PPT

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COLLABORATORS

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PPT

1.1   Welcome to PPT

WELCOME TO PPT

Release: Cauchy

PPT is an interactive image manipulation package. PPT has been

written by Janne Jalkanen , who would very much like to hear

your comments.

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For those who were born with an inquisitive mind, here you can visit

PPT's past, present and

(a possible) future .

PPT is a modular package, ie. you may write your own effect

modules, loaders and savers using a compiled language. If this

interests you, mail me. I am compiling together a version of

DISCLAIMER

Any errors in code, spelling, tact or fact are transmission

errors. So don't hold me responsible.

While PPT has been tested in multiple Amiga systems, it is quite

possible that it is your hardware combination that makes it

go haywire and destroy everything. This non-deterministic property

of computer software makes it impossible for me to take any responsibility

for any damage your computer might take during installation or

other stuff.

1.2   introduction

Any nitwit can understand computers. Many do.

-- Ted Nelson

The Amiga has always been a graphics-oriented computer and there has

been a lot of commercial image manipulation software for it.

However, I've often wondered why there are no good 24bit image

processing programs released as PD/Freeware or Shareware. Now I know

why. It is a gargantuan job :)

Anyway, recently some new programs have emerged which show good

promise and nice programming skills. (Hello there, you know who you

are :) So, I decided to add my own experience in the ever-growing

Amiga Software Pool and here it is.

Another one megabytes the dust.

You might say: "Oh no, another image processing program. What do we

need these all for?" That is true. This is an another image

processing program and you might never need it. I just happen to

think that it is better to have many programs to choose from than

have just one "Market Standard". Just look what happened in the

PC-world...

So, try this one out and if you don't like it, throw it away. If you

don't like it but would like it to become better, write to me

and let me hear your suggestions.

1.3   Requirements

Hardware: The parts of a computer system that can be kicked.

You will need the following things in order to run PPT:

- OS 2.0 or higher (V36+)

- 1 Megabyte of main memory

- several Megabytes of free hard disk space for virtual memory.

- bgui.library V41+.

To run PPT comfortably, I'd suggest however the following setup:

- OS 3.0+ (V39+)

- AGA Amiga (for many colors...)

- 68020 CPU or better.

- many Megabytes of true FAST RAM.

- lots of hard disk space.

PPT was written on a Amiga 4000 with 68060/50 MHz, 2+12 Megabytes of

RAM and very little hard disk space which suddenly became a lot when

I got a brand new IBM 1.7 GB disk drive :-)

Software used includes SAS/C 6.58, XDME and lots of other tiny

programs.

Software is to computers as yeast is to dough.

1.4   Installing PPT

PPT does not require much to be installed. Just click on the

"Install" - icon and a standard Installer will take care of things

for you. If you do not have this magnificent package, check your

local Aminet site (or BBS or whatever) for a file called

Installer_43.3.lha or something similar.

It is possible to install PPT manually. Here's how:

You can run PPT from the directory you extracted it to, no

assignments or anything are necessary. What you have to do is to

copy the contents of the 'libs' subdirectory to the appropriate

places.

a) Copy libs/bgui.library to LIBS: (or wherever you keep your

libraries). The bgui.library_e is the 68020 version that

requires OS3.0. You may use that if you meet the specs.

b) Copy libs/bgui_palette.gadget and libs/bgui_float.gadget to

SYS:Classes/Gadgets (or wherever you keep your gadgets).

c) Add an assignment to JPEGTMP: to your User-Startup (or wherever

you keep your assignments). It should point to a place where

you have plenty of space (a hard drive is preferable).

Other than that, just copy the PPT directory to wherever you like.

Just don't mess with the directory structure... (See Modules

for additional info.)

1.5   Thanks, guys

I'd like to use this opportunity to thank the following persons,

without whom PPT would either not exist or be at least very

different:

- Jan van den Baard for BGUI , the coolest GUI

designer around.

- Ian J. Einman and Manuel Lemos for BGUI also.

- Simon P. Bullen for Fortify, which proved to be a very effective

tool when tracking down memory leaks.

- Commodore-Amiga design team for the Amiga.

- J. Michael Straczynski, who has proven that you can actually

make good TV shows, if you're convincing enough.

- SAS/C guys for continuing the support of THE Amiga C compiler.

- my betatesters .

