

GridPP

UK Computing for Particle Physics

Build it and they will come: How to get non-physicists to use your Grid

Stuart Purdie



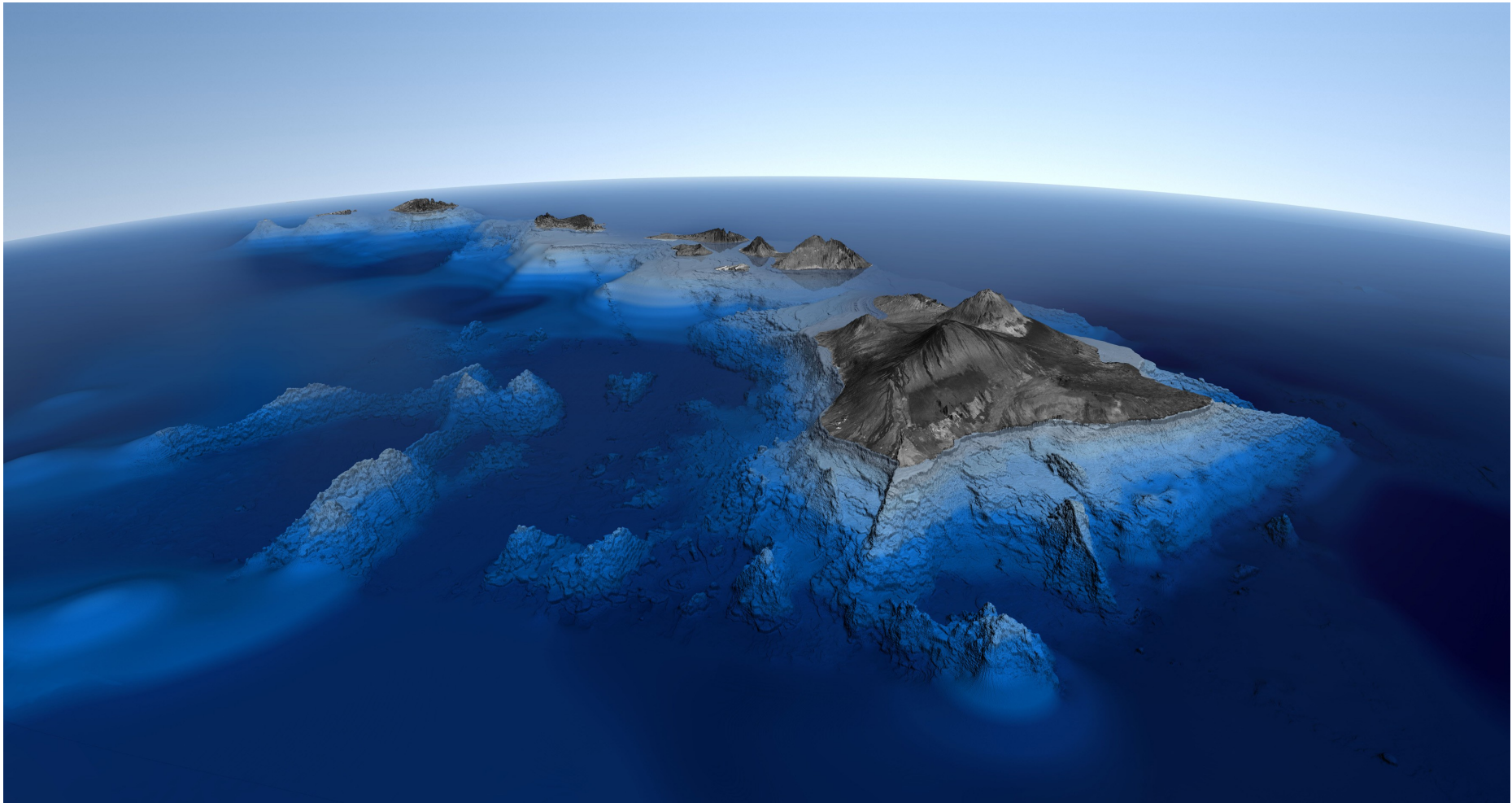
University
of Glasgow

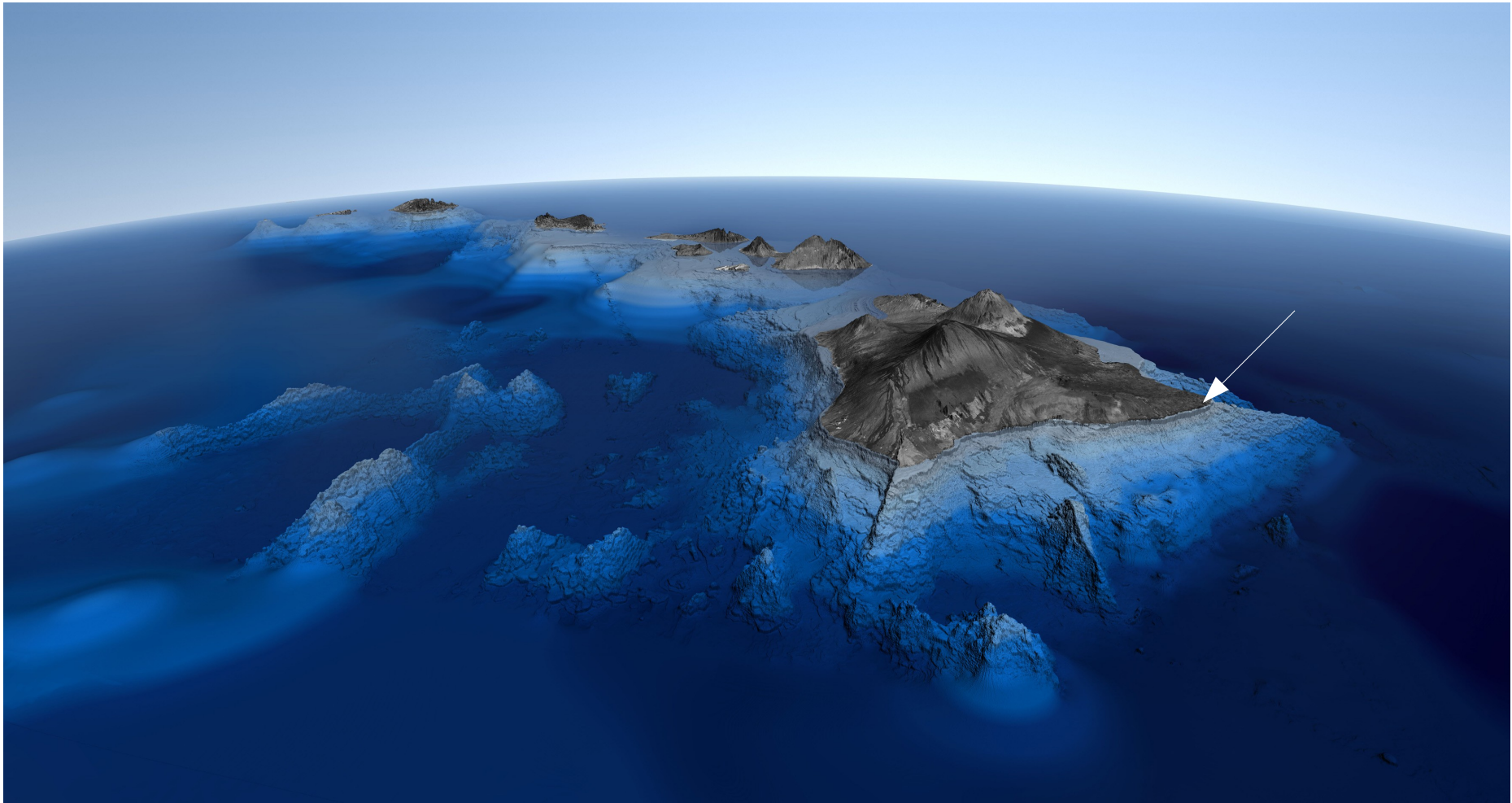
Experiment together

