arexx

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Chapter 1

arexx

1.1 PPT Arexx interface

THE AREXX INTERFACE

No self-respecting Amiga program comes without Arexx port. So I've

included one, too. Currently, there are not very many commands

available, I'm afraid but the list is growing, day by day...

This list is currently in alphabetical order. A good idea might

be to order them by context or something... Tell me if you

have a suggestion!

About AREXX and PPT

Generic hints - Read this!

ASKFILE - simple file requester

ASKREQ - complex requester construction

CLOSERENDER - closes a rendered image screen

COPYFRAME - makes a duplicate from a frame

CROP - crops to the selected area

DELETEFRAME - removes a frame from memory

EFFECTINFO - information about an effect

FRAMEINFO - information about a frame

GETAREA - returns the selected area

GETRENDERPREFS - gets rendering preferences

HIDE - hides the image

LISTEFFECTS - returns a list of effects available

LISTIOMODULES - returns a list of iomodules available

IOMODULEINFO - returns info about an IO module

LOADFRAME - open a frame

PPT_TO_BACK - sends PPT screen to back

PPT_TO_FRONT - pops PPT screen to front

PROCESS - starts an effect

RENAMEFRAME - renames a frame

RENDER - renders using current preferences

RENDER_TO_FRONT - brings rendered image to front

SAVEFRAMEAS - saves frame under a different name

SETAREA - set the selection area

SETRENDERPREFS - sets render preferences

SHOW - shows the image again

SHOWERROR - show an error message

VERSION - give version information

QUIT - quit PPT

1.2 How PPT works with AREXX

How PPT works with AREXX

When PPT starts, it will look at the PROGDIR:Rexx subdirectory to

find any files ending with '.prx'. It compiles a list of these

which it then shows in the scripts window.

At the moment, the AREXX dispatcher is not multi-threaded, even though

any effects it spawns are. This means that you may see some lack

in responsiveness from PPT in general, but yes, it is still possible

to continue processing with other images while a script is churning

away in the background. Just be careful with this =)

How to write my own scripts

A good idea is to look at the example scripts in the PROGDIR:Rexx

directory to see how things are done. It is not really that difficult,

if you already know about AREXX. See also some hints.

1.3 Generic hints on writing AREXX scripts for PPT

Generic hints on writing AREXX scripts for PPT

Currently this section is a bit incomplete, but I suggest you still

keep the following things in mind:

· Some effects (Brightness, Contrast, and Gamma, for example) use

floating point values for input. While this is OK by AREXX, you

might want to enclose numeric literals in quotes, when you send

them to PPT.

· Use the empty.prx script from the Rexx/ -directory as a template

for your own scripts. It contains error handlers to ease your

job.

· Be easy on quotes and double-quotes. If you use too many of them,

you'll probably start getting strange error messages from PPT.

A good example might be "REXX message of incorrect format" which

probably means you've overdosed on quotes.

· In general, boolean type variables return a number that is not

zero for TRUE and zero for FALSE. So don't expect to find that

1 or -1 means TRUE.

1.4   AREXX: ASKFILE

MENU

N/A

AREXX Command Template

TITLE/A,POSITIVE=POS,INITIALDRAWER=ID/K,INITIALFILE=IF/K,

INITIALPATTERN=IP/K,SAVE/S

INPUTS

TITLE - The title for the requester

POSITIVE - Whatever the positive gadget should say. Default is

the default for the locale (English : "OK").

INITIALDRAWER - The contents of the Drawer gadget. Default

is to use the directory that the "Open..." file requester

uses.

INITIALFILE - The contents of the File gadget.

INITIALPATTERN - The contents of the Pattern gadget. If not

specified, no pattern gadget will be displayed.

SAVE - If set, then the requester will be a save requester

(white text on black background).

OUTPUTS

RESULT = filename.

RC ~= 0 on error, RC2 contains error message.

If the user cancels, RC = 5.

DESCRIPTION

This is a multi-purpose interface to the ASL file requester. Its

good side is that it actually remembers what you did last, so you do

not have to specify all of the options each time.

NB: The SAVE and INITIALPATTERN are not remember between each

invocation of this call. If you can convince me otherwise, do so...

EXAMPLE

ASKFILE '"Open file"'

This asks the user for a file. Nothing fancy there.

ASKFILE '"Save file"' POS "Save!" ID="T:" SAVE

Asks the user for a filename for saving. Default directory shown

will be T:.

BUGS

This is not multithreaded, so the main interface will block if you

use it.

Maybe more options? Do you need more? Write me, I will help!