I would also like to extend my gratitude to Heli, who has endured

these long hours of coding with patience I don't believe I would

have had.

1.6   The BGUI package

PPT uses BGUI for the graphical user interface. This is a very nice

package from Jan van den Baard, that allows one to write scalable,

font-independent code with OO methods very easily. I extend my warm

thanks to you, Jan, for releasing this great program.

During 1996, Ian J. Einman (ie@az.com) took over BGUI development

and has been pouring sweat and effort into it. Thanks, Ian, for not

letting BGUI die.

And, when Ian's Amiga died, Manuel Lemos (mlemos@acm.org) started

taking care of it. Geez, this package has died as many times

as the Amiga, now =)

PPT requires bgui.library V41.7 or later.

BGUI and bgui.library are (C) Jan van den Baard, 1994-1995,

Ian J. Einman 1996-1997 and Manuel Lemos 1998.

1.7   Future of PPT

I have some thoughts about how PPT will change in the future:

- Add PPC support. (This actually is already in. Since I don't
have a PPC card at the moment, I would like to welcome people
who could test PPC effects for me.)
- Add more color spaces. Specifically I'd like to support
complex number spaces for FFT and IFFT effects. This is gonna
be slow without an FPU, and could really benefit from a fast
CPU, such as the PPC.
- Animation support. Basically, the hooks are there, but I haven't
yet got a clue how to support such matters.
- Better AREXX scripts, especially better batch processing scripts.
This is really a priority.
If you feel you could contribute to this list, write up a suggestion
and mail it to me!

1.8   Virtual Memory

'Virtual' means never knowing where your next byte is coming from.
Virtual Memory is a way to utilize the computer's disk space as
memory. That is, data which is currently unused is swapped
onto the hard disk and fetched from there whenever the need arises.
The Amiga does not contain built-in virtual memory, but there are
several programs like GigaMem and VMM that allow you to have extra
memory on disk. However, all these programs require a device called
Memory Management Unit - or MMU for short - which is not standard in
most Amiga models. Only those machines with a true 68030, 68040 and
68060 processors (NOT the EC versions, thus A4000/030 does not
qualify) have a MMU.
PPT circumvents this problem by utilizing it's own Virtual Memory
scheme, thus allowing even owners of 68000-based Amigas to handle
large images. Only thing required is a reasonably fast hard drive
and LOTS of space.
One picture is worth 128K words.
You can easily calculate how much free hard drive space you will
require: Take the image size and then multiply the height with the
width and the multiply the result by three to get how much a full
RGB picture takes memory.

For example, a standard 320 X 200 image would take (320*200*3 ==

192000 bytes (187 kBytes) of memory. A 640 X 480 picture would take

900 kBytes. And of course, if you wish to retain any undo buffers,

you will soon notice that your main memory would be completely

depleted, if you wouldn't use virtual memory.

PPT will always use virtual memory. It is not possible to turn it

off, but if you define a big enough VM page size (see

Preferences/VM Settings

NEED the disk space, but retain everything in memory. The disk file

is created, anyways, so that undo buffers can be used.

NB: PPT is not compatible with the Shareware program VMM, because

the data PPT uses is shared between different tasks all the time,

which means PPT makes its memory allocations using the MEMF_PUBLIC

flag. However, you can use RAM: as the PPT virtual memory directory

and set RAM to use VMM.

1.9   modularity

Every program is a part of some other program, and rarely fits.

PPT - unlike many other programs - cannot do very much by itself.

The functionality for the program comes from external

modules, which contain executable code.

Currently PPT understands about two types of external modules: Loaders

and Filters.

IOModules are modules, which contain code to either save or load

pictures.

Effects are modules, which take one image as input and produce an

another image. They are the basis for PPT's image manipulation.

This modularity means that you can easily extend PPT's functionality

by adding more external modules, which will appear to the user just

like the ready-made ones.

By default, PPT will search for its modules in the PROGDIR:modules[1]

subdirectory.

Since V3 PPT modules contain information about for which CPU type

the module has been compiled for. When PPT is starting, it will

check the CPU of your machine and use the best possible effects it

can find. You can figure out which effect is compiled for which CPU

by looking at its name. An effect compiled for the 68020 CPU will

have a _020 - postfix or something similar to its name.

