Graphics API:
Work in progress

8. Rules for Monday Developers' Telecoference

A. Presentation shall take no more than 17.5 minutes (17 min 30 sec) when rehearsed beforehand. Developers are expected to rehearse the presentation at least once before commanding the attention of an audience of up to 30 busy people nationwide.

B. Emphasis on design issues. Demonstrations shall not try to cover a maximum number of functionalities and usage patterns, but shall demonstrate only a key feature or two.
Concepts

It **is:**

- Front end to VTK and Matplotlib
- A matlab-style api
- Callable as set of (pyre?) panel components
- Well documented

It **is not:**

- A polished GUI—real gui would have bottom panel for common options, additional convenience menus
Repository:

danse.us/graphics
  \hspace{1cm} \text{branches/vtkTesting2}
  \hspace{1cm} \text{(new vtk functionality)}

  trunk \text{ (matplotlib)}
User's guide:

- Prereqs: matplotlib (svn, including my patch in danse.us/graphics/trunk/patches), vtk (kitware) and its python bindings (~v5.0), wx (v2.8)
- Optional: pyre (for installation)
- Installation:
  1) Check out trunk
  2) Run mm from top directory and run ApiTester.py
  or
  1) Check out branches/vtkTesting2
  2) Put top directory in PYTHONPATH and call graphics/MainPlotWindow.py (or use eclipse—paths already set)
- Demo scripts:
  danse.us/graphics/branches/vtkTesting2/graphics/examples.py
- Movie: danse.us/graphics/trunk/
- Release page
Developer's guide:

- Doxygen documentation in danse.us/branches/vtkTesting2/docs/html
- UML class diagrams in danse.us/branches/vtkTesting2/docs/uml
- Get Vtk/Matplotlib panel, PlotBrowser panel, or PropertiesEditor panel from AUI and add to your application
- Pyre compatibility planning
Design of API:

(html)
Scripting examples:

see danse.us/graphics/branches/vtkTesting2/examples

eExample:

# compute streamtube
x = seq(-2,2,1)
xx,yy,zz = meshgrid(x,x,x)
vv = xx*exp(-xx**2-yy**2-zz**2)
px,py,pz = gradient(vv)
streamtube(xx,yy,zz,px,py,pz,[0.1]*5,[-.5,-.2,0,.1,.5],seq(-2,2,1),
    #zmin=-.2,zmax=.2,
    daspect=[1,1,1])
ToDo List:

• add items to wiki
  http://danse.us/trac/tickets/wiki/StandardGraphical
• please leave name or email address
• integrate with subgroup app or two to demonstrate how to integrate—volunteers?
• different class structure (see Chaco). Layers

Previous requests:
→ “google-maps” zooming, panning
→ change line styles instead of colors
→ add plottables type and other data objects
→ multiple figures
→ polar plots, etc.
→ exponential range compression