

Programming Changes to ARRIS 9.0

Menu Sizing

The arris.ini value G_MENU_SIZE can change the size of the ARRIS menu system.

Sigmacs which assumed that it was 52 x 39, should use \$getvar(#menucols) and \$getvar(#menurows) instead.

For instance mn_winport.ff was changed from:

```
rx = $getvar(#tnmaxx)/52.0 /* menu units
ry = $getvar(#tnmaxy)/39.0
```

to

```
// we need the actual menu size
rx = $getvar(#tnmaxx)*1.0/$getvar(#menucols) /* menu units
ry = $getvar(#tnmaxy)*1.0/$getvar(#menurows)
```

The vertical sidebar has moved to the right side of the MN_FULLS menu so menus which assume the slide bar is on the left, should plan for it to be on the right.

New default sigmac library (file90.sm)

In ARRIS 9.0, if you compile and load your Sigmacs into file90.sm instead of file.sm, then this will be the Sigmac file loaded when ARRIS starts, and will be the default for :smf

This makes it easier to separate your 8.3 and earlier Sigmacs from your new 9.0 Sigmacs (which may use new \$ utilities, long file names, new \$variables, etc.)

Note: You will only see this change after you create a file90.sm, until then it will continue to use file.sm as the default.

Here is the batch file we use to compile sigmac: (compile90.bat)

```
Rem compile90.bat
@echo off

rem - set standard locations for files, etc.
set ARRIS_LOC=c:\arris90
set SMFILE=file90.sm
set ARRIS_USER=c:\arris_users\YOUR_USER_NAME
set GLOB=%ARRIS_LOC%\ade\src\ff_commands\gr___glob.ff

rem usage: 'compile xxx' where xxx.ff is the name of the sigmac source file
echo COMPILE FILE %2 %1

rem - remove any left over .gg files from last compile
del *.gg
```

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```
rem - compile the sigmac
echo "%ARRIS_LOC%\bin\graphics" -c %2 "%GLOB%" %1.ff
"%ARRIS_LOC%\bin\graphics" -c %2 "%GLOB%" %1.ff > errout
if errorlevel 1 goto error
cat errout

rem - store resultant .gg files in file.sm
for %%g in (*.gg) do "%ARRIS_LOC%\bin\smar" rv %ARRIS_USER%\%SMFILE% %%g