It is quite safe to keep several versions of the same effect in the modules - directory. PPT will figure out which one is the best for your machine.

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[1] PROGDIR: is the directory from which PPT was started.
(Now, why the hell is there a footnote in a hypertext document?
I must be going mental or something...)

1.10 Color Spaces

Wow... Look at all the colors...
-- Dirac
Images can be represented in many ways. Probably the most common two are RGB and grayscale, but there are many others as well. PPT supports the two aforementioned formats:
RGB - Each pixel of the image is represented as a combination of three main colors: Red, Green and Blue. Every component may have up to 256 values (8 bits or one byte) which yields 16 million different color combinations. This is the standard presentation in almost everywhere for true color images.
Greyscale - Every pixel is represented by one byte, giving the effective range of 256 different gray levels. This has the advantage of taking only one third of memory versus RGB, but unfortunately, all color information is lost.
ARGB - This format is like the RGB format, but it contains an extra channel for transparency. It is thus possible to specify a transparency value between 0 and 255 for each pixel separately, at the cost of some extra memory consumption. 0 means no transparency and 255 means fully transparent. Check out the Transparency effect.
The extra memory cost compared to an RGB image is 1 byte/pixel.
For more information, see Alpha Channels .
In the future, PPT may well support more color space formats, as it has been designed to be as extensible as possible.

1.11   Menu selections

By clicking the right mouse button you will get a bunch of menus,

from which you can choose the following items:

Project Menu:

- New...

- Open...

- Open As...

- Save As...

- Rename...

- Hide/Show

- Close

- Preferences...

- About PPT

- Quit

Edit Menu:

- Undo

- Cut

- Copy To New

- Copy

- Paste

- Zoom In

- Zoom Out

- Select All

- Edit Info...

Display Menu:

- Settings...

- Render

- Close Render

- Correct Aspect

- Palette >>

Process Menu:

- Process...

- Break

Window Menu :

- Frames

- Toolbar

- Select

- Effects

- Loaders

- Scripts

1.12   Windows

There are many windows to look about.

- Images

- Frames

- Toolbar

- Select

- Effects

- Loaders

- Scripts

You can toggle the existence of these windows by using the Windows

menu and selecting the item. A checkmark tells you if this window is

currently open.

1.13   Making up a new project from scratch

You can use this menu item to create a new, empty image. Note that

what this actually does is that it calls the external I/O module

called 'Plain', so the effect is the same as if you had used the

"Open As..." menu item and opened the 'Plain' loader.

For more information on how this one works, see here.

1.14   Loading a new project

When you choose to open a new project, a standard ASL requester will

pop up and ask for the file name. When you've chosen a file, PPT

will automatically attempt to recognize the file type and load it

in.

The last selected path is saved along with other preferences, when

you select "Save" in the Preferences requester.

1.15   Loading a new project

This will proceed exactly as a standard Open , but you will be

asked for a file type first. This may be useful if a loader

cannot recognize a file, so you can try to feed the file directly

to it.

Some loaders do not need a file, but they create the frame with

algorithms. This is the only way to access those loaders. One such

loader is called Plain.

1.16   Saving a project

Save As... : Saves the current frame onto the disk, asking for

the format and filename first. You will be presented a requester,

in which you can select the filename (click on the gadget at the

top right corner to select the file using ASL File Requester).

You can also choose the format to save the image as by clicking

on the listview requester at the left. If the saver supports

other image formats than 24 bit, you may click on the

multiple-choice gadgets on the right to select the more precise

format.

There are currently two choices: 24 bit and colormapped. To save

a colormapped image, you must first render the picture

separately. (See Render/Settings).

Finally, click "OK" to save the image on the disk. Should the

saver require any additional parameters, you will be asked them

before the save is commenced.

See here for a list of the savers.

NB: At the moment I have not implemented a pure 'save'. This is

because I haven't figured out how it should work in the terms of

options, such as if you have a JPEG image, should it automatically

remember the compression options, etc? Send me some feedback,

if you have any ideas...

1.17   rename

Renames the current frame. Just use the keyboard to edit a new name

for the frame. Note that if a frame with the same name already

exists, a number in brackets will be added to the name.

1.18   Hide/Show

This menu item will hide the image, or if the image is hidden, it

will re-open the window.

An another possibility to reopen the window is to double-click on

the name of the image in the Frames window.

