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Dynamic Grid Optimisation

W. H. Bell, D. G. Cameron

University of Glasgow

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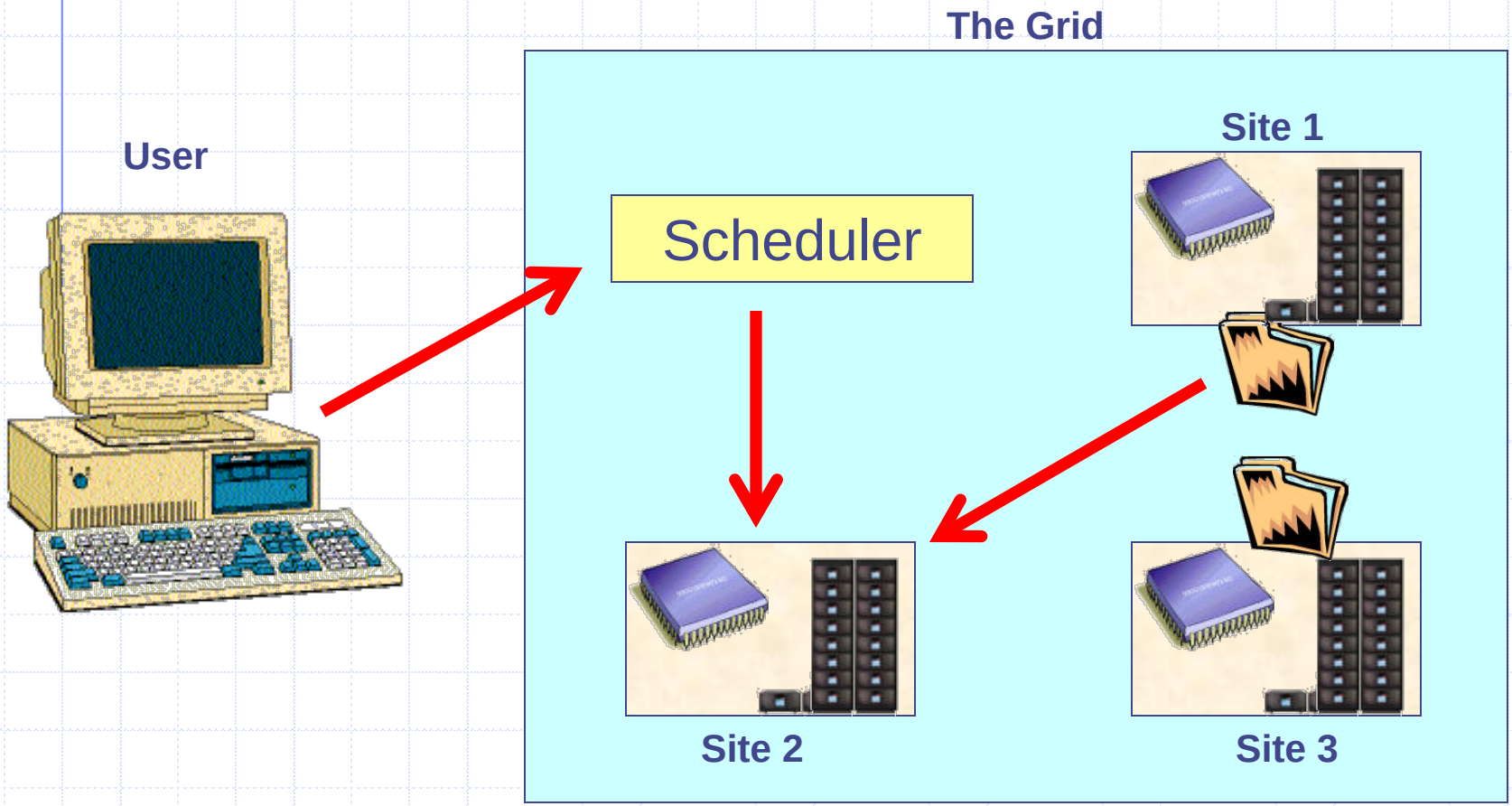
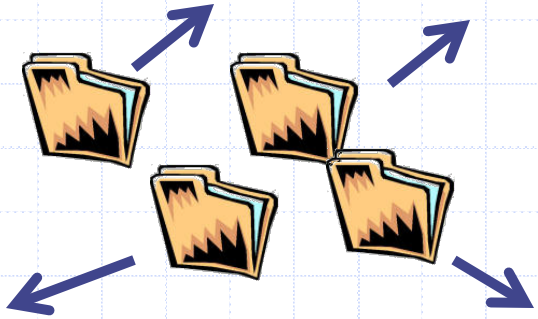


