

ABSTRACT

The XAL [1] Application Framework is a framework for rapidly developing document based Java applications with a common look and feel along with many built-in user interface behaviors. The *Bricks* GUI builder consists of a modern application and framework for rapidly building user interfaces in support of true Model-View-Controller (MVC) compliant Java applications. *Bricks* and the XAL Application Framework allow developers to rapidly create quality applications.

XAL Application Framework

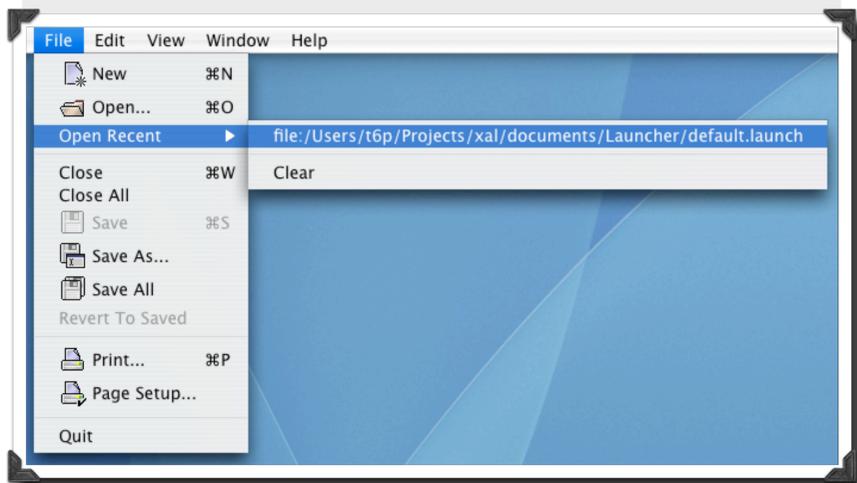
The XAL Application Framework is a mature Java package for rapid development of quality document based applications sharing a common look and feel. Over four dozen applications have been written for the accelerator physics group at SNS [2] using this framework.

Main Features

- Provides a common look and feel with standard menus
- Developers can easily customize menus
- Many common features are provided with little or no effort on the part of the developer
- Developers implement callback methods which the framework uses to process events
- Allows the developer to focus on what matters most

Standard Menus

Standard menus are provided to deliver a consistent look and feel. Users get convenient features such as recent file tracking without any work.



Common Callback Methods

The developer implements callback methods and hooks in the document and application adaptor classes. Below are some common methods in the application adaptor.

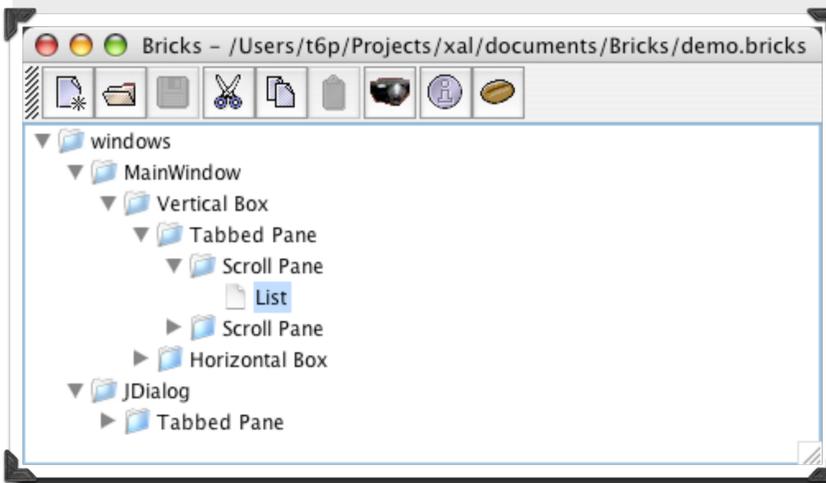
Method	Responsibility
readableDocumentTypes	Provide a list of document types the application can open
writableDocumentTypes	Provide a list of document types the application can write
newEmptyDocument	Create a new empty document
newDocument	Create a new document given a URL to the document source
applicationName	Provide the application's name
applicationFinishedLaunching	Optional callback which is called when the application has finished launching
customizeCommands	Implement actions for menu definition items

Bricks

The *Bricks* application is a layout tool for rapidly constructing views and supports the MVC design pattern.

