Migration Toolbox Manual

Chapter 3

UIS Conversion

Programs that convert Khoros 1.0
UIS file to 2.0 UIS files

Chapter 3 - UIS Conversion

A. Introduction to UIS conversion routines

This chapter explains the low level routines that help users convert User Interface Specification file (UIS). One routine is included to convert from Khoros 1.0 UIS files to Khoros 2.0 UIS files, and another is used to convert the physical layout of pane files for cantata, so that they conform to the same visual presentation as other panes displayed from the visual language. These routines are uisupdate and kfixpane respectively.

A.1. uisupdate — *Updates an old Khoros 1.0 Patch 5 UIS file to a new Khoros 2.0 UIS file.*

Object Information

Category:	*Migration Tools*
Subcategory:	*UIS Migration*
Operator:	*Update UIS File*
Object Type:	*kroutine*
In Cantata:	*No*

Description

This program will update a Khoros 1.0.5 UIS file to a Khoros 2.0 UIS file. It will make a backup of the Khoros 1.0.5 UIS file, called {uis_filename}.old.

After running uisupdate on a UIS file, check the results using "preview" or "guise".

NOTE that error checking of UIS files in Khoros 2.0, both for syntax and for logic, is much more stringent than it was in Khoros 1.0; therefore, a correctly updated UIS file may still produce errors when an attempt is made to display it with the Khoros 2.0 "preview" or "guise". Error messages are fairly self-explanatory; simply read the message and fix the error with your visual editor.

You will notice that converted GUI's do not look as good as they did under Khoros 1.0. This is because interpretations of geometry strings have changed somewhat for Khoros 2.0, due to the support of multiple widget sets. After using uisupdate to update a UIS file, it is strongly recommended that you use guise to interactively "clean up" your GUI so that it looks good under Khoros 2.0. In particular, you may notice that logical, list, and cycle selections might be truncated to the point where you cannot read the label on the button. Also, buttons that looked good with a height of 2 under Khoros 1.0 will look big and awkward under Khoros 2.0; use guise to resize them down if desired.

Also be aware that if desired, you may use guise to "turn off" the scrollbar on an integer or float selection you don't want it. Double selections are also supported under Khoros 2.0; you may have cases where a double selection is more appropriate than the float selection that was used in Khoros 1.0.

The new "stringlist" selection may be useful in cases where you want the user to input a string, but there are a number of "most commonly used" strings that could be used in a pulldown menu. Use the stringlist selection if it is appropriate.

In addition to the Mutually Exclusive groups (choose ONE and ONLY ONE) supported by Khoros 1.0, Khoros 2.0 also supports Mutually Inclusive groups (choose ALL or NONE) and Loose Groups (choose AT LEAST ONE). There may be situations where one of the latter grouping types may be appropriate.

Both Help (-H) lines and Blank (-b) lines in the Khoros 2.0 UIS file have variable names, where they did not have one in Khoros 1.0. Uisupdate will put in a variable name for you, but the name is simply "help%d" or "blank%d", where %d is the number of help or blank lines in the UIS file. Since these variable names are not very descriptive, you may want to change them to something more intelligent.