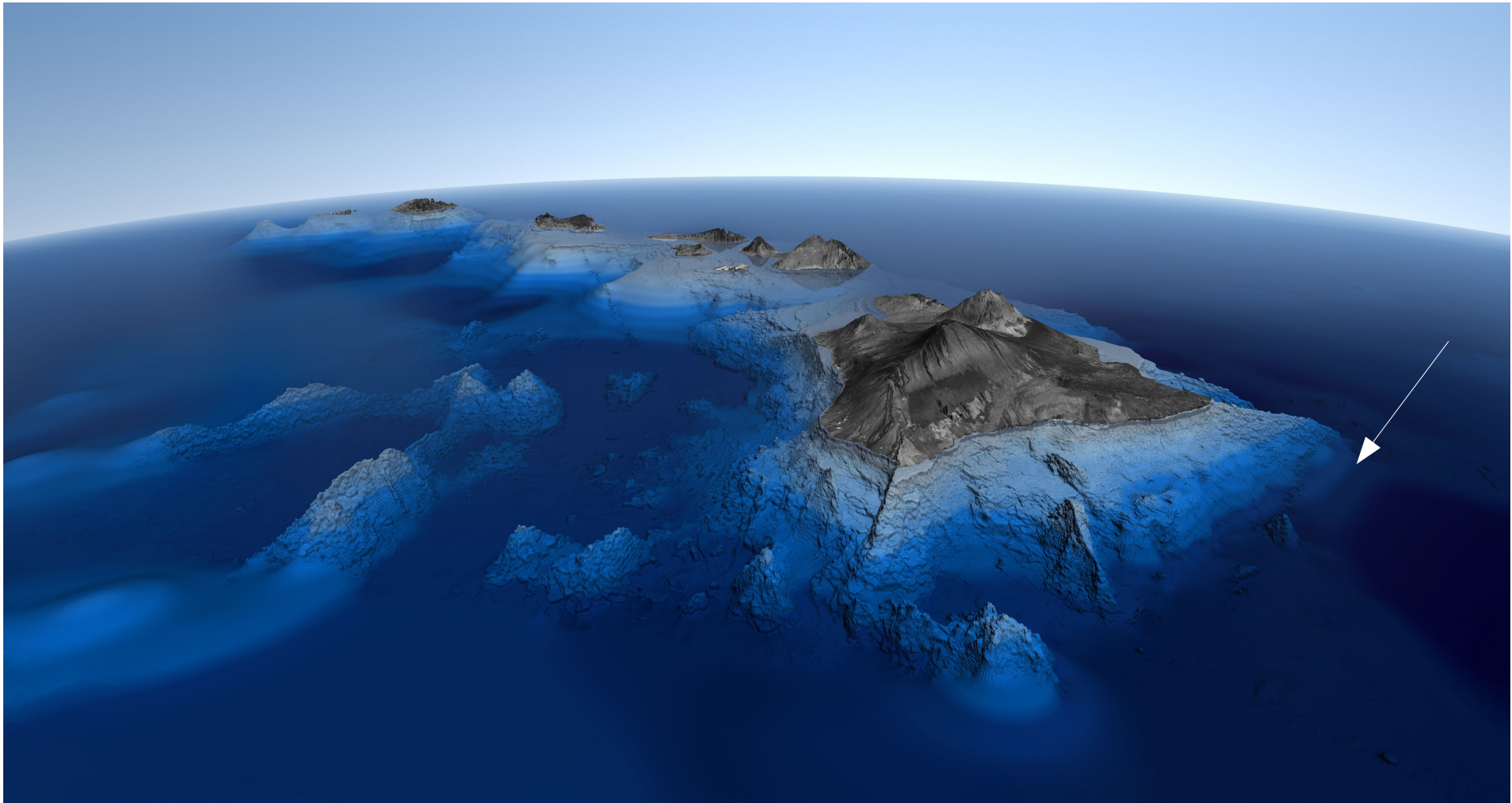
- Setting the scene
 - With pictures
- Some specific case studies
 - i.e. ones that worked...
- Where to go from here