Also, you can use the gadget in the image window top border to hide

the image. Sorry for the imagery, it sucks.

1.19   Closing a project

When you get bored with a frame use this menu item to delete it
away. Poof, it says and goes away. Asks you first, though. It does.
This does not delete the image file from the disk, only from memory.

1.20   Preferences Settings

You can configure several program related preferences here. They are
divided on three pages:
System
VM Directory
Page Size
External Stack
External Nice
GUI
Main Font
List Font
Screen Mode
Preview Mode
Misc
Max. Undo Levels
Flush Modules
At the bottom of the window, you have three choices for different
actions after you've changed the settings:
Save
This saves the current settings (including the locations of
those windows that happen to be open at the moment and other
preferences, such as the current directory path) into the
ENVARC: directory under name PPT.prefs. The file format is
ASCII, but I still wouldn't suggest you tamper with it. The
format can and will change between revisions of the main
software...
The preferences will be acted upon immediately. However, some
settings cannot be used until the next restart of PPT and if
you've made any such modifications you'll be told about it.
Use
This does not save the choices you made, but otherwise functions
exactly as "Save".
Cancel
Discards changes and reverts back to old settings.

1.21   System Settings

There are two variables PPT cares about when dealing with virtual memory:

VM Directory

This variable tells where PPT should keep its virtual memory files. I suggest you choose a fast hard drive with lots of free space. It is quite possible to have it in RAM: or T:, if you can afford the memory. Then the overhead of reading and writing to the VM file is quite small.

PPT is uses T: by default for its VM directory.

Page Size

The size of the 'chunk' PPT reserves from the main memory pool for each frame. If the image is smaller, then PPT will only reserve as much memory as it needs.

The larger this value is, the faster PPT gets, because it does not have to do as many page swaps per image. It basically tells how much memory PPT is allowed to use per frame and if you set it to something like 2 Megabytes (2000 kbytes) only the largest images will then use virtual memory and the smaller ones will just use the RAM.

The size is in KBytes. The minimum possible value is 96 Kbytes. Note that PPT won't allocate more memory than is needed for the image. Also, undo images require very little memory, as they're kept almost completely in the VM directory.

There are also settings concerning the externals:

External Stack Size

You can use this to set the stack size of the external processes that are launched for different processes. You may not go below 5000 kbytes and the recommended setting is 10000 bytes. If you start to see really strange crashes, try increasing this value and see if the problems go away.

Priority

You can set the priority of any subprocess started by PPT with this gadget. I recommend you keep it below zero, as then any processing you do should not affect your other duties. If you don't know about processes, don't touch this knob ;-)

External Nice Value

If you have Petri Nordlund's excellent Executive package

installed, you can use this slider to set the nice value for all
external processing. The larger the nice value is, the easier it
is for other tasks to take the CPU from the external process.
The default value is 10, a good value if you run a lot of
processing. You can set it to anywhere between -20 and 20 (but I
really don't recommend setting it smaller than zero!)
By the way, did you know that a polar bear is just a cartesian bear
undergoing a coordinate transformation?

1.22 PPT Fonts

PPT uses two fonts:
Main Font
This is the font which is used for the screen, gadgets, window
titles, etc. I suggest this font is a large and readable one.
List Font
This font is used in any list PPT creates. For example, the
loaders and effects lists use this font. I suggest you keep this
font a bit smaller and more condensed, which allows you to have
smaller windows but still see things.

1.23 Setting the Main Screen

Screen Mode
This tells which screen mode you are currently using. Click on
the button gagdet on the right to get a standard ASL screen
requester (ASL.library V38+ required!) in which you can set the
screen depth, size, resolution and mode.
Color Preview
If this is toggled, then all PPT preview windows will be in
color. Note that you need at least a 32 color (depth 5) screen
for this to work.
If a color screen cannot be opened or this item is not set, then
PPT will use a grayscale screen.
PPT supports OS 3.0 color sharing schemes. All the colors PPT
uses have been locked using shared mode and some colors may not
be locked at all.
Preview Mode
Some effects can show a real-time preview. You can use this to
control the size of the preview images. You should do this to
reflect the speed of your machine: on a 060 the 'Large' setting
should be your choice.
You can also turn the previews off completely.