SEE ALSO

1.5   REXX: ASKREQ - build complex requesters

MENU

N/A

AREXX Command Template

ASKREQ TEXT/A,POSITIVE=POS/K,NEGATIVE=NEG/K,GAD1,...

INPUTS

TEXT - A string to be shown in the text box at the top of the

window.

POSITIVE - Positive gadget (bottom left). English default is "Ok".

NEGATIVE - Negative gadget (bottom right). English default is "Cancel".

GAD1 - The first of stems describing other gadgets on this requester.

See below.

OUTPUTS

RESULT = 0, if the user OK'ed the requester, ~= 0 otherwise.

RC ~= 0 on error.

DESCRIPTION

This is a command that allows building multiple-gadget requesters.

The idea is that each of the gadgets on the requester is described

by a stem, which contains the necessary details for the gadget

to be displayed. This is how you would create a simple gadget that

would ask for values between -128 and +128:

MYGAD.TYPE=SLIDER /* Because we want a slider gadget */

MYGAD.MIN=-128 /* Minimum value that the slider should accept */

MYGAD.MAX=128 /* Maximum value that the slider should accept */

MYGAD.LABEL='"Slide me"' /* Label to appear on the left side of the slider */

MYGAD.DEFAULT=0 /* Default value is zero */

ASKREQ '"Select the new value for mygadget"' MYGAD

IF result = 0 THEN DO

... /* Whatever you like */

DONE

ELSE DO

... /* Cancelled */

DONE

(Note the single and double quotes ('"..."') that are required for
the text with spaces in it to pass the REXX parser without being
chopped to pieces.)

When ASKREQ is done, the value for each of the gadgets can be found
in the stem variable .VALUE, ie. in the previous example the
result could be read from MYGAD.VALUE.

Common attributes for different gadgets are:

.LABEL - this sets the label to be seen on the left side of the
gadget.

Different gadgets that ASKREQ recognizes are:

.TYPE = SLIDER

This produces a slider gadget that has an integer gadget placed
next to it. Possible attributes are:

.MIN - The minimum value that is possible to be entered into
this gadget. Default is zero (0).

.MAX - The maximum value. Default is 100.

.DEFAULT - The value the slider should start from. Default is 50.

The result is returned in .VALUE, which contains the position of
the slider (between .MIN and .MAX).

.TYPE = CHECKBOX

This produces a simple checkbox (on/off gadget). Possible
attributes are:

.SELECTED - Set this to 1, if you want the gadget to be selected
(ie. have a checkmark in it) initially. Default is zero.

The result returned in the .VALUE is 0, if the gadget was not
checked or ~= 0, if the gadget was checked.

.TYPE = STRING

This produces a string (text entry) gadget. Possible attributes
are:

.MAXCHARS - Maximum length of the string allowed. Default is 80.

.INITIALSTRING - A string that is used as the initial value for
the gadget. Default is "" (empty string).

The result returned in the .VALUE-attribute is the string that

the user entered into the gadget.

.TYPE = CYCLE

This produces a cycle gadget (or popup-menu, if so requested.)

Possible attributes are:

.ACTIVE - The initial active choice. Zero (which is the default)

means the first choice.

.POPUP - Set this to 1, if you want a popup-menu style gadget.

Default is 0 (a plain cycle gadget).

.LABELS - A string of bar-separated words, that are the different

choices available to the user. For example:

MYGAD.TYPE=CYCLE

MYGAD.LABELS="One|Two|Three"

would produce a cycle gadget that has three choices to

choose from.

Note that this attribute MUST BE SPECIFIED, otherwise an

error will be returned.

The result returned in .VALUE is the currently active choice (0

means the first choice).

.TYPE = FLOAT

This produces a floating point gadget with a slider attached.

Possible attributes are:

.MIN - The minimum value. Default is 0.0.

.MAX - The maximum value. Default is 100.0.

.DEFAULT - The initial value. Default is 0.0.

.FORMATSTRING - A standard C printf() format string for the

gadget. Default is "%.3f", i.e. show three decimals.

Note that these names are case-insensitive as the rest of the AREXX.

BUGS

This is not multi-threaded, so the main interface will block when

you use it.

SEE ALSO

Example code in PROGDIR:rexx/

1.6 AREXX: CLOSERENDER

MENU

Render/Close Render

AREXX Command Template

CLOSERENDER FRAME/A/N

INPUTS

FRAME - frame id.

OUTPUTS

RC ~= 0 on error.

DESCRIPTION

This command closes a rendered image and frees the memory

back to system use. Note that it is safe to call this even

when there is no rendered image.