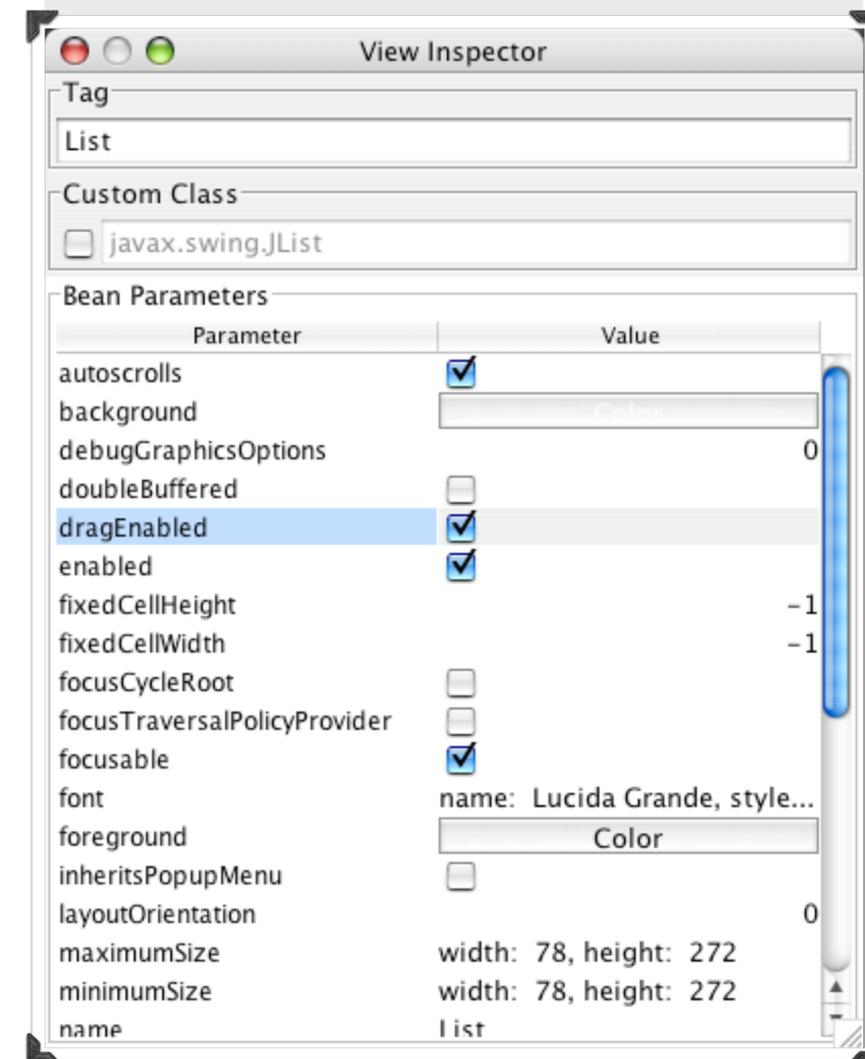
Main Features

- MVC compliant
- Generates one XML file for all of the views you want
- Integrates well with the XAL application framework
- Convenient for both Java and Java based scripting languages since no compilation is needed
- Graphically layout views
- Convenient view hierarchy browser



View Inspector

Many Java bean properties of a selected view can be set easily through the view inspector. This eliminates the need to write tedious code.



Bricks Runtime

While the *Bricks* application is a graphical tool for designing views and storing the design in an XML file, the *Bricks* runtime generates a window reference from that XML file. The developer typically implements one or more controller classes to manage the views. For example, a controller can get a table view from the window reference and assign a model to populate it with data.

References

- [1] XAL, <http://neutrons.ornl.gov/APGroup/appProg/xal/xal.htm>
 [2] SNS, <http://neutrons.ornl.gov>