Exploring the affordances of virtual fieldwork in a multi-user, 3-D digital environment

Conference or Workshop Item

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Virtual Skiddaw:
Exploring the affordances of virtual fieldwork in a multi-user, 3-D digital environment

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What we built
Access via web browser

100 km² area
real data, maps
6 detailed sites
higher res
hand specimens
task lists
Navigation
avatars
guided (linear)
free-roaming
teleports
Chat
range adjustable
Support
manual, transcripts
Gaming VFTs: challenges

Cost: resources, people, time
Real data: detail vs performance
Framework: self-contained vs adaptable
Comparisons: virtual vs physical fieldwork
Overload: not alienating non-gamers...

How to combat fear that VFTs might replace real field teaching?

Gaming engine: affordances

‘3D’ landscape – geology in context; spatial literacy
Rich interface – interactivity and immersion
Self-contained – (mostly): little linked material
Multi-user – especially for distance learners
‘More than fieldwork’ – do something different:
  – flying
  – aerial views, map overlays
  – in-world cross-section
  – teleports (time-saving)
  – fadable avatars

What about: F2F students? or schools?
Evaluation & the future...

1. V-skiddaw at the OU
eSTEeM project + Steve Tilling

2. V-skiddaw for A-Level students

3. A Virtual Field Trip Service
   innovate UK project
   Daden Ltd, DesignThinkers, OU

What about: F2F students? or schools?

Virtual Field Trip Ecosystem

Authoring Institution
(also likely to be a user institution, but could be non-educator)
- Technically Skilled Educator/Staff
- Create new locations and core lesson plans
- Under contract (if req)
- Digita area from sat/aerial/site
- Geospatial Subcontractor

User Institution
- Educators
- Customise Lesson Plans
- Learning Analytics
- Experience Virtual Field Trips
- Create User Generated Content

Web/Cloud
- Multiple Locations, eg
  - Skiddaw
  - Snowdon
  - Everest
  - Moon

Core App
- Management/Support Costs
- £

Virtual Field Trip Service
- Multiple Lesson Plans
  - KS1-3
  - GCSE/A
  - U/Grad
- £

Revenue/Cost flows in yellow
- £
- £
Questions for you

1. Main attractions of Virtual Skiddaw?
2. How would you use a similar VFT?
3. Should we make more?
4. Would you like to be involved?
Shameless plug…

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Come in and look around.

Popular experiments

Project team (1)

Open University
Shailey Minocha – leader, virtual worlds
Tom Argles – geologist
Brian Richardson – production manager
Kat Gallow – project manager
Sarah Hack – graphic designer
Nick Braithwaite – OSL Director
Sarah Davies – academic consultant

Trent & Peak Archaeology
David Strange-Walker – LiDAR, photogram
Daden Ltd
David Burden – *project lead*
Paul Rahme – *programmer*
Macdonald Mbaya – *programmer*
Darrell Smith – *project manager*
Tim Lozinski – *graphics/environment*
Iain Brazendale – *programmer*
Lucy Smallwood-Rose – *administrator*
Guy Wallace – *graphic designer*
Chris Stevens – *programmer*