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Subject: printing widget, as-is  
Posted by [Eric E. Dors](#) on Thu, 03 Sep 1998 07:00:00 GMT  
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<!-- This file was generated by mk\_html\_help.pro -->  
<html>

<head>  
<TITLE>Extended IDL Help</TITLE>  
</head>

<body>  
<H1>Extended IDL Help</H1>  
<P>  
This page was created by the IDL library routine  
<CODE>mk\_html\_help</CODE>. For more information on  
this routine, refer to the IDL Online Help Navigator  
or type: <P>  
<PRE> ? mk\_html\_help</PRE><P>  
at the IDL command line prompt.<P>  
<STRONG>Last modified: </STRONG>Tue Jan 27 22:56:55 1998.<P>

<HR>

<A NAME="ROUTINELIST">  
<H1>List of Routines</H1></A>  
<UL>  
<LI><A HREF="#EXPAND\_ALL\_VARS">EXPAND\_ALL\_VARS</A>  
<LI><A HREF="#FORM\_PRINT\_CMD">FORM\_PRINT\_CMD</A>  
<LI><A HREF="#GET\_CFG\_LINE">GET\_CFG\_LINE</A>  
<LI><A HREF="#GET\_CONFIG\_FILENAME">GET\_CONFIG\_FILENAME</A>  
<LI><A HREF="#PRINT\_FINISH">PRINT\_FINISH</A>  
<LI><A HREF="#PRINT\_WINDOW">PRINT\_WINDOW</A>  
<LI><A HREF="#READ\_PRINT\_CONFIG">READ\_PRINT\_CONFIG</A>  
</UL><P>

<HR>

<H1>Routine Descriptions</H1>  
<A NAME="EXPAND\_ALL\_VARS">  
<H2>EXPAND\_ALL\_VARS</H2></A>  
<A HREF="#FORM\_PRINT\_CMD">[Next Routine]</A>  
<A HREF="#ROUTINELIST">[List of Routines]</A>  
<PRE>  
NAME:  
 expand\_all\_vars

PURPOSE:

This function takes a list of variable definitions and returns the expanded list. That is it expands references of variables on the right hand side to their definitions

#### CATEGORY:

General Utility

#### CALLING SEQUENCE:

Result = expand\_all\_vars(varlist, expanded)

#### INPUTS:

varlist: A 2xn dimensional array of variable and definitions  
[[name1,def1],[name2,def2],...,[namen,defn]]

#### KEYWORD PARAMETERS:

top\_widget: the id of the parent widget base if it exists

#### OUTPUTS:

result: 0 for failure, 1 for success.

expanded: The two dimensional variable list with variable references in the definitions expanded using other variables in the list.

#### PROCEDURE:

The variable list is looped through up to max\_iter times. Each time through it looks at each variable definition one by one. It then looks for the first occurrence of a variable reference in the definition, and then replaces it with the appropriate definition. Then it moves on to the next variable and keeps looping until all the variables references in the definitions have been replaced, an undefined variable is found, or the max\_iter has been hit.

#### EXAMPLE:

result = expand\_all\_vars(varlist,expanded)

Written by: Eric E. Dors, 9 September 1997.

#### MODIFICATION HISTORY:

Fri Jan 23 19:42:12 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Added top\_widget parameter for use with widget\_message.

</PRE><P>  
<STRONG>(See print\_window.pro)</STRONG><P>  
<HR>

<A NAME="FORM\_PRINT\_CMD">  
<H2>FORM\_PRINT\_CMD</H2></A>  
<A HREF="#EXPAND\_ALL\_VARS">[Previous Routine]</A>  
<A HREF="#GET\_CFG\_LINE">[Next Routine]</A>  
<A HREF="#ROUTINELIST">[List of Routines]</A>  
<PRE>  
NAME:  
    form\_print\_cmd

#### PURPOSE:

The purpose of this function is to create a string which contains the operating system command to print a file of a given type to the correct printer.

CATEGORY:  
    General Utility

#### CALLING SEQUENCE:

```
Result = form_print_cmd(print_file, printer_type, $  
                        print_color, lpr_switches, ptype_btns, $  
                        color_btns, print_command)
```

#### INPUTS:

print\_file: The name of the file to be printed.

printer\_type: A value from the list of printer types in ptype\_btns describing the type of printer.

print\_color: A value from the list of printer color support in color\_btns describing the color printing options selected.

lpr\_switches: A string of user printer switches to be used in addition to the switches set in print\_window.cfg.

ptype\_btns: A list of printer types.

color\_btns: A list of printer color options.

#### KEYWORD PARAMETERS:

top\_widget: the id of the parent widget base if it exists

#### OUTPUTS:

print\_command: A string which contains the system command necessary to print the desired file.

result: 0 for failure of this routine, 1 for success.

#### PROCEDURE:

Replace the reserved variable queue with the print queue appropriate to the current print job. Replace the reserved variable file with the file name appropriate for this print job. Expand all other variables. Return the print\_command requested.