BUGS

SEE ALSO

RENDER

1.7 AREXX: COPYFRAME

MENU

N/A

AREXX Command Template

COPYFRAME FRAME/A/N

INPUTS

FRAME = frame to be duplicated.

OUTPUTS

RC = 0, if succeeded

RESULT = new frame id.

DESCRIPTION

Use this command to make a complete duplicate of a frame. The only

thing differing from the original frame is the name.

BUGS

SEE ALSO

1.8 AREXX: CROP

MENU

Edit/Crop

AREXX Command Template

CROP FRAME/A/N

INPUTS

FRAME = frame

OUTPUTS

A smaller frame

DESCRIPTION

Crops away the area outside the selected area.

Use the SETAREA command to first set the area to be cropped!

BUGS

SEE ALSO

1.9   AREXX: LOADFRAME

MENU

Project/Load

AREXX Command Template

LOADFRAME FILE/A

INPUTS

FILE = the file to be loaded.

OUTPUTS

rc = 0, if succeeded.

RESULT = new frame id.

DESCRIPTION

Loads a new frame to the PPT.

BUGS

SEE ALSO

SAVEFRAMEAS

1.10   AREXX: DELETEFRAME

MENU

Project/Delete

AREXX Command Template

DELETEFRAME FRAME/A/N,FORCE/S

INPUTS

FRAME - the frame ID.

FORCE - If not specified, a confirmation requestor

is shown.

OUTPUTS

A lot more free memory.

DESCRIPTION

Deletes the frame completely. No traces. You will be asked

for a confirmation first, of course.

BUGS

SEE ALSO

1.11 AREXX: LISTIOMODULES

MENU

Windows/Loaders

AREXX Command Template

LISTIOMODULES STEM/A,ONLYLOADERS/S,ONLYSAVERS/S

INPUTS

STEM - a variable to be filled with data.

STEM.0 - amount of loaders

STEM.1 - first loader name,

STEM.2 - second loader name

...

ONLYLOADERS - specify if you do not want to see any savers

ONLYSAVERS - specify if you do not want to see any loaders

OUTPUTS

RC = 0, if no error. Otherwise RC2 will contain a string

describing the error.

DESCRIPTION

Returns available IO modules in the system. By using the switches

you may specify which kind of modules you want to see.

BUGS

The switches are not very clear.

SEE ALSO

@{ "LISTEFFECTS" link ListEffects }, IOMODULEINFO

1.12 AREXX: IOMODULEINFO

MENU

N/A

AREXX Command Template

IOMODULEINFO IOMODULE/A,STEM/A

INPUTS

IOMODULE - The IO module name you wish info on.

STEM - A stem variable telling where the info should be put.

OUTPUTS

RC = 0, if no error. Otherwise RC2 will contain a string

describing the error.

DESCRIPTION

Gets information on a given module. The stem is filled out as follows:

STEM.VERSION - Version number

STEM.REVISION - Revision number

STEM.AUTHOR - The author of this module

STEM.INFOTXT - A short blurb describing this module.

STEM.LOAD - 1, if this module is capable of loading

STEM.SAVETC - 1, if this module saves truecolor images

STEM.SAVECM - 1, if this module saves colormapped images

STEM.REXXTEMPLATE - String containing the AREXX command template

for this module.

BUGS

SEE ALSO

@{ "EFFECTINFO" link EffectInfo}, @{ "LISTIOMODULES" link ListIOModules}.

1.13   AREXX: EFFECTINFO

MENU

N/A

AREXX Command Template

EFFECTINFO EFFECT/A,STEM/A

INPUTS

EFFECT - The effect name you wish info on.

STEM - A stem variable telling where the info should be put.

OUTPUTS

RC = 0, if no error. Otherwise RC2 will contain a string

describing the error.

DESCRIPTION

Gets information on a given effect. The stem is filled out as follows:

STEM.VERSION - Version number

STEM.REVISION - Revision number

STEM.AUTHOR - The author of this module

STEM.INFOTXT - A short blurb describing this module.

STEM.REXXTEMPLATE - String containing the AREXX command template

for this effect.

BUGS

SEE ALSO

@{ "IOMODULEINFO" link IOModuleInfo}, @{ "LISTEFFECTS" link ListEffects}.

1.14 AREXX: LISTEFFECTS

MENU

Project/Modules/Filters

AREXX Command Template

LISTEFFECTS STEM/A

INPUTS

STEM - specifies a stem variable to be affected. Hereforth

referenced to as stem.

OUTPUTS

The stem.0 - compound symbol contains the number of possible

effects. The names of the effects will be from compound

symbol stem.1 onward.

DESCRIPTION

Use this to get a listing of all possible effects at your

disposal.