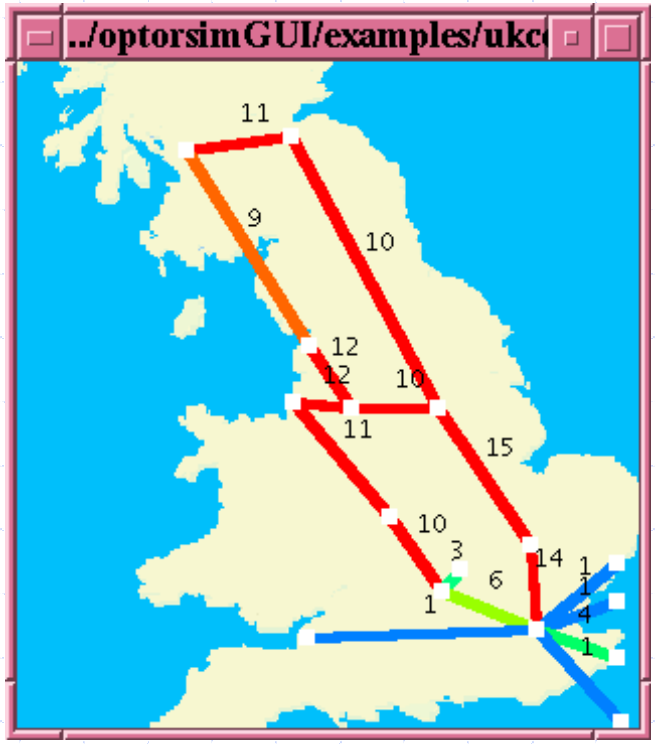
Replica Optimisation



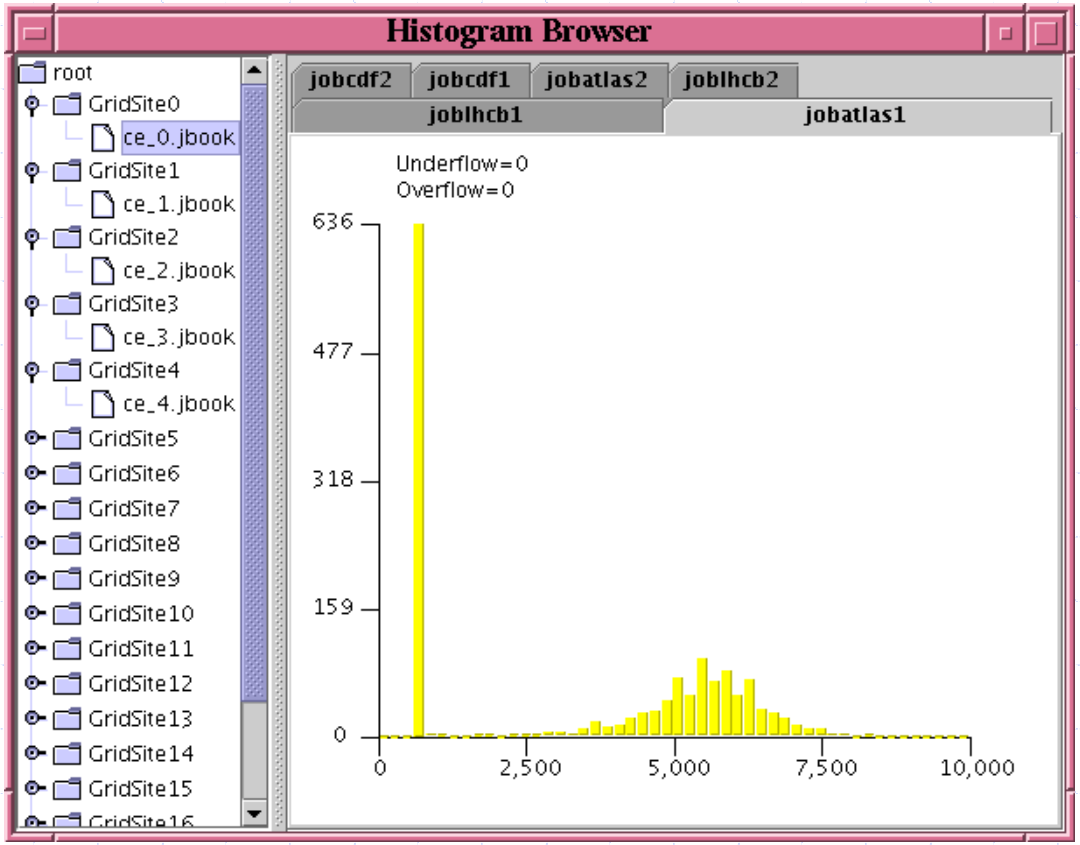
- Programs running at many different sites use files distributed throughout the Grid.
- Many programs run. File access patterns collected.
- Introduce controlled intelligent copying to optimise the Grid.
- Test optimisation algorithms using simulator: Optor.

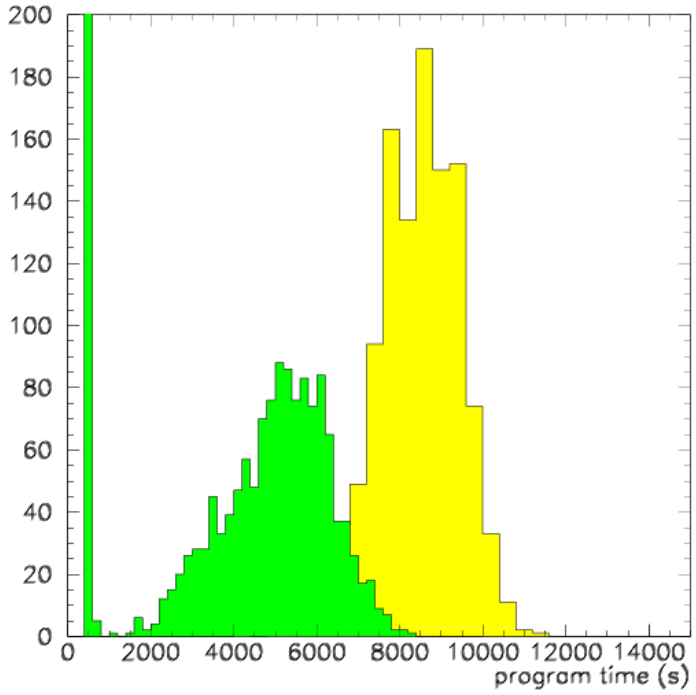
Optor – a replica optimiser simulation

- Simulate prototype particle physics Grid.
- Input site policies and experiment data files.
- Introduce replication algorithm:
  - Files are always replicated to the local storage.
  - If necessary oldest files are deleted.



Results





Introduction of a replication algorithm significantly reduces network traffic and program running times.