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

Tom Argles, Shailey Minocha
(The Open University)
David Burden
(Daden Ltd)

email: tom.argles@open.ac.uk

What we built

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...

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)
  – fadeable 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
(possibly to be a user institution, but could be non-educator)
- Digitise area from sat/aerial/site
- Create new locations and core lesson plans
- Under contract (if reqd)

User Institution
- Create new locations and core lesson plans
- Experience Virtual Field Trips
- Create User Generated Content
- Educators
- Learning Analytics
- Student

Geospatial Subcontractor
- £ Revenue stream from others’ use

£ Payment, eg per use, per loc, global pass, per annum

Management/SUPPORT Costs
- Customise Lesson Plans
- Experience Virtual Field Trips
- Create User Generated Content
- Web/Cloud
  - Multiple Locations, eg
    - Skiddaw
    - Snowdon
    - Everest
    - Moon
- VFTaaS Operator
  - (Daden)
  - New Locations
  - New Features
  - Management/SUPPORT Costs
- £
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...

Project team (1)

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

Trent & Peak Archaeology
David Strange-Walker – LiDAR, photogram
Project team (2)

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*