BUGS

SEE ALSO

EFFECTINFO, LISTIOMODULES.

1.15 AREXX: FRAMEINFO

MENU

N/A

AREXX Command Template

FRAMEINFO FRAME/A/N,STEM/A

INPUTS

FRAME - frame ID

STEM - a stem variable where the information is put.

OUTPUTS

RC = 0, if no error. Otherwise RC2 will contain a string

describing the error.

DESCRIPTION

The stem variable is filled as follows:

STEM.NAME - The name for this frame

STEM.FILENAME - The actual path for the file on disk.

STEM.HEIGHT - Height of the image

STEM.WIDTH - Width of the image

STEM.COLORSPACE - A name describing the colorspace. Possible

results are "RGB", "Greyscale" and "ARGB".

STEM.COMPONENTS - # of components / pixel.

STEM.DPIX, STEM.DPIY - The Dots-Per-Inch figures for X

and Y axis. Also tells you the image aspect ratio.

STEM.BYTESPERROW - How many bytes does one row occupy

STEM.HIDDEN - TRUE, if the image has been hidden; FALSE otherwise.

In this case, TRUE is any number ~= 0, FALSE == 0.

EXAMPLE

The following example will toggle the hidden state of the image.

...

FRAMEINFO frame STEM foo

IF FOO.HIDDEN == 0 THEN DO

HIDE frame

END

ELSE DO

SHOW frame

END

...

BUGS

SEE ALSO

HIDE, SHOW

1.16   AREXX: SETAREA

MENU

NA

AREXX Command Template

SETAREA FRAME/A,X0/N,Y0/N,X1/N,Y1/N,ALL/S

INPUTS

FRAME = frame name

X0, Y0 = Co-ordinates of the upper left-hand corner

X1, Y1 = Co-ordinates of the lower right-hand corner

ALL = Specify if you wish to select the whole picture

If ALL is specified on the command line, the co-ordinates

are ignored.

OUTPUTS

RC = 5, if the co-ordinates were out of bounds or there

were not enough of them.

DESCRIPTION

Set the area to be used with processing applications.

1.17 AREXX: QUIT

MENU

Project/Quit (Q)

AREXX Command Template

QUIT FORCE/S

INPUTS

Specify FORCE on the command line if you don't wish the selection

to be confirmed.

OUTPUTS

RC = 5, if the user cancelled, 0 otherwise.

DESCRIPTION

You may quit the program by selecting this. You will be asked first for

confirmation, of course, unless the FORCE - keyword is specified.

1.18 AREXX: PPT_TO_FRONT

MENU

N/A

AREXX Command Template

PPT_TO_FRONT

INPUTS

N/A

OUTPUTS

N/A

DESCRIPTION

Brings the PPT screen to the front.

BUGS

SEE ALSO

PPT_TO_BACK,intuition.library/ScreenToFront()

1.19 AREXX: PPT_TO_BACK

MENU

N/A, except for the little knob at the top of the screen.

AREXX Command Template

PPT_TO_BACK

INPUTS

N/A

OUTPUTS

N/A

DESCRIPTION

Pushes the PPT screen to be the backmost screen.

BUGS

SEE ALSO

PPT_TO_FRONT,intuition.library/ScreenToBack()

1.20   AREXX: PROCESS

MENU

Process/Process...

AREXX Command Template

PROCESS FRAME/A/N EFFECT/A ARGS/F

INPUTS

FRAME - frame id

EFFECT - the name of the effect you wish to perform

ARGS - all the rest of the command line is understood as

arguments for the effect. See effects for more

information.

OUTPUTS

RC != 0 on error.

RC2 = a textual description of the error.

DESCRIPTION

Start up a new process. Note that this command is blocking, ie.

even though a new process is started this command does not return

until it has completed. However, it does not block PPT and you

may still run other Arexx scripts or use the program manually

while this command is executing.

BUGS

SEE ALSO

1.21   AREXX: SAVEFRAMEAS

MENU

Project/Save As...

AREXX Command Template

SAVEFRAMEAS FRAME/A/N FILENAME/A FORMAT/A/K COLORMAPPED/S ARGS/F

INPUTS

FRAME - frame id

FILENAME - the new filename to save this frame as.

FORMAT - the file format

COLORMAPPED - if specified, will save the rendered image

(you must use RENDER first!)

ARGS - the rest of the line is used as parameters to be

sent to the IO module.

OUTPUTS

RC != 0 on error.

RC2 = a textual description of the error.

DESCRIPTION

Use this command to save a frame that has been loaded into PPT.