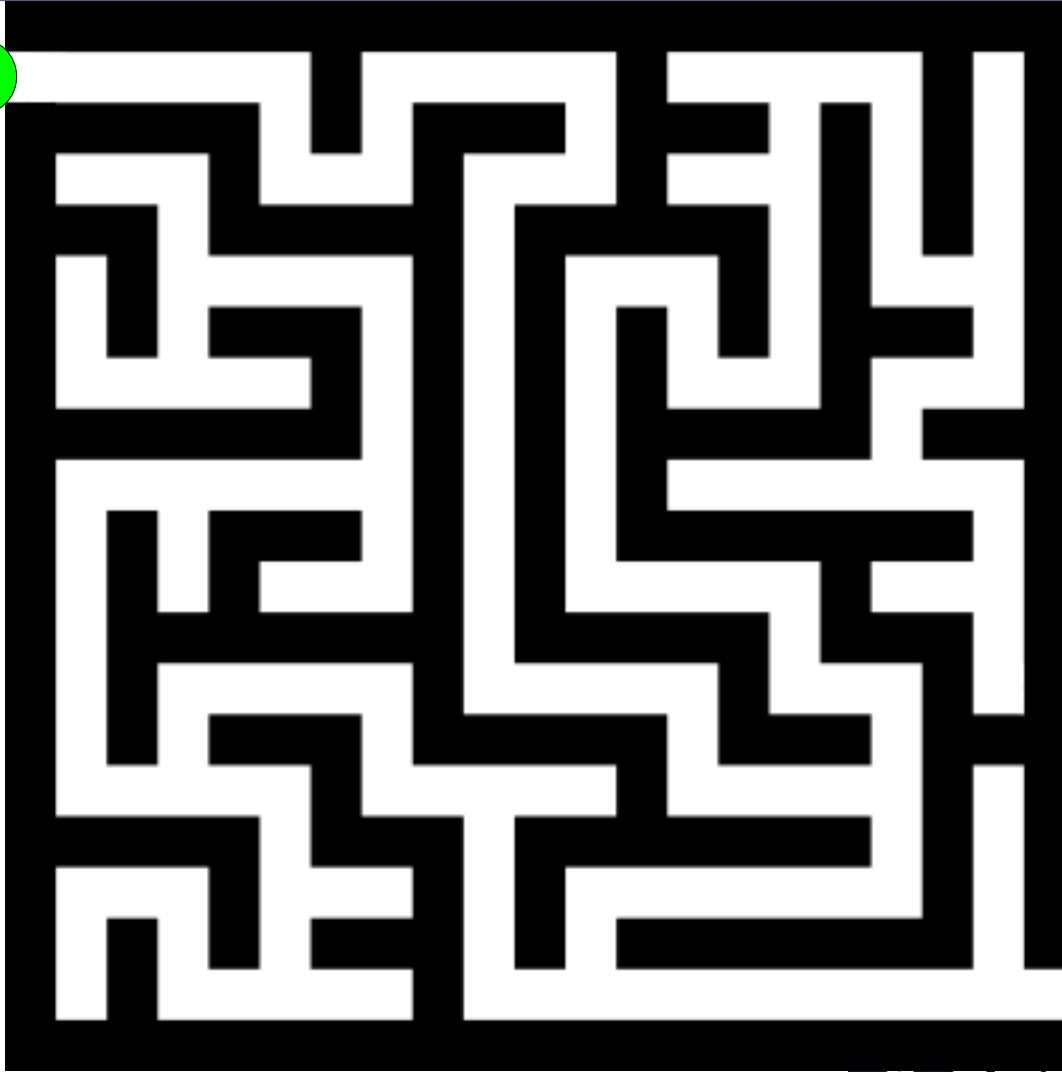














“What's ssh?”