goto done
:error
cat errout

:done
```

New \$ Utilities

Check \$ARRIS\ade\doc\gr_util.txt for the latest documentation

\$getlbf

itype = \$getlbf(filename)

- Returns (as an integer) the library format of the file whose number is passed to it.

For Ri libraries, 83 means a pre 9.0 library

90 means a 90 library.

\$getkeystr

str = \$getkeystr

Get the key string for a hardware or software key.

Description:

Gets the key string which would be displayed in authmgr.exe

for example: NK-4479628-W-497609689-111

If there is an error, it returns:

'Key Not Found' or

'SoftID does not match'

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\$get_mult_ly

slayer = \$get_mult_ly - return multi layer information

for the current entity.

returns a blank string if:

- #applmask not set to include #msk_layer, or
- \$getdbf(#ap_layer, #ly_is_multi) is not set

otherwise, returns the name of the "multi-layer" layer for the current database entity.

\$lychk83

serr = \$lychk83()

Checks text entities, RI names, etc. in a layer, to make sure they are not too long

Returns an error message for the first bad entity found.

Otherwise it returns a blank string

\$lysv83

\$lysv83(filename)

- Saves the current layer in the named file.

Saves the layer in 8.3 format

\$namlen(sprefix)

returns the maximum name length for a prefix.

e.g. if \$len(riname) > \$namlen('ri')

For drawing names, layers, ri names, etc. this is 64

For images names, style files, text files, etc this is 128

\$opengl(scmd)

turn on and off the open gl renderer

OpenGL functionality

scmd is:

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'on' - Turn OpenGL on. Display 3D objects fully rendered.

'off' - Turn OpenGL off.

'toggle_on' - Toggle OpenGL on and off.

'refresh' - re-render database - does nothing if OpenGL is off.

This is used when the model is changed and you want to see your changes in OpenGL (only if OpenGL is already enabled)

'assn_tx' - load dialog to assign textures to the model

'setback' - set background color to the red, green, and blue supplied

`$opengl('setback', ired, igreen, iblue)`

'tools1' - load standard opengl toolbar.

For 9.0 the toolbars toggle opengl display, and toggle textures.

'tools2' - load opengltoolbar with 9.1 features enabled.

shadows, reflrection, and hidden line are planned for 9.1

but are not completed yet

'tools3' - load opengltoolbar with 9.2 features enabled.

There are currently no 9.2 features

'axon' - display the X, Y, Z axes (default in debug mode)

'axoff' - hide the X, Y, Z axes. (default in release mode)

'hlon' - Hidden Line on. (planned for 9/1)

'hloff' - Hidden Line off..

'txon' - Textures on. Display opengl with textures.

'txoff' - Textures off.

'toggle_tx' - Toggle textures on and off.

'status' - display status of opengl on current machine

\$printenv

Display all environment variables in a text file

\$qdraw

`$qdraw(scmd, 'str')`

interface to QuickDraw paint functions

scmd is:

- 'load_dialog' - load the quick draw dialog
- 'close_dialog' - close the quick draw dialog
- 'load' - load a saved paint file
- 'save' - save a saved paint file.
- 'clear' - clear all paint data
- 'hide' - hide paint data
- 'show' - show paint data if hidden
- 'in_use' - return #true if active
- 'is_hidden' - return #true if hidden
- 'redraw' - redraw the paint system

\$resetenv

Reset all environment variables

Description :

All environment variables will be fetched from arris.ini
or from the environment again the next time they are needed.

\$setdview

`$setdview(scmd)`

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Sets dynamic view mode

scmd is:

'tools' - bring up dynamic view toolbar.

'off' - dynamic view modes off.

'zoom' - zoom mode on.

'tzoom' - toggle zoom mode.

'pan' - pan mode on.

'tpan' - toggle pan mode.

'orbit' - orbit mode on.

'torbit' - toggle orbit mode.

'spin' - spin mode on.

'tspin' - toggle spin mode.

'walk' - walk mode on.

'twalk' - toggle walk mode.

\$setenv

\$setenv

Operating System Utilities

Set an environment variable string.

Usage

\$setenv(svariable, snew_value)

Description

Sets the string that an environment variable holds. This is

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the environment value as the current ARRIS session knows it.

Parameter

svariable

The name of the environment variable (a string). Do not include a leading dollar sign.

snew_value

The new value.

If you set an variable to blank, then it will be fetched from arris.ini or from the environment again the next time it is needed.

\$set_mult_ly

\$set_mult_ly(slay) - sets multi layer information for the next entities placed.

Sets the applmask flag properly, and sets #ly_is_multi

Use: \$set_mult_ly("") - to clear multi layer and any flags

\$libchk

\$libchk(filename,type,[icheck83])

If 'ilibchk83' is set to #true,
returns 83 if an 8.3 (pre 9.0) format library

Ceilinged Sigmacs

These files were "CEILING'd" (tagged as no longer active) in ARRIS80 and have been removed from source for ARRIS 90

ff_commands\gr__flsplit.ff

ff_commands\gr_gnrcrst.ff

ff_commands\gr_dbconv.ff

ff_commands\gr_move.ff

ff_commands\gr_mover.ff

ff_commands\gr_skbm.ff

ff_commands\gr_trans.ff

ff_commands\gr_vwupd.ff

ff_mn\mn_apfill.ff

ff_mn\mn_disk.ff

ff_mn\mn_etsuffix.ff

ff_mn\mn_extmain.ff

ff_mn\mn_linetywl.ff

ff_mn\mn_lnhilite.ff

ff_mn\mn_reset.ff

ff_mn\mn_rotmain.ff

ff_mn\mn_ststri.ff

ff_mn\mn_tolmode.ff

ff_mn\mn_winmen.ff

ff_mn\mn_wlflgs.ff

ff_mn\mn_xhnam.ff

ff_r\r_colmap.ff

ff_r\r_workp.ff

ff_y\y_lbdp.ff

ff_y\y_mnlbdp.ff

ff_y\y_rf_pmod.ff

ff_y\y_rf_sect.ff

bc\ff\bc_mn_desktop.ff

f\ff\fl_st_3dl.ff

f\ff\fl_st_3ds.ff

f\ff\fl_st_3du.ff

f\ff\fl_st_agx.ff

f\ff\fl_st_arrow.ff

f\ff\fl_st_autoinpt.ff

f\ff\fl_st_break.ff

f\ff\fl_st_dimen.ff

f\ff\fl_st_drag.ff

f\ff\fl_st_fndprt.ff

f\ff\fl_st_horl.ff

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```
f\ff\fl_st_lstair.ff  
f\ff\fl_st_mvorg.ff  
f\ff\fl_st_padd.ff  
f\ff\fl_st_params.ff  
f\ff\fl_st_pardsp.ff  
f\ff\fl_st_place.ff  
f\ff\fl_st_plnl.ff  
f\ff\fl_st_plns.ff  
f\ff\fl_st_plnu.ff  
f\ff\fl_st_ppost.ff  
f\ff\fl_st_pstmen.ff  
f\ff\fl_st_reorg.ff  
f\ff\fl_st_rlmen.ff  
f\ff\fl_st_setorg.ff  
f\ff\fl_st_setup.ff  
f\ff\fl_st_sln.ff  
f\ff\fl_st_sstair.ff  
f\ff\fl_st_stairl.ff  
f\ff\fl_st_stflg.ff  
f\ff\fl_st_stmen.ff  
f\ff\fl_st_style.ff  
f\ff\fl_st_ustair.ff  
f\ff\fl_st_xtract.ff
```

