Converting R3 Athena Widget Applications to R4

The Athena widget set has gone through many changes since R3, new widgets have been added, and many of the existing widgets have be rewritten to be have more features and be more robust. While much thought has gone into making the widget set compatible with earlier versions, there have been some changes made that will effect application code written against the R3 Athena widget set.

This document describes how to get your R3 applications running under the new Athena widget set, as well as how to convert your code to not depend upon pieces of the widget set that are no longer supported, and have only been preserved for compatibility.

1. Getting R3 Clients to Run with the R4 Athena Widgets

While many changes have been made to the Athena widget set, most of the R3 client code will build and run if the widget library and the application are built with the **XAW_BC** flag set.

2. Incompatible Changes

There were only two incompatible changes made to the Athena widget set in this release.

1) The List widget's ListReturnStruct had a member called *index* in R3. Since some operating systems had a global symbol that collided with this name it had been change to *list_index*.
2) The Scrollbar had a resource named **top**. This resource collided with one of the Form widget's constraint resources, to prevent this problem the name of the scrollbars **top** resource has been changes to **topOfThumb**.

3. Removing R3 dependencies from Client Applications.

Although the **XAW_BC** flag will allow your client to build, features that are only active when this flag is set will be removed from future releases of the widget set. To get your client to build ‘‘Cleanly’’ under the Release 4 Athena widget set you must do the following.

Change Header Files	All header files in the Athena widget set have been moved from **<X11>** to **<X11/Xaw>**. For example the Label widget's header file will now be found in **<X11/Xaw/Label.h>**.
Change **Xt** to **Xaw**	All Convenience routines and most of the other symbols provided by the Athena widget set now start with the letters **Xaw** instead of **Xt**. This helps distinguish those things that are part of the Athena widget set, from those are in the Intrinsics. When is doubt about whether or not the name has changed see the *Athena Widget Set - C Language Interface*.

In addition, some of the old widgets have had their interface slightly modified.

Box	No changes will be necessary.
Command	No changes will be necessary.
Dialog	No changes will be necessary.
Form	No changes will be necessary.
Grip	No changes will be necessary.
Label	No changes will be necessary.
List	The **XawListReturnStruct** member *index* is now called *list_index*.
Scrollbar	

- The **thumbProc** is no longer supported use **jumpProc** instead.
- Change the **top** resource to **topOfThumb**.

Text

- AsciiString and AsciiDisk widgets have been replaced with the AsciiText widget. This widget supports editable disk sources and memory management. If you want your string to be used in place (R3 Style) set the **useStringInPlace** resource. See *Athena Widget Set - C Language Interface*. This change of class means that the following changes will be necessary.
    - Class symbol used in **XtCreateWidget** is now **asciiTextWidgetClass**.
    - header files are now **AsciiText.h** and **AsciiTextP.h**.
- The **textOptions** are no longer supported. These features have been broken up into separate resources so that string converters could be registered on these options.

Viewport No changes will be necessary.

VPaned This widget has been renamed Paned, since it now supports horizontal scrolling. This change of class means that the following changes will be necessary.

- Class resource name is **Paned**.
- Class symbol used in **XtCreateWidget** is now **panedWidgetClass**.
- header files are now **Paned.h** and **PanedP.h**.