



Visualization and Interaction Services for heart and tumour modelling Report from RAL

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Presentation Overview

- Overview of RAL's approach for scalable, generic visualization services
- Visualization and image processing Services
- Data formats and desktop user interfaces
- Status report on tumour modelling
- Roadmap for near future



Grid Enabled Visualisation

- Grid computing is required for visualization
 - When the amount of data is very large and is already on the grid compute resource
 - The visualization techniques required are themselves compute intensive or specialised.
 - Better response time is required.

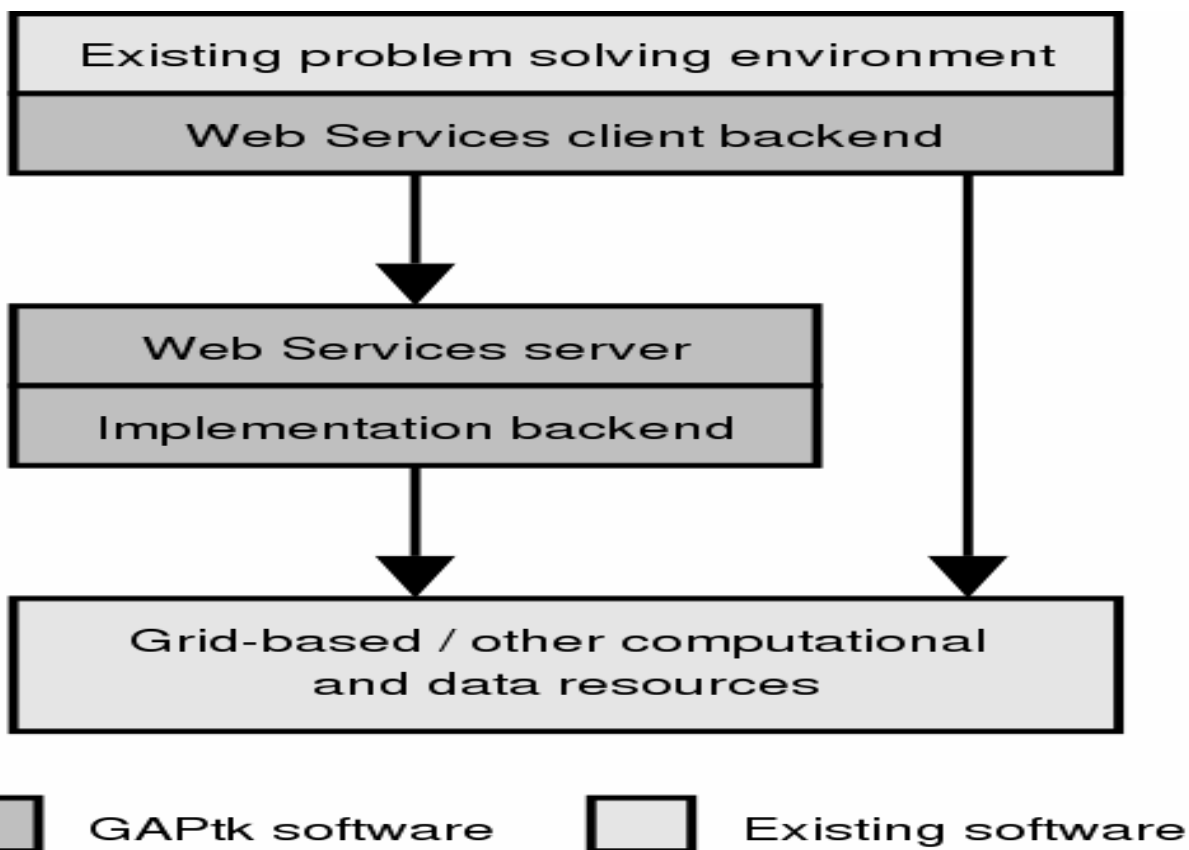


Grid Enabled Visualisation (2)

- The challenges for visualization and interactive services for IB are:
 - Support near real-time interactivity and collaboration
 - Visualization and image processing techniques to support variety and quantity of data
 - Client-side vs server side rendering for quality and purpose
 - Interfaces to computational steering libraries of user's choice
 - Desktop user interfaces for different teams and applications



Architecture





Some of the services and interfaces

Services

- Slices
- Animation
- Isosurfaces
- View dependent animation
- Publication quality postscript generation
- Some image processing services

Interfaces

- Matlab
- CoolGraphics
- Meshalyzer
- IRIS Explorer
- Custom FLTK interface



Tumour modelling environment

Overview diagram



Near future scheduled work

- Completion of the exemplar for tumour modelling
- Completion of the FLTK based tumour modelling environment
- Integration of the advanced services into Meshalyzer and CMISS
- Interface to SRB
- Integration of the steering libraries clients
- Modules for collaborative working