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# BEAR – Take 2

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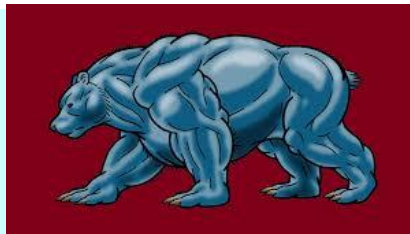


Dr John Owen and Paul Hatton  
IT Services

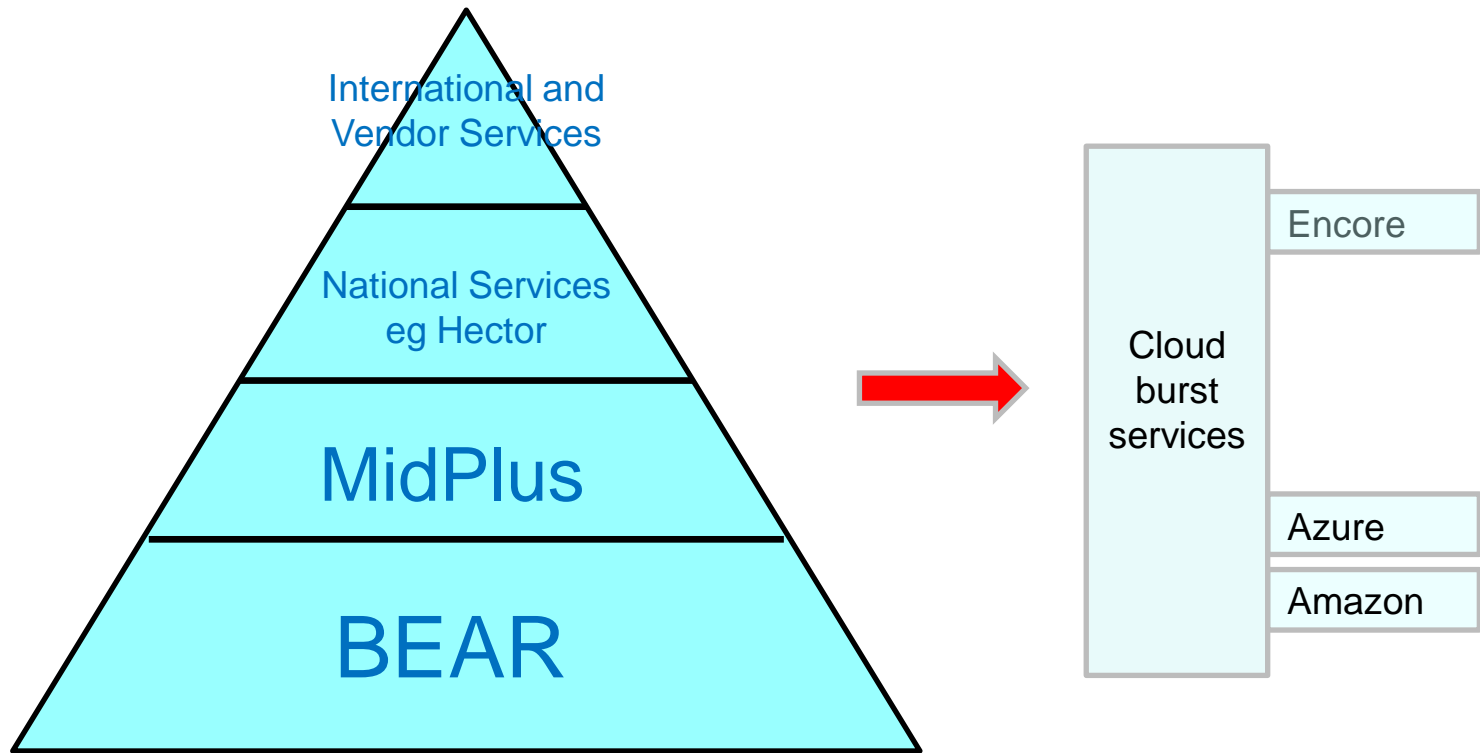
# BEAR and MidPlus

<http://www.birmingham.ac.uk/bear>

- BEAR and BlueBEAR
  - Birmingham Resource
    - Batch Processing (number crunching)
    - Windows
    - Data mining / database / Hadoop
    - Rendering
    - Visualisation
    - Highly scalable conferencing and DCV (desktop cloud visualisation)
- MidPlus
  - Regional Resource
  - Birmingham, Nottingham, Warwick, Queen Mary (London)
  - Compute and storage