1.24   Miscallaneous Settings

Max. Undo Levels

You can only have this many undo levels. Note that this means

that for every undo frame, a copy is held in the VM directory

and thus will eat away your RAM or hard drive space (depending

on where the VM directory is placed.)

The default is 4 undo levels. There is no practical limit to

this value.

Flush modules when they're not needed?

If you check in this box, PPT will attempt to reduce its memory

consumption by flushing all unused external modules from memory.

Depending on the situation, this can free a lot of memory. On

the downside, this slows down operation a bit, since any modules

must still be loaded from disk when it is used.

The default is to keep all modules in memory.

NB: Since PPT modules are standard Amiga shared libraries, you

can use any suitable tool to flush them from memory. For

example, saying "Avail FLUSH" will flush away all unused

libraries.

Confirm Requesters?

Sometimes saying 'OK' to all kinds of boring requesters can be

dull. If you think that this is the case, then uncheck this

box and PPT won't ask you to confirm your choices. For example,

if this box is unchecked and you decide to delete a frame,

you won't be asked if this is what you really want to do.

Also, some of the more obvious error messages are replaced with

a sound signal and a flashing screen (DisplayBeep() for those who

care.)

This option is for power users and thus should be used sparingly

if you're not quite sure what you're doing.

1.25   About PPT

This menu selection will show you some information on the

current status of PPT, as well as the Author's name

and address.

1.26   Quitting PPT

Quits the program. You'll be asked if you really want to do this

or not...

1.27   Cropping an image

Copy To New

Creates a new frame and puts the cropped area into that one,

leaving the original one unscatched.

1.28   Copying and pasting

You may select an area of an image and then copy it to the PPT

clipboard. Then, when you select Paste, it will launch the

Compositing module, which allows you to place the image within the

target image.

If you choose 'Cut' instead of 'Copy', the area you have cut will

be cleared to black.

This is almost the same as dragging an image from the list of frames

into a frame, but this allows more flexibility.

1.29   Render Settings

In this window you can select how your project will be rendered.

Following options are available:

Screen Mode

Use this to set the rendering screen mode. The field will show the

display id and next to it is a button from which you can call up the

ASL screenmode requester. This function requires asl.library V38 or

newer.

Render Mode

This is a cycle gadget, from which you can select how your render is

to be made. Here you can specify if you want it to be normal color,

Extra Halfbrite, HAM or HAM8.

PPT uses a specialized algorithm for HAM images to provide a great

image quality. Which is why it takes a bit longer to generate the

palette for a HAM/HAM8 image. Just sit tight :-)

Dither

There are several dithering options available. The least effective
and also least computationally intensive (read: faster) are on top
and the slower but better ones are nearer the bottom. You can, if
you really want to, use dithering while in HAM modes, but it is not
recommended, however.

Colors

If you're using Normal Color - option in the Render Mode-gadget, you
can specify the amount of colors here.

Force B/W?

Normally after PPT places the darkest color (ie the most black) at
color table position 0 and the brightest color (ie the most white)
at color table position 1. If you want the color table entries 0 and
1 to actually be black and white, respectively, then check this
option. It can sometimes enhance the image quality if you're using a
very small number of colors.

Palette

Tells how the palette should be chosen. There are three methods
available:

Median Cut : An optimized Heckbert median cut algorithm, which
often produces the best results.

Popularity : A simple algorithm that uses the most popular colors
in an image.

Force : This forces the palette from an other image onto this
image. You may enter the filename into the string
gadget next to this or by clicking the button to the
right of the gadget, use the ASL file requester.

The palette must be in IFF format, so you can use
any colormapped ILBM image to get the palette from.

Draw Alpha?

If the checkbox is selected, then the image alpha channel will be
rendered as well. This means that if there are some areas which
have been marked as totally transparent, you will not see anything
on them. However, this is quite useful if you're planning to save a
transparent image.

OK

Click this to accept the current settings and start rendering.

Cancel

This will forget your changes and close the window.

1.30   Rendering

PPT handles images internally in full 24bit format
(or 8bit, if the image is a grayscale image). Sometimes it may be
necessary however to reduce the colors of an image or view it in
color (if you happen to use the grayscale preview...)
Rendering will take the existing preferences
and attempts to render your image according to them. You may then
save this rendered image to disk as a colormapped image.
Rendering will be done in a separate process yet again, so you can
always do something else while the system chews on your image.