#### EXAMPLE:

```
ret_val=form_print_cmd(print_file, printer_type, $
    print_color, lpr_switches, ptype_btns, $
    color_btns, print_command)
```

```
if (ret_val eq 1) then begin
    spawn,print_command
endif
```

Written by: Eric E. Dors, 9 September 1997.

#### MODIFICATION HISTORY:

Fri Jan 23 19:42:25 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Added top\_widget parameter for use with widget\_message.

Fri Sep 12 15:36:07 1997, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Add recognition of new variable to configuration file called 'file' this shows the position of the file name in the print command.

</PRE><P>  
<STRONG>(See print\_window.pro)</STRONG><P>  
<HR>

<A NAME="GET\_CFG\_LINE">  
<H2>GET\_CFG\_LINE</H2></A>  
<A HREF="#FORM\_PRINT\_CMD">[Previous Routine]</A>  
<A HREF="#GET\_CONFIG\_FILENAME">[Next Routine]</A>  
<A HREF="#ROUTINELIST">[List of Routines]</A>

<PRE>

NAME:

get\_cfg\_line

PURPOSE:

The purpose of this function is to return one variable  
expression line configuration file.

CATEGORY:

General Utility

CALLING SEQUENCE:

retval = get\_cfg\_line(unit, oneline)

INPUTS:

unit: The file unit number of the opened configuration file.

OUTPUTS:

oneline: One variable expression is returned from the  
configuration file. Comment lines are skipped.

retval: 1 is returned on success, 0 is returned if eof is  
found before a variable definition is found.

PROCEDURE:

The configuration file is read in line by line until a non  
commented line is found and then that line of text is returned  
to the caller in oneline and 1 is returned in retval. If eof  
is hit then the value of oneline is not guaranteed to be  
anything useful, and retval is set to 0.

EXAMPLE:

retval = get\_cfg\_line(unit, oneline)

Written by: Eric E. Dors, 9 September 1997.

## MODIFICATION HISTORY:

```
</PRE><P>
<STRONG>(See print_window.pro)</STRONG><P>
<HR>

<A NAME="GET_CONFIG_FILENAME">
<H2>GET_CONFIG_FILENAME</H2></A>
<A HREF="#GET_CFG_LINE">[Previous Routine]</A>
<A HREF="#PRINT_FINISH">[Next Routine]</A>
<A HREF="#ROUTINELIST">[List of Routines]</A>
<PRE>
```

### NAME:

get\_config\_filename

### PURPOSE:

This function locates the fully qualified filename of the configuration file required for the operation of print\_window.pro.

### CATEGORY:

General Utility

### CALLING SEQUENCE:

Result = get\_config\_filename(filenameout)

### KEYWORD PARAMETERS:

top\_widget: the id of the parent widget base if it exists

### OUTPUTS:

result: result is set to 1 for success and to 0 for failure of this subroutine to find the configuration filename.

filenameout: The fully qualified filename of the configuration file print\_window.cfg.

### PROCEDURE:

First an optional environment variable called PRINT\_WINDOW\_CFG is searched for. This environment variable is supposed to contain the path to the configuration file "print\_window.cfg". If the environment variable is not found then directory in

which print\_window.pro resides is searched for the system default configuration file also called print\_window.cfg. If the file is found the configuration information is read in, otherwise the programs writes an error message and exits.

#### EXAMPLE:

```
F = get_config_filename(cfgfilename)
```

Written by: Eric E. Dors, 9 September 1997.

#### MODIFICATION HISTORY:

Fri Jan 23 19:41:41 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Added top\_widget parameter for use with widget\_message.

```
</PRE><P>  
<STRONG>(See print_window.pro)</STRONG><P>  
<HR>
```

```
<A NAME="PRINT_FINISH">  
<H2>PRINT_FINISH</H2></A>  
<A HREF="#GET_CONFIG_FILENAME">[Previous Routine]</A>  
<A HREF="#PRINT_WINDOW">[Next Routine]</A>  
<A HREF="#ROUTINELIST">[List of Routines]</A>  
<PRE>  
NAME:  
    PRINT_FINISH
```

#### PURPOSE:

This procedure completes the actions initiated by PRINT\_WINDOW.

#### CATEGORY:

General Utility

#### CALLING SEQUENCE:

PRINT\_FINISH, handle

#### KEYWORD PARAMETERS

parent\_id: The widget handle to the controlling base widget.  
This is used so that informational dialog can be centered on that widget.

noconfirm: if 0 then ask before deleting print file,  
otherwise delete without confirmation.

## COMMON BLOCKS:

print\_event: A common block to pass information between the event handler and the widget creation routine.

print\_finish: A common block to hold the selections made during the PRINT\_WINDOW dialogue with the user.

## SIDE EFFECTS:

The current plot device is changed.