System Flag changes:

The **\$getvar(#tgterm)** constants:

```
#tmscl,      /* sun 19" med res color */  
#tmvm},     /* vmi 8820 board. */  
#tmgnrc,    /* generic system. */  
#tmiris,    /* silicon graphics IRIS. */
```

were removed. Use of \$getvar(#tgterm) is discouraged.

New System Parameters

Check \$ARRIS\adedoc\gr_const.txt for latest changes,

#menucols

columns in menu system (default is 52)

#menurows

rows in menu system (default is 39)

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#vno_double_bfr

- * Do not double buffer ARRIS screen.
- * Double buffering is used to speed up the graphics display.
- * Turn it off if you are having a problem displaying the drawing.
- *
- * This feature was added in ARRIS 9.0

* **#vno_wide_screen**

- * Disables adjusting menus on high aspect ratio screens or windows.
- * When enabled, this feature keeps menus and controls from
- * appearing distorted on a wide screen.
- *
- * This feature was added in ARRIS 9.0

* **#v_aspect_wide**

- * When adjustment of menus on high aspect ratio screens or windows
- * is enabled, #v_aspect_wide is the target aspect ratio times
- *
- * 133 (the default) will display the ARRIS menus in a 4:3 ratio.
- *
- * 100. e.g. #v_aspect_wide set to 100 will size menus as though
- * the window were square.
- *
- * This feature was added in ARRIS 9.0

* **#vno_menubar**

- * Disables the Windows-type menu bar.
- *
- * This feature was added in ARRIS 9.0

#v_refresh_opengl

#v_refresh_opengl

OpenGL needs to be re-rendered if TRUE.

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This feature was added in ARRIS 9.0

`#v_skip90chk`

`#v_skip90chk`

Check before saving a previous database in 9.0 format

If this is `#true`, then databases will not be checked before saving in 9.0 to make sure that they are not from an earlier version.

This feature was added in ARRIS 9.0

Other changes

`#errwait` has been eliminated (in `gr_strt`) – it no longer did anything

Unused terminals have been removed:

`#tmiris`, `#tmvmi`

Command changes:

there is a document in `$ARRIS/ade/doc`: `gr_util.txt` and `gr_const.txt` which outline the `$` utilities and `#` constants.

System files

`Sysmenu.txt` was added to `$ARRIS/lib`.

It is the default definitions for the new ARRIS Windows Menu Bar.