Examples

The following two example panes are a syntactically correct Khoros 1.0 pane file followed by the syntactically correct Khoros 2.0 pane file that is generated by uisupdate from the Khoros 1.0 pane.

```
% cat vgef.pane
-F 4.2 1 0 0x0+0+0 +0+0 'Cantata' cantata
  -M 1 0 100x40+10+20 +27+1 '2D Spatial Domain Filters' 2Dspatl
     -P 1 0 80x38+22+2 +14+0 'First Derivative Operator' vgef
        -b +12+1 'for Symmetric Exponential Filter'
        -I 1 0 0 1 0 1 50x1+2+3 +0+0 ' ' 'Input  Image' 'input image' i
        -O 1 0 0 1 0 1 50x1+2+4 +0+0 ' ' 'Output Image' 'output image' o
        -b +2+6 'Filter Parameters:'
        -f 1 0 1 1 0 48x1+4+7 +0+0 0 1 0.45 ' a0 ' 'Filter Parameter GEF' a0
        -b +2+9 'Hysteresis Thresholds:'
        -i 1 0 1 1 0 48x1+4+10 +0+0 0 255 3 ' T1 ' '1st Hysteresis Threshold' t1
        -i 1 0 1 1 0 48x1+4+11 +0+0 0 255 4 ' T2 ' '2nd Hysteresis Threshold' t2
        -b +2+13 'Minimum Length of a Segment (in Pixels):'
        -i 1 0 1 1 0 48x1+4+14 +0+0 0 100000 5 'Length' 'Minimum Pixel Number in a Segment' l
     -R 1 0 1 13x2+1+16 'Execute' 'do operation' vgef
        -H 1  13x2+39+16 'Help' 'man page for visef' KHOROS_HOME/doc/manpages/vgef.1
     -E
  -E
-E

% uisupdate -i vgef.pane
Overwrite 'vgef.pane'? (Yes/No) [Yes]: y
UIS written to file vgef.pane

% cat vgef.pane
-F 4.3 1 0 20x5+0+0 +0+0 'Cantata' cantata
  -M 1 1 20x5+10+20 +27+1 '2D Spatial Domain Filters' 2Dspatl
    -P 1 0 80x38+22+2 +14+0 'First Derivative Operator' vgef
      -b +12+1 'for Symmetric Exponential Filter' blank0
```

```
        -I 1 0 0 1 0 1 50x1+2+3 ' ' 'Input  Image' 'input image' i
        -O 1 0 0 1 0 1 50x1+2+4 ' ' 'Output Image' 'output image' o
        -f 1 0 1 1 0 48x1+4+7 0 1 0.45 0 1 0 ' a0 ' 'Filter Parameter GEF' a0
        -i 1 0 1 1 0 48x1+4+10 0 255 3 1 0 ' T1 ' '1st Hysteresis Threshold' t1
        -i 1 0 1 1 0 48x1+4+11 0 255 4 1 0 ' T2 ' '2nd Hysteresis Threshold' t2
        -i 1 0 1 1 0 48x1+4+14 0 100000 5 1 0 'Length' 'Minimum Pixel Number in a Segment' l
        -R 1 0 1 13x2+1+16 'Execute' 'do operation' vgef
        -b +2+6 'Filter Parameters:' blank1
        -b +2+9 'Hysteresis Thresholds:' blank2
        -b +2+13 'Minimum Length of a Segment (in Pixels):' blank3
        -H 1  6x1+39+16 'Help' 'man page for visef' KHOROS_HOME/doc/manpages/vgef.1 help
      -E
    -E
  -E
```

See Also

kdarwin(1), kfixpane(1)

Restrictions

Unfortunately, uisupdate is not smart enough to follow paths to other UIS files that are included with (-k) or (-p) lines. If your UIS file includes a subform UIS files using the (-k) line, or a pane UIS file using a (-p) line, you will have to follow this procedure:

1. Use '#' in the 1st column to comment out the (-k) line and its corresponding (-d) line, or to comment out the (-p) line and its corresponding (-g) line.

2. Run uisupdate on all the UIS files individually, both the UIS file that includes the others and the others that are included.

3. Make sure that the variable name on the (-d) line matches that of the (-M) line in the included subform file, and that the variable name on the (-g) line matches that of the (-P) line in the included pane file. In Khoros 1.0 UIS files, subform buttons were matched with subforms and guide buttons were matched with panes according to their order of occurrance in the UIS file. In Khoros 2.0, they are matched according to the variable name, which must be identical for each pair.

References

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Command Line Arguments

```
Usage for uisupdate: Updates an old Khoros 1.0 Patch 5 UIS file to a new Khoros 2.0 UIS file.
% uisupdate
  -i         (infile) old UIS file

  [-force]   (flag)   force over-write of old UIS file (suppress prompting)?
```

A.2. kfixpane — *Update Pane UIS File to Khoros 2.0 Conventions*

Object Information

Category:	*Migration Tools*
Subcategory:	*UIS Migration*
Operator:	*Fix Pane File*
Object Type:	*script*
In Cantata:	*No*

Description

The program *kfixpane* is a perl script which takes one or more UIS pane files, and ensures that it conforms to certain guidelines.

These guidelines are for geometry and layout rules that are common to all glyphs shown in *cantata* This program is primarily used by *kdarwin* to make sure that converted uis files conform to the 2.0 layout and geometry rules.