# A Hierarchy of (Compute) Services



# Why BlueBEAR?



**In American Indian mythology, Bear is the font of all wisdom and the source of all knowledge.**

**They have also been spotted around the Denver Convention Centre.**



# Funding (BEAR)



- Guaranteed annual funding over 4 years from IT Strategy and IT Services budgets (2011/12 – 2014/15)
- ‘Year on year’ funding but with front-loaded spend
- Money available in future years for upgrades based on usage profile
- Research groups supplementing BlueBEAR configuration (as of 31 May approx 10% of the cluster had been funded in this way)





- Funded by EPSRC (£1.6M, April 2012) with supporting funds from each of the 4 institutions
- CPU into Warwick and Queen Mary
- Archival storage into Birmingham and Nottingham
  - Mirrored between the 2 sites for resilience
- Why storage?
  - Safeguarding our intellectual property
  - ‘Open access’ agenda

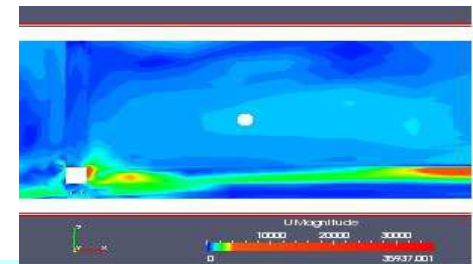
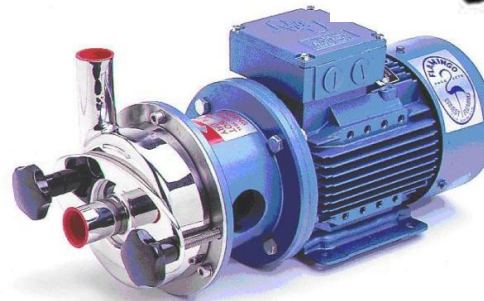
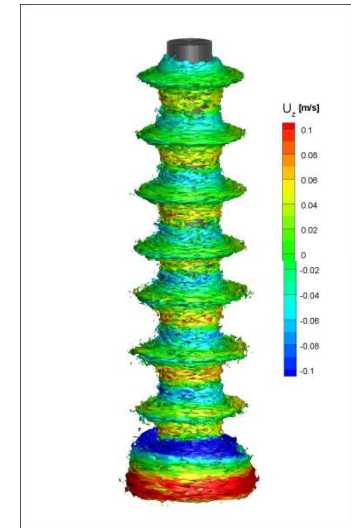
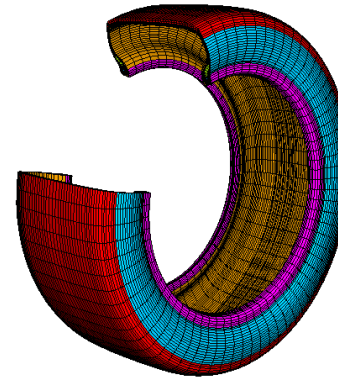


# Research Output: Some Birmingham Examples

<http://www.birmingham.ac.uk/bear>



Tyre design	
Mixing technologies	
Casting technology for aerospace components	
Leaking pipes	
Heat exchangers	
Aerodynamics of train design	



# Research Output: Some Birmingham Examples (cont)

<http://www.birmingham.ac.uk/bear>

Food Technology (margarine)

'Thinking machines' - chess

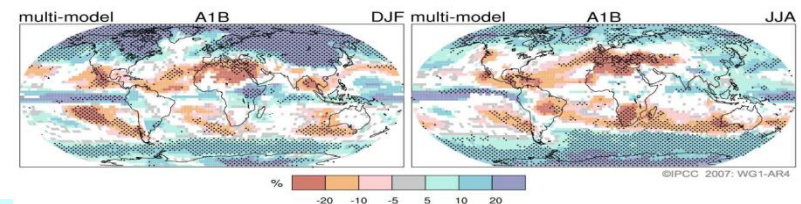
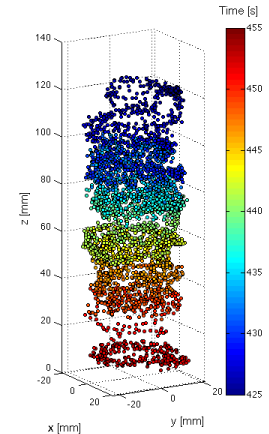
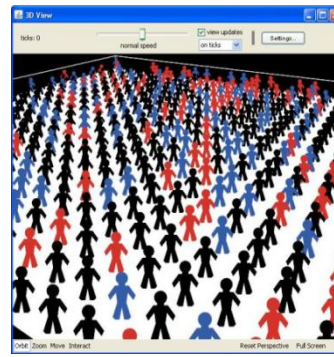
Voting tactics

Climate change

Social stigma

Medieval warfare

Submerged landscapes



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# New Opportunities



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# Any questions?

A BlueBEAR Cluster

