usable access for open microscopy environments

MADISON APRIL 2006
Dundee EPSRC Project

• 3 year project from June
  – usable access to open microscopy environments

• Investigators
  – Jason Swedlow
  – Peter Gregor (interface design, usability expert)
  – Catriona Macaulay (requirements, design ethnographer)
  – Ian Ricketts (project management, developer)

• Staffing
  – Designer/Developer (3 yrs) and Design ethnographer (18 mo)
  – PhD Student (3 yrs)
Project Objectives

• Investigate ways of improving access to large and complex datasets

• Using ethnographic techniques, to study the ways investigators perceive and interact with a complex e-science system (OME)

• Analyse the usability of the existing interfaces to OME

• On the basis of these findings develop an iterative user experience improvement plan, adopting the best available techniques from human computer interaction studies and other fields

• Implement this plan and measure the outcomes
Ethnography?

• ‘Writing Culture’:
  – immersion in ‘the field’
  – participant / observation (hanging about)
  – mix of qualitative and quantitative techniques
  – all about interpretations

• Ethnography and design:
  – widely used in industry (Intel, Sapient, Microsoft etc.)
  – Integrates well with HCI design methods like scenario based design

• Aim:
  – describe imaging work practices within Life Sciences
  – explore relationship of scientists with technologies like OME
  – export relevant insights to UI design
OME USER EXPERIENCE DESIGN
OME Developers as Participants

• You are already doing the ethnography!
  – tap into that resource
  – multi-site is exciting

• Highly specialised system:
  – Close relationship between developers and end users
  – Users don’t always know what is possible
  – Users as developers

• The OME story:
  – history is valuable
  – history can get lost
Ethics and Consent

• Ethical issues:
  – professional basis (UK Association of Social Anthropologists)
  – informed consent
  – confidentiality
  – recordings (e.g. audio)

• Consent:
  – ongoing process
  – trust
  – sensitivities

• Next step:
  – read info
  – return signed form if OK
Next Steps…

• Getting to know you all

• Ethnographic study of end users and developers
  – focus on Dundee users initially
  – visit users at other labs

• Usability evaluations of OMERO and OME
  – Thinkaloud, heuristic, keystroke logging, focus groups, etc

• Planning/scoping for:
  – iterative prototype development / evaluation
  – integrating UI with backend and middleware developments