If it was requested either a file is created, printed or both.

## EXAMPLE:

```
result=print_window(xsize=draw_x, ysize=draw_y)
...
if (result) then begin
  data plotting routines go here
  time_stamp
  ...
  print_finish, parent_id=parent_id
endif
...
```

Written by: Eric E. Dors, 15 November 1995.

## MODIFICATION HISTORY:

### HISTORY:

Fri Jan 23 19:16:46 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Removed top\_widget input and created the parent\_id ;  
keyword parameter to contain the base id of the  
calling widget if it exists. Also added the  
noconfirm parameter to prevent the popping of the  
confirmation dialog for deleting of the print file.

```
</PRE><P>
<STRONG>(See print_window.pro)</STRONG><P>
<HR>

<A NAME="PRINT_WINDOW">
<H2>PRINT_WINDOW</H2></A>
<A HREF="#PRINT_FINISH">[Previous Routine]</A>
<A HREF="#READ_PRINT_CONFIG">[Next Routine]</A>
<A HREF="#ROUTINELIST">[List of Routines]</A>
<PRE>
NAME:
```



## PRINT\_WINDOW

### PURPOSE:

This function creates a dialogue box for printing information, the generated events can put IDL into a state to make files or send plots to a printer.

### CATEGORY:

General Utility

### CALLING SEQUENCE:

Result = PRINT\_INFO\_WINDOW

Result: 1 unless print operation was canceled in which case 0 is returned.

### KEYWORD PARAMETERS:

xsize: Optional keyword to allow removing of device dependent parameters for operations such as tv.

ysize: Optional keyword to allow removing of device dependent parameters for operations such as tv.

color\_t: Color table to use for color printing. (39 default)

color\_g: The gamma factor to use for color printing. (1.0 default)

bw\_t: Color table to use for black and white printing. (0 default)

bw\_g: The gamma factor to use for black and white printing. (1.0 default)

parent\_id: The widget handle to the controlling base widget.  
This is used so that informational dialog can be centered on that widget.

### COMMON BLOCKS:

print\_event: A common block to pass information between the event handler and the widget creation routine.

### SIDE EFFECTS:

The current plot device is changed.

NOTE By calling print\_finish, a device,/close and a set\_plot, 'x' will be done to restore to the normal state.

### EXAMPLE:

```
result=print_window(xsize=draw_x, ysize=draw_y)
```

```

...
if (result) then begin
  data plotting routines go here
  time_stamp
  ...
  print_finish, parent_id=parent_id
endif
...

```

Written by: Eric E. Dors, 15 November 1995.

#### MODIFICATION HISTORY:

Fri Jan 23 18:46:48 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Simplified the creation of the main base widget.

Changed print\_window to a function instead of a procedure. Returns 0 if canceled, 1 otherwise.

Also added a parent\_id parameter to contain the base id of the calling widget if it exists. This facilitates the centering of widget\_message events.

</PRE><P>  
<STRONG>(See print\_window.pro)</STRONG><P>  
<HR>

<A NAME="READ\_PRINT\_CONFIG">  
<H2>READ\_PRINT\_CONFIG</H2></A>  
<A HREF="#PRINT\_WINDOW">[Previous Routine]</A>  
<A HREF="#ROUTINELIST">[List of Routines]</A>  
<PRE>

NAME:  
    read\_print\_config

#### PURPOSE:

The purpose of this subroutine is to read in the printing configuration file called print\_window.cfg. And return a list of variables set in the configuration file to the caller.

#### CATEGORY:

General Utility

#### CALLING SEQUENCE:

Result = read\_print\_config(varlist)

## KEYWORD PARAMETERS:

top\_widget: the id of the parent widget base if it exists

## OUTPUTS:

varlist: A 2xn array holding variable [name, definition] of each of the n variables defined in the configuration file.

result: Return 1 on successful configuration file read, and 0 on failure.

## PROCEDURE:

get\_config\_filename is used to find the configuration file, then it is opened and read line by line with get\_cfg\_line. Since the configuration file is perscribed to have comment lines beginning with ';' and variable setting lines which look like 'name=definition' we separate the names from the definitions and return the result as a 2xn dimensional array of [[name1,def1],[name2,def2],...,[namen,defn]].

## EXAMPLE:

```
result = read_print_config(varlist)
```

Written by: Eric E. Dors, 9 September 1997.

## MODIFICATION HISTORY:

Fri Jan 23 19:42:06 1998, Eric E. Dors  
<dors@gamma.physics.uiowa.edu>

Added top\_widget parameter for use with widget\_message.

```
</PRE><P>  
<STRONG>(See print_window.pro)</STRONG><P>  
<HR>  
  
</body>  
</html>
```

## File Attachments

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- 1) [print\\_window.pro](#), downloaded 53 times
  - 2) [print\\_window.cfg](#), downloaded 56 times
  - 3) [print\\_window.html](#), downloaded 89 times
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