Grand Challenges: E-Science Opportunities in the World of the Visual Arts

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'Cybernetic Serendipity'

'The Computer is only a tool, which, at the moment, still seems far removed from those polemic preoccupations which concern art. However, even now seen with all the prejudices of tradition and time, one cannot deny that the computer demonstrates a radical extension in art media and techniques.

The possibilities inherent in the computer as a creative tool will do little to change those idioms of art, which rely primarily on the dialogue between the artist, his ideas and the canvas. They will, however, increase the scope of art and contribute to its diversity.'

Jascia Reichardt (1966)
How can we apply E-science to visual arts research?

Research:
Use E-science tools and technology for interactive, global research, conferences, workshops for the visual arts.

Future:
• Develop collaborative courses and exhibitions between remote locations.
• Stage master classes.
• Live performance and installation events with remote collaborators.
  – **Connecting Data (Data Grid)**
    interrogating ensembles of resources in a distributed way. These could include, virtual reality reconstructions, multi-media -(video and sound), digital images both 2D & 3D
  – **Connecting Data and People(Access-Grid)**
    (Virtual Research/Learning Environments – VRE/VLE) Grids of People and Data
Collaborative Research Spaces
Shared Learning Space
Shared Research Space
Grid Access via Palm Pilot

AccessGrid to GO
An Agenda ... with Money

UK e-Science Budget (2001-2006)
Total: £213M + £100M via JISC

EPSRC Breakdown
- Applied (£35M) 45%
- HPC (£11.5M) 15%
- Core (£31.2M) 40%

+ Industrial Contributions £25M

Source: Science Budget 2003/4 – 2005/6, DTI(OST)

Slide from Steve Newhouse
We have the potential for very large demands for fast transfers of data

- Larger, faster & cheaper storage technology, digital communications – higher bandwidth & cheaper
  - We have the potential for very large demands for fast transfers of data (high resolution of images; video and sound footage etc) such as video streaming.
  - To store *sufficient good quality* metadata, with appropriate authentication, licence, and copyright and accessibility issues, including interoperability
  - Less local storage, with file sharing capabilities, practical to access and copy remote data.

slide information: courtesy of Malcolm Atkinson, National e-Science Centre
**Visitors Studio**

an online place for real-time, multi-user mixing, collaborative creation, many to many dialogue and networked performance and play.

Chat with other users while you upload and mix your sounds, images and movies in real-time.

**Welcome to VisitorsStudio Version2**

Lots of new artistic tools, facilities and resources...

- schedule your own networked performances
- record your mixes and distribute them
- practice in the Solo Studio

**Upcoming Events**

The times shown are for your location (1 hour ahead of GMT)

- **event** / **Month of Sundays - Session 4**
  date: Sun Jun 25th 4pm-6:45pm
  with: Glenn Bach and John Kannenberg

For more details of all Upcoming Events
art gallery: Synaesthesia
art gallery: Synaesthesia
Synaesthesia
art gallery: Synaesthesia
Synaesthesia
Vienna

Vienna Art Week
4 – 9 April 2006
Robert Stolz Platz 3
Vienna

In conjunction with Vienna’s most important art institutions, Vienna Art Week offers an exclusive insight into the great museums, galleries and institutions of the Austrian capital. Vienna Art Week provides a platform for artists from around the world to network and is an opportunity to tour and exchange new ideas and expertise while enjoying the beautiful city of Vienna.

take:
time

norbert BRUNNER will ALSOP darryl GEORGIOU

A new collaboration for Vienna Art Week ‘06
Public projection/installation objects
Projection in Berlin during World Cup
QuickTime™ and a
TIFF (LZW) decompressor
are needed to see this picture.

Darryl Georgiou Decade Prototype
Paul Sermon

Interactive Media Artist - Specialised in telematics and telepresence research.

"Telematic Dreaming" deliberately plays with the ambiguous connections between geographical distance and technology involved in the complete sharing of touch that is enhanced by the context of the bed and caused by a voyeurism of its self. The cause and effect interactions of the body, light and locate itself wherever it is interacting. In "Telematic Dreaming" the body is both on site and remote and the act of being shared has a direct impact on the sharing of the experience and the received. The interaction of the shared acts as a way to contrast and analyse the way in which technology changes and develops in both social and technical way. The shared experience is both on site and remote and the act of being shared has a direct impact on the sharing of the experience and the received. The interaction of the shared acts as a way to contrast and analyse the way in which technology changes and develops in both social and technical way.

Paul Sermon

"Telematic Dreaming" 1992

Telematic Dreaming (installation view) | © Paul Sermon
Art in Orbit: The Space Synapse System and the Symbiotic Sphere

Figure 2: The Space Synapse System.

Anna Hill
Questions and Answers

Q. What do we need to do:
- to become an Access Grid node?
- what do we need to establish for a research presence for the visual arts using E-science?

Q. What do we need to do to collaborate via the Access - Grid?
- A dedicated and collaborative effort between the networking, audio visual, computing, and content?
- Funding for audio and visual equipment for Research (computer workstation, 2 large screens, equipment as, 2 cameras, audio speakers, microphone?)

Q. How should we approach the issues of awareness, training, and support?
Q. Research collaboration poses fundamental questions about ‘ownersl
Visual Arts and the E-Science Agenda:

Where to Start – People and Collaborative Environments

A pilot project with some or all of the following characteristics?

- a distributed group of visual art research practitioners with Access Grid facilities?
- a defined research agenda, with questions that have not been answered before?
- clearly defined research outcomes that can be documented as not as capable of being produced by other means?
Final Questions

1. Establish what is common to all our needs
2. Map this onto E-science: is there a fit? If there is: move to next stage. If **not**: we should say so!
3. How ‘common’ are we? Can we speak persuasively for our community?
4. How would the visual arts community share the experience/results of these pilot projects?
5. Would the establishment of a Visual Arts e-Science Forum be a good idea?
6. What about technical/cultural/IP impediments?
7. Where do we want to be in five years’ time?
8. Define what each of us wants, individually……
9. What tools/resources and training do we need to help us build these collaborative infra structures?
ArCade IV

Novorsibirsk April ‘05