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

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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
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...

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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

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**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)
  - Digitise area from sat/aerial/site
  - Create new locations and core lesson plans

- 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

- Multiple Lesson Plans
  - KS1-3
  - GCSE/A
  - U/Grad

- VFTaaS Operator (Daden)
  - New Locations
  - New Features

Revenue/Cost flows in yellow

- £ Revenue Stream from others' use
- £ Payment, eg per use, per loc, global pass, per annum
- £ Revenue

Core App

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…

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Popular experiments

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

Site visit, April 2013