1.31   Close a Rendered Image

Select this menu item to close a rendered image. Until you do this,
the image will be out there, eating away your precious RAM.

1.32   Correct Aspect Ratio

Since PPT allows you to resize the image at will, you'll get very
easily distorted images. This operation allows you to instantly
resize your image window so that it has the correct aspect ratio.

1.33   Palette editing

If you have a rendered image, you can use this menu item to further
edit it.
This menu item has three sub-menus:
Edit...
Opens up a palette editor in the screen that contains the image. It
is quite a normal palette editor with R, G and B components, but you
can also use it to set the Alpha channel information on each color.
When you save a rendered image in a file format that supports
transparent colors, the transparency information is now saved along
with the colormap. PNG images support full transparency information
for each color, whereas GIF images support only one transparent
color. If only one transparent color can be saved, the color with
the highest transparency value is marked as transparent *or* the one
that is the first to have a transparency value of 255.

Load...

Loads a palette on the image. It was better if you used the Force
Palette on the Rendering settings, as it can cope with some things
better than this.

Save...

Use this to save the current palette on disk. The palette is saved
in IFF format and can be read in by almost any software package.
Note that PPT saves the alpha channel information in a separate hunk
called "ALFA". Unfortunately, this is an unregistered hunk and can
cause confusion with some software. Let me know if this happens.

1.34   Processing images

After selecting this item, you can choose an effect
through which your selected area will be run. You
must first click on the name of the filter and then choose Execute.
Some filters will require you to set some additional options before
actually executing. You will then see a progress display in a window
while the filter does its job.
The processing is done as a separate process, so you can still
continue to work on other images, but you cannot work on this image,
until the processing has completed. It is possible to resize or
close the image window, but you will only see a busy text if you
attempt to redraw the window.
You may break the process any time by clicking on the Break
- button on the progress window or by choosing the Break Menu item.

1.35   Break

Clicking on this button or choosing the menu item causes a CTRL-C
signal to be sent to the external process (ie. Load, Save, Effect or
Render) that is currently processing this frame. The execution
should stop.
Note: Due to the multitasking nature of the software, it may be
possible that it takes a short while for the signal to get through
to the external process. Do not get alarmed, if nothing happens at
first.

1.36   Alpha channels

NB: This changed completely in v4.3!

Alpha channels define the transparency of a pixel. If the

transparency value (also called alpha) of a pixel is zero, then

that pixel is completely opaque. If it is 255, then the pixel would

be completely transparent, regardless of what color the image might

be. A value of 128 would mean that the pixel is half-transparent.

You can add an alpha channel to the image at any time by dragging

the alpha channel image you want from the main frame list into the

target image. This will produce a requester window from which you

can choose to add the alpha channel. (The other possibility would

be to Composite the images together.)

When you add the alpha channel, the target image will become an ARGB

type image, with the alpha values taken from the alpha image. Also,

if there was a previous alpha channel, the values will be replaced

by the new alpha values.

If the alpha image is an RGB image, the alpha values will be based

on the intensity of each image. White color will produce a

transparent pixel, and black color will produce an opaque pixel.

If the alpha image is an ARGB image, you will be presented a

requester, from which you can choose whether to copy the alpha

channel of the alpha image to the target image or to use the

intensity values of the alpha image to build the alpha values.

Displaying alpha channels

When an image contains an alpha channel, you will notice this by a

checkerboard pattern in the image. You can think of it as a

background pattern, which can be seen through when the transparency

value of the image allows it.

When you render an image, you can choose, whether you'd like the

transparency to be taken into account. See Render Settings .

Why use alpha channels? Because they're cool. And they make your

web page look a lot better ;-)

1.37   Undo

Sometimes even the wisest make mistakes. That is why an undo
-function is a necessity.
Whenever you modify an image, PPT will keep a copy of the original
one, so that when you choose this menu item, you'll get the previous
version back.
You can set how many copies PPT keeps from the Preferences menu.
Note that if you keep very many copies your disk space will be
seriously depleted, however main memory is not used almost at all.

1.38   Zooming

Use these two menu items to control zooming in and out,
respectively.
Zoom In takes the currently selected area and enlarges it to fill
the entire window.
Zoom out currently zooms back to the entire image.
You can move around in the image while zoomed by using the slider
gadgets in the window borders.