I think it's easiest just to give an example:

LOADFRAME "t:foo.ilbm"

myframe = result

SAVEFRAMEAS myframe "t:foo.jpg" FORMAT=JPEG COMPRESSIONLEVEL=50 PROGRESSIVE

This command loads image "t:foo.ilbm" into PPT and saves it back

as a JPEG image.

Note that everything that has not been identified as a parameter

to this command is passed to the IO module and thus you should look

at the {"loaders.guide" link loaders.guide/main} to see what parameters

different modules accept.

BUGS

May be a bit shaky at the moment.

SEE ALSO

LOADFRAME

1.22 REXX: SHOWERROR

MENU

N/A

AREXX Command Template

SHOWERROR ERROR/A,LINE/N

INPUTS

ERROR - Error text.

LINE - Optional line on which the error occurred.

OUTPUTS

N/A

DESCRIPTION

Shows a simple requester on the PPT screen informing the user

that an error has occurred within the REXX script.

BUGS

SEE ALSO

1.23 AREXX: RENDER

MENU

Render/Render

AREXX Command Template

RENDER FRAME/A/N

INPUTS

FRAME - Frame id

OUTPUTS

RC != 0 on error.

DESCRIPTION

Renders the frame using the current preferences.

BUGS

SEE ALSO

SETRENDERPREFS

1.24 AREXX: RENDER_TO_FRONT

MENU

N/A

AREXX Command Template

RENDER_TO_FRONT FRAME/A/N

INPUTS

FRAME - frame id

OUTPUTS

RC ~= 0 on error

DESCRIPTION

If a rendered image on a separate screen exists, this will

bring it to the front.

BUGS

SEE ALSO

1.25 AREXX: SETRENDERPREFS

MENU

Render/Settings...

AREXX Command Template

SETRENDERPREFS FRAME/A/N NCOLORS/K/N MODE/K DITHER/K MODEID/K/N

FORCEBW/S

INPUTS

FRAME - frame id

NCOLORS - maximum number of colors that PPT is allowed to use

(this also affects the number of base colors available in

the HAM modes)

MODE - The display mode: Color,EHB,HAM6 or HAM8

DITHER - The dither to be used. Available options are:

None and Floyd-Steinberg

MODEID - Standard Amiga ModeID for the screen. In decimal, please.

FORCEBW - Forces the background color to zero (black) and the

foreground color (one) to white.

OUTPUTS

RC ~= 0 on error

DESCRIPTION

Set the render preferences for a frame. Here's an example:

SETRENDERPREFS myframe MODE HAM8 DITHER Floyd-Steinberg

This makes the next render to use HAM8 with FS dithering.

BUGS

Modeid should be usable in hexadecimal and text too.

DITHER should really understand about abbreviated names, too.

SEE ALSO

GETRENDERPREFS,

Render/Settings...

1.26 AREXX: GETRENDERPREFS

MENU

N/A

AREXX Command Template

GETRENDERPREFS FRAME/A/N PREFS/A

INPUTS

PREFS - a stem into which the preferences are put.

OUTPUTS

RC ~= 0 on error.

DESCRIPTION

The PREFS stem consists of following elements after the command

has returned:

MODEID = current mode id

DEPTH = display depth

NCOLORS = number of colors

DITHER = string telling the current dithering method

MODE = render mode (Normal, EHB, HAM6, HAM8)

FORCEBW = 0, if Black/White color scheme for the two first

colors is not used, ~= 0 otherwise.

BUGS

SEE ALSO

SETRENDERPREFS,

Render/Settings...

1.27   AREXX: HIDE

MENU

Project/Hide/Show

AREXX Command Template

HIDE FRAME/A/N

INPUTS

FRAME - the frame handle.

OUTPUTS

RC ~= 0 on error.

DESCRIPTION

This AREXX command hides the image. You may find this useful

if you're doing a long script, since the image won't be redrawn

each time.

If you wish to know if an image is hidden or not, see the

HIDDEN attribute of the FRAMEINFO command.

BUGS

SEE ALSO

SHOW, PPT.guide/Hide, FRAMEINFO

1.28   AREXX: SHOW

MENU

Project/Hide/Show

AREXX Command Template

SHOW FRAME/A/N

INPUTS

FRAME - the frame handle.

OUTPUTS

RC ~= 0 on error.

DESCRIPTION

This command displays the image again after it has been hidden

with the HIDE command.

If you wish to know if an image is hidden or not, see the

HIDDEN attribute of the FRAMEINFO command.

BUGS

SEE ALSO

HIDE, PPT.guide/Show, FRAMEINFO

1.29 empty

MENU

AREXX Command Template

INPUTS

OUTPUTS

DESCRIPTION

BUGS

SEE ALSO