The checks and changes made are:

- Sets the minimum geometry of the pane to be 52 by 1.
- Makes sure the subform title is on the first line of the subform.
- Puts the pane one line down on the subform, so the subform title is visible.
- Adds an "Options" pull-down menu in the upper left of the pane. The menu contains an item to bring up the Copyright.
- Ensures there is a "Quit" button at the top right of the pane.
- Ensures there is a "Help" button at the upper right of the pane, to the left of the Quit button.
- Sets the geometry of input and output file selections (-I and -O), unless they appear within a grouping UIS construct.
- If there is an "Options" action button on the pane, it is removed.
- If there is a "Copyright" button on the pane, it is removed, since a "Copyright" item is put in the options menu.

Examples

This example shows how we took the syntactically correct Khoros 2.0 vgef pane we generated from *uisupdate* (see the *uisupate* man page for more details), and converted it into a pane that conforms with the Khoros 2.0 pane layout guidelines.

```
% cat vgef.pane

-F 4.3 1 0 20x5+0+0 +0+0 'Cantata' cantata
  -M 1 1 20x5+10+20 +27+1 '2D Spatial Domain Filters' 2Dspatl
    -P 1 0 80x38+22+2 +14+0 ' ' vgef
      -b +12+1 'for Symmetric Exponential Filter' blank0
      -I 1 0 0 1 0 1 50x1+2+3 ' ' 'Input  Image' 'input image' i
      -O 1 0 0 1 0 1 50x1+2+4 ' ' 'Output Image' 'output image' o
      -f 1 0 1 1 0 48x1+4+7 0 1 0.45 0 1 0 ' a0 ' 'Filter Parameter GEF' a0
      -i 1 0 1 1 0 48x1+4+10 0 255 3 1 0 ' T1 ' '1st Hysteresis Threshold' t1
      -i 1 0 1 1 0 48x1+4+11 0 255 4 1 0 ' T2 ' '2nd Hysteresis Threshold' t2
      -i 1 0 1 1 0 48x1+4+14 0 100000 5 1 0 'Length' 'Min Pixel Num in a Seg' l
      -R 1 0 1 13x2+1+16 'Execute' 'do operation' vgef
      -b +2+6 'Filter Parameters:' blank1
      -b +2+9 'Hysteresis Thresholds:' blank2
      -b +2+13 'Minimum Length of a Segment (in Pixels):' blank3
      -H 1  6x1+39+16 'Help' 'man page for visef' KHOROS_HOME/manpages/help/vgef
    -E
  -E
-E

% kfixpane -tb retro -oname vgef -type kroutine -short-desc "My vgef"
-rpath "mybin/vgef" -help '$RETRO/objects/kroutine/vgef/help' vgef.pane

% cat vgef.pane

-F 4.3 1 0 52x1+0+0 +0+0 'Cantata' cantata
  -M 1 1 52x1+0+0 +1+0 'My vgef' 2Dspatl
    -P 1 0 52x1+0+1 +14+0 ' ' vgef
      -Q 1 0 5x1+47+0 'Close'
      -D 1 0 9x1+0+0 'Options' _gui_options
        -H 1 6x1+0+0 'Copyright' '(C)' $RETRO/repos/copyright/Copyright copyright
      -E
      -b +12+1 'for Symmetric Exponential Filter' blank0
      -I 1 0 0 1 0 1 52x1+0+3 ' ' 'Input  Image' 'input image' i
      -O 1 0 0 1 0 1 52x1+0+4 ' ' 'Output Image' 'output image' o
      -f 1 0 1 1 0 48x1+4+7 0 1 0.45 0 1 0 ' a0 ' 'Filter Parameter GEF' a0
      -i 1 0 1 1 0 48x1+4+10 0 255 3 1 0 ' T1 ' '1st Hysteresis Threshold' t1
      -i 1 0 1 1 0 48x1+4+11 0 255 4 1 0 ' T2 ' '2nd Hysteresis Threshold' t2
      -i 1 0 1 1 0 48x1+4+14 0 100000 5 1 0 'Length' 'Min Pixel Num in a Seg' l
      -R 1 0 1 5x1+35+0 'Run' 'do operation' mybin/vgef
      -b +2+6 'Filter Parameters:' blank1
      -b +2+9 'Hysteresis Thresholds:' blank2
      -b +2+13 'Minimum Length of a Segment (in Pixels):' blank3
      -H 1 5x1+41+0 'Help' 'man page for visef' $RETRO/objects/kroutine/vgef/help help
    -E
  -E
-E
```

See Also

none

Restrictions

Since *kfixpane* is a perl script, you must have perl installed before you can use it. We recommend you install Perl 4.0.36.

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