹, Tom Rodden², Gary Olson³, Roger Slack⁴, Mark Hartswood⁵, Marina Jirotko⁶, Annamaria Carusi⁶, Steffen Budweg⁷

¹ National Centre for e-Social Science, University of Manchester, UK,

² School of Computer Science and IT, University of Nottingham, UK

³ School of Information, University of Michigan, US

⁴ School of Social Sciences, University of Wales, Bangor, UK

⁵ School of Informatics, University of Edinburgh, UK

⁶ Oxford e-Research Centre, Oxford University, UK

⁷ Fraunhofer FIT, Sankt Augustin, Germany

alex.voss@ncess.ac.uk, rob.procter@ncess.ac.uk, meik.poschen@ncess.ac.uk,
tar@cs.nott.ac.uk, gmo@umich.edu, mjh@inf.ed.ac.uk, r.slack@bangor.ac.uk,
marina.jirotko@comlab.ox.ac.uk, annamaria.carusi@comlab.ox.ac.uk
steffen.budweg@fit.fraunhofer.de

Abstract. The aim of this workshop is to discuss collaboration in e-Research and the role that the CSCW community might play in studying the uptake of collaboration technologies in e-Research and informing the design of technologies aimed at addressing collaboration support needs that are specific to e-Research.

Workshop Rationale

Working practices in knowledge intensive domains show a tendency to evolve from being centred around individual activities to work conducted in teams and further to community based efforts. A prime example of this is e-Research, where the notion of the “virtual organisation” organised around particular scientific

collaborations spanning organisational (and often national) boundaries underpins a vision of a transformation of research practice. e-Research¹ is by definition a collaborative activity that combines the abilities and resources of distributed groups of researchers in order to achieve research goals that individual researchers or local groups could not hope to accomplish. Today, e-Research spans activities in physics, astronomy, oceanography, biomedical research, economics, classics and archaeology, to name a few. Very often, e-Research is also multidisciplinary, spanning not only geographical and organisational boundaries but also disciplinary ones.

Researchers make use of a range of tools to support their collaboration, from relatively common applications such as email, instant messaging, wikis or groupware systems, to tools that are designed specifically to support research and to address the specific challenges it poses. For example, the Access Grid has been designed to facilitate synchronous remote collaboration between large groups of people. However, it is probably fair to say that current collaboration tools offer little interoperability and that they lack support for the integration of work activities within larger and dynamic contexts as envisioned by e-Research.

The notion of a virtual research environment² (VRE) has gained prominence in the e-Research community. The aim of a VRE is to provide an *integrated* environment that supports the work of a community of collaborating researchers. That is, they bring together previously separate tools needed for conducting the research and for collaboration – collaboration is increasingly recognised as an *integral* aspect of the work of research rather something that can be added on as an afterthought. At the same time, research on collaborative work environments is currently looking at providing support for increasingly dynamic work contexts spanning organisational boundaries.

We feel that the CSCW community has a lot to offer to people working on collaboration in e-Science, both in terms of design recommendations and in terms of the wider socio-technical context of the development of e-Research collaborations, but that the potential has yet to be fully realised. Our aim is to work towards closer links between the CSCW and e-Research communities, utilising the former's extensive work on studying the role of IT systems in the social organisation of human activities in order to establish better socio-technical arrangements for the conduct of e-Research.

Why now?

Over the last six years, the UK e-Science Programme, the Cyberinfrastructure programme in the US and similar initiatives in other countries have been key in

¹ We follow the recent trend to speak about e-Research rather than using the older term e-Science as we wish to explicitly include research activities outside the sciences, e.g. in arts and humanities.

² We treat the term as being synonymous with other concepts such as collaboratories, cyberenvironments or science gateways.

establishing the vision of e-Research and securing significant funding for work aiming to establish sophisticated, ubiquitous e-infrastructures for research. More recently, e-Research has started to move from the development of basic technologies (like the Grid) and early demonstrators to more routine practice, and the range of research disciplines taking up e-Research approaches has widened and now includes social science and arts & humanities research.

It is at this point, where the focus shifts to the accomplishment of e-Research as a routine undertaking, that issues to do with collaboration in e-Research come to the fore. At the same time, serious questions are being asked about the wider uptake and sustainability of e-Research. Many of these issues, e.g., supporting remote or distributed collaboration, understanding the social dimensions of collaboration and technology use, building collaborative applications and environments have been key research areas for the CSCW community over the years, placing it in a unique position to contribute methodological, conceptual and practical insights in support of the e-Research endeavour. The workshop will contribute to our evolving understanding of how e-Research endeavours get realised. It follows on from a workshop on Realising e-Research Endeavours, which took place at the e-Science Institute in Edinburgh in March 2007, a workshop on Virtual Research Environments and Collaborative Work Environments that took place at the e-Science Institute in May and a forthcoming workshop on VREs at the UK e-Science All Hands Meeting in Nottingham September 2007.

Format and Outcomes

The workshop will be a full-day event with the number of participants limited to 10-15 (in addition to the organisers). We will ask participants to submit position statements before the workshop and during the workshop there will be only a short opportunity for people to introduce themselves and present the two or three main points they wish to make. Most of the time will be spent in round-table discussions around specific topics such as:

- Managing remote collaborations
- Advanced collaboration support for e-Research
- Common architectures and standards for collaboration support
- Provisioning collaboration support functionality in e-infrastructures
- Collaboration environments as the glue that binds e-Research together

We expect the outcome of the workshop to be a concrete plan for a better utilisation of the lessons of CSCW research in e-Research Endeavours. This may involve plans for training events such as Summer Schools or developing ways in which CSCW knowledge can be brought to bear in e-Research projects. The workshop organisers have a track record of studying collaboration in e-Research and, through their various affiliations, can guarantee that the workshop outcomes are widely disseminated and taken seriously by the e-Research community.