1.39   Selecting an area

It is not necessary to apply your effects to the entire image. You
can use the PPT selection tool to limit the area you are going to
edit. This can happen in several ways.
The Mouse
Use the mouse to select an area. That's right, just click
anywhere on the image and drag the mouse around and keep the
left mouse button pressed down.
If you are not happy with the area you selected, you can grab
the corners of the area (use the small squares) and resize it
again. If you wish to move the area you have selected, press
down CONTROL and grab the area with the left mouse button.
The Edit Menu/Select All
Use the Edit menu and select "Select All". This selects the
entire image to be your select area.
The Selection Window
Open up the Selection window (from the Window menu). In this

window you will see the selected area in real-time. You can also
write the exact values into the string gadgets of this window.
If you do not select anything, the entire image will be affected.
Note that some effects may well reset the selected area, because it
may be difficult to predict what the area should be after a
modification.

1.40   Editing interesting tidbits

Extensions could be almost anything: some image types use an
extension to save image-specific data like compression options or
something else; some use it to save textual information about the
image or its creator. Extensions can be edited using the "Edit" menu
item "Edit Info".
PPT understands three standard Extension names:
"Author" - this is basically your own name.
"Annotation" - this is an annotation string, for example image
copyright, what software was used and so on. Basically any
information you might want that the user sees.
"Date" - A string containing the creation date for this image.
You are not restricted to these, of course. You can invent your own
and some image formats can retain most of them when saving your
image. However, you should see the descriptions of the IO modules to
see which loaders save which Extensions.
Another possible use for this screen is that you might want to
remove an existing Extension from a saved image. This you can do by
selecting the Extension name using the left-hand listview and then
clicking on "Remove". You will, of course, asked for confirmation
before the item is removed.
Note that the Extension names are case specific, i.e. "Author" is
different from "AUTHOR" or "auThoR". PPT understands only when the
extension is written verbatim.

1.41   The frames window

This window contains the master list of different images you have
opened. It will also inform you about the status of the images, by
showing the letter 'B' next to the image if the image is busy at the
moment and 'R' if it has a currently open rendered image.

On the bottom line, you can actually see some attributes valid for
this image.

If the image is hidden, (see Project/Hide) you can also reopen
the image by double-clicking on the image name.

If you wish to composite images,
you can grab a frame in this window and drag&drop it to an another
window. Just click on a name, keep the mouse button pressed and move
the cursor onto the image you wish to composit this image on. You
will be presented with three choices:

Alpha Channel

See Alpha Channels

Composite

See Composite.

Cancel

Selbstverständlich.

1.42   Toolbar

The toolbar is a small window located initially to the bottom left
corner of the display. It has a couple of useful buttons and it also
can tell you the co-ordinates of your mouse cursor relative to the
current image.

This window will, in the future contain a lot more functionality.
You can close the window by clicking on the close gadget or by using
the 'Windows' - menu to toggle it off. You can get it back on by
using the Windows - menu.

1.43   Effects Window

This window is lists all of the effects at your disposal. You can
get information on any effect module by selecting it (click once
over the name) and then clicking on the 'Info' gadget.

You can execute an effect on the current image by double-clicking
the name or by selecting it and then selecting 'Go!'.

This window can be toggled on and off by the Windows - menu.

See the chapter about Processing .

1.44   Loaders window

This window will list all of the loaders at your disposal. You
can use this window to get information on a loader, just click on
the name and then on "Info".
The other main use of this window is to force to run a certain
loader. Normally, when you tell PPT to load a file, it will go
through all loaders until it can find one which can understand the
file in question. However, some loaders may not be capable of
recognizing file types (for example, if the data is in a raw format)
and you may need this option then.
Also, some loaders do not do disk loading, but they generate the
image by some algorithmic means. This window is the only way (save
AREXX) to use those loaders.

1.45   Scripts window

The script window shows all AREXX scripts available to you. Or to
be more precise, those scripts PPT knows about.
You can run a script by double-clicking on it's name or selecting it
and clicking on "Go!". "Info" will show you what the script looks
like.
NB: "Info" uses MultiView on systems that have Workbench 3.0 installed.
If you have 2.x, then PPT will check your "PAGER" environment variable.
If that does not exist, it uses "More". Note that More is not able
to open on the right screen, so you'll have to look it up in your
Workbench screen. One more reason to upgrade to 3.x.
The program specified in PAGER should support the "PUBSCREEN"
command line argument.
You can close this window by clicking on the close gadget or by
toggling the "Scripts" - menu item from Window menu.

