Title

Kitware Workshop

Dates

6th-10th July 2015

Visitors

Marcus Hanwell – Kitware (confirmed)

6th July 2015 - Hands-On Paraview Workshop (Imperial - London)

Timings:

- 10am-5pm with breaks for lunch and coffee

Topics:

- PISTON framework for GPU acceleration
- PISTON + pvrenderserver
- Headless, X-less installation for batch processing
- OpenGL antialiasing
- Adding custom filters through the Python interface. This might be used for example to import an external package (e.g. Dolfin, Firedrake, PyFR) so that we can use these packages to perform tasks such as projecting between function spaces. Will this work in parallel?
- Adding Paraview plugins. This might be used to encapsulate the above functionality.
- Discussion of the new rendering code in VTK/ParaView
- GPU acceleration and VTKm

Attendees:

- PRISM Staff
- PRISM Students

Notes:

- Attendees to bring a laptop

7th July - Face-to-face Technical Meetings with Staff and Students (Imperial - London)

Topics:

- Various

Attendees:

- PRISM Staff
- PRISM Students

8th July - High-order Visualisation with Paraview (Imperial - London)

Timings:

- 10am-5pm with breaks for lunch and coffee

Topics:

- A recap of the current support for high-order elements within VTK. Emphasis on the high-order elements types that are available and how sub-divison is performed (error in geometry vs. field).
- A description of the high-order element types employed by Nektar++/PyFR and how we currently visualise high-order elements (manual subdivison).
- Discuss any issues which prevent us (the codes within PRISM) from using the existing high-order support that exisits within VTK.
- Showcase existing solutions (the high-order plugin by Sébastien Blaise) and talk about the issues we have encountered using them in the real world.
- Discuss what would be required going forwards in order to resolve these issues including adding additional element types and ensuring that the degree of subdivision is based off of errors in the fields rather than the geometry.
- If there is time/interest then consider alternative strategies for high-order visualisation (ray tracing as opposed to sub-dvision).

Attendees:

- PRISM Staff
- PRISM Students

9th July - Paraview Industry Workshop (CFMS - Bristol)

Timings:

- 11am-5pm with breaks for lunch and coffee

Topics:

- A beginners session followed by a master class so that we can cater for different audiences. It would be good if we can make both sessions interactive by getting attendees to bring laptops.
- Topics for the beginner session should be simple but masterclass could focus on the Python scripting api including catalyst and cinema.

Attendees:

- PRISM Staff
- Industry (Rolls Royce, BAE Systems, Arup …)

10th July - Free Day (Imperial - London)