Picture of very hard mountain here

Picture of very hard mountain here



- Mental model of how the Grid works
- After that:
 - Batch computing
 - Job submission
 - Job monitoring
 - “Where's my output?”
 - Not killing a site
 - Meta-scheduling
- So ... just about everything

- Mental model of how the Grid works
- After that:
 - Batch computing
 - Job submission
 - Job monitoring
 - “Where's my output?”
 - Not killing a site
 - Meta-scheduling
- So ... just about everything

- Electrical Engineering
- Optical Engineering
- Solid State Physics
- Statistics

- Electrical Engineers
 - Running their own code
- Dates back to beginning of the the cluster at Glasgow
- Was always meant to be a Grid Project
- Used shared areas a lot
 - Not quite best fit for Grid systems
 - AFS as a replacement

- Driven by Lumerical
- Commercial software; 10 user licence granted by Lumerical
 - Available to UK opto-engineering community
- Wrote custom driver scripts to hide the input and output staging
- Can use MPI; often does

- Primarily multi core MPI jobs
- CASTEP
- Lots of CASTEP
- Interesting scaling behaviour - nodes for peak performance for our GigE coupled network same as on HECTOR
 - (HECTOR still a wee bit faster, of course)
- And more CASTEP

- R package
 - (Also in use by other VO's: DAMES)
- Interesting quirk on R Libraries, and working out how to handle them
- Users were inexperienced with batch computing
 - But picked it up quickly

- Something to drive adoption
 - Normally use of backfill for free
- Use of commercial software licences might be an avenue worth exploring
 - Small number of licences resulting in wide net
- User education is *always* more tricky than expected

Third (and final!) section

- Software that wasn't designed for the Grid

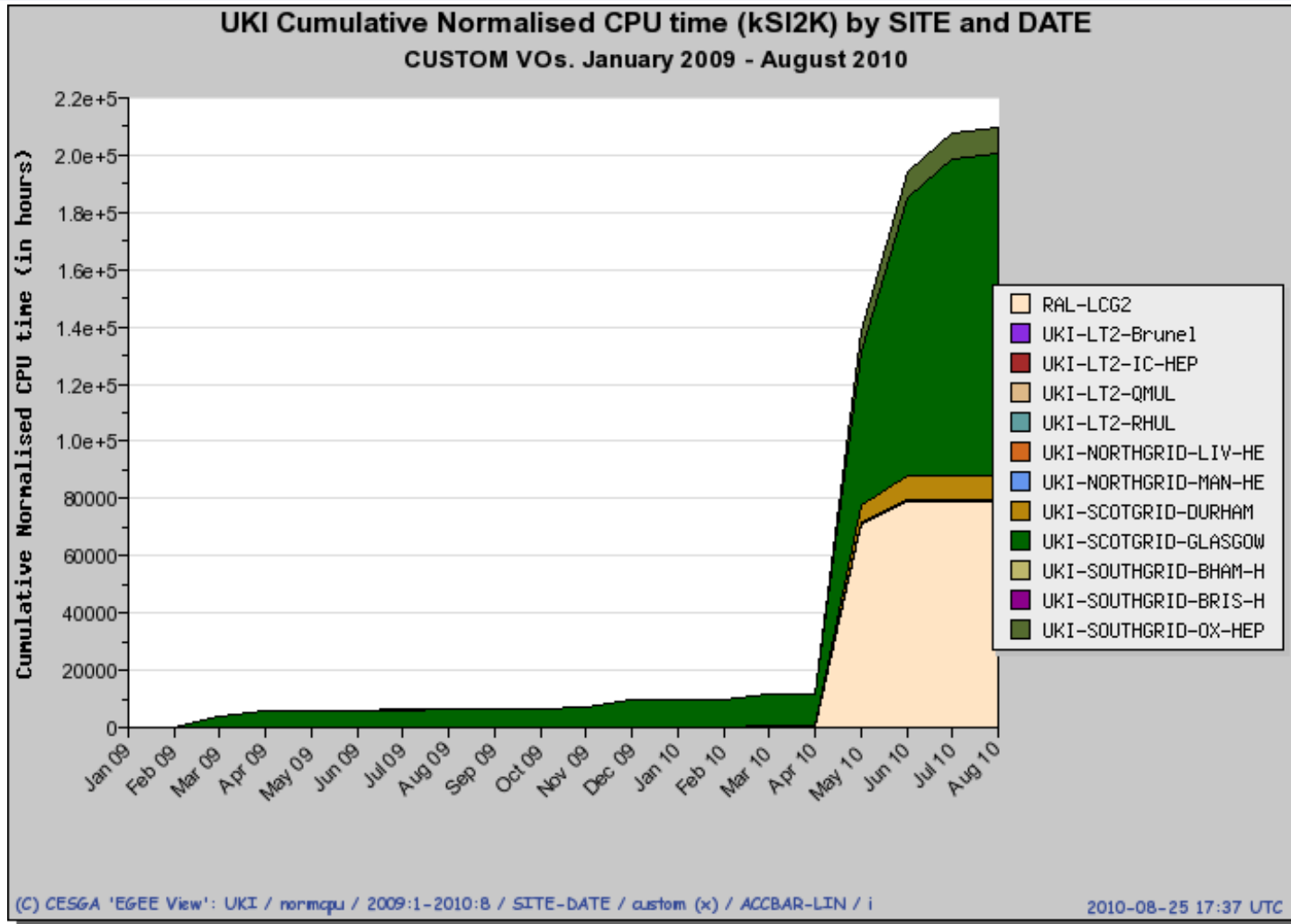
- Software that wasn't designed for the Grid
- Software that wasn't designed for Batch computing

- Software that wasn't designed for the Grid
- Software that wasn't designed for Batch computing
- Software that wasn't designed

- But is done
- Software that assumes a GUI
- Software will multithread up to the 'whole node' rather than a set list of processes. Not MPI - must be same machine.
- Software that assumes it's run on a desktop - and can monopolise it

- But people want / expect
- HTTP stage-in support
- CPUTime / WallTime support for Job submission
- MPI jobs
 - Fabric matters - InfiniBand is different from Gig Ethernet!

- NGS affiliate
 - Support ngs VO
 - And some basic software (that's probably already installed)
- Not too hard
- Decent back fill
- VO's work better the more sites they are enabled at



ngs gardens open
for charity

[NGS Gardens](#) [NGS Near You](#) [News](#) [About Us](#) [Shop](#) [Contact NGS](#)



100 inspirational gardens

dream gardens of England

Exclusive Tours [Warner Leisure Hotels](#) [Coffee Morning](#) [Classic Cakes](#) [Dream Gardens Of England](#)



Garden Search

Postcode Town County Garden Name

Postcode
Please enter a valid postcode

Distance
25 miles

Date Range
Next 7 Days

FIND

Latest News

NGS Receives Donation
24/08/2010
Press day at Chelsea was great news for the NGS. Nick Vincent, Chief Executive of Three Counties Agricultural Society, presented a donation of £2700 to a delighted Penny Snell, Chairman of the NGS.

A Little Piece of Paradise - Episode 5
24/08/2010
In the final programme in a new series, ITV Wales' weather presenter Ruth Wignall continues her journey around Wales visiting some of the gardens taking part in this year's National Gardens Scheme.

Win Wows Janice
23/08/2010
Janice Montgomery from London visited the NGS stand at Chelsea and fell in love with the stunning

The Yellow Book

Order your Yellow Book online here



Visit A Garden

With over 3,700 lovely gardens open for charity, you'll find the perfect one for you to visit right here



Features

Warner Leisure Hotels
As a keen garden visitor supporting the National Gardens Scheme we would like to introduce you to Warner Leisure Hotels the UK's leading Short Breaks provider.

A Little Piece of Paradise

Open Your Garden

Help raise money for charity by opening your garden today