1.46   The image itself

This window will show you a quick preview of an image. Depending
on the current settings it may be in
black and white or in color
Colorspaces}. Of course, a black and white image cannot be
rendered in color, even if the window was in color.

You may resize this image at will and you can choose

Correct Aspect in the Display Menu to

restore the original aspect ratio.

Also, after zooming in, you can use the slider gadgets in the

window borders to center more accurately to the area you wish to

see.

Lastly, there's an extra gadget at the top of the window in

addition to the standard Intuition gadgets. Use this gadget to

iconify the image.

SEE ALSO: Selecting an area.

1.47   Technical notes

There are some ... quirks in how PPT handles things. Here's a short

list of them:

- You may notice, that after the installation procedure PPT has many

external modules in the modules-subdirectory, and some of these

seem to be the same module, except that some have been compiled

for different processors. This is not an error, since PPT can

recognise the different versions during run-time. You can safely

keep the different versions in the directory, PPT will figure out

by itself, which one to use.

- PPT has a rudimentary form of memory protection built inside. It

checks its internal pointers from time to time and will notify you

if it finds something wrong with them. If you see a message that

claims an "Illegal Memory Access" has happened, it means that the

machine is an unpredictable state. You should quit PPT immediately

in order to minimize the damage.

- You may also see a "Soft Error" message. This is PPTs way of

telling you that it has noticed a bug in itself. If this ever

happens, please send me a message and describe

which message you got and how did you get it.

- Lastly, if things go real bad, PPT will tell you it is

panicking and will attempt to quit. It will attempt to kill all of

its threads and if it cannot succeed, it'll notify you.

- PPT cleans out the VM directory when it starts. This behaviour may

later be changed, but at the moment it makes sense.

- If a window refuses to open, there are two possible reasons:

a) you have run out of memory, or

b) the screen is too small for the window to open. There should

be none of these...

- DO NOT RENAME FILES IN THE MODULES -directory. AmigaOS seems to

get confused, if the library name within the library is different

from the actual file name! If you don't want the 000-versions

of the libraries hanging around on your hard drive, just

delete them. PPT knows automatically which version is the

fastest for you.

1.48   Known bugs

This is a list of well-known, bigger bugs in the software. Of

course, by the time you read this, I probably know of lots more

bugs, but since you are reading this, I cannot add anything to it.

Clear?

However, if you find any new ones, please submit a bug report . OK?

- PPT does not work with VMM. There are some quite big problems

with this... In the mean time, you *can* utilize VM by using a

relatively small buffer size and setting the RAM: device to use

VMM. Do not forget to set the VMM prefs as N N for PPT.

- It would seem that PPT does not live well together with the V43

FFS and large blocks. I really can't figure out why...

- If you get a lot of Enforcer hits when you use a file requester,

then get a newer version of bgui.library. The v41.8 filerequester

class is buggy...

- PPT seems quite slow with CyberGFX. This is not actually so,

the culprit is BGUI. The newer versions of BGUI *fly* on my

CV/3D, so you don't need to worry about this, just get the newest

BGUI library when it comes out (Manuel keeps promising this RSN.)

- PPT crashes if you select Palette/Edit... OK, this is really

BGUI's fault: it crashes, if it cannot locate the bgui_palette.gadget

in SYS:Classes/Gadgets/

- PPT sometimes hangs input.device when using Drag&Drop. This is

BGUI's fault and will be fixed in a future version. In the

meantime, just use Cut/Copy/Paste in the Edit window.

1.49   Reporting bugs

One night debugging multi-threaded code makes a hard man humble

Not much between despair and ecstacy.

-- Chess

OK, so you've found a bug in PPT. Cool. What should you do?

a) Write down what you did. Useful bits of information would be:

- The image you were trying to process (format, type and size)

- The exact sequence of commands that caused the bug to emerge

(the bug may well manifest only when several commands are used

in a certain order!)

- If it was a script, then write down the script as well.

b) Try to repeat what you just did. If you can repeat the bug

every time, good. If you can send me any Enforcer output,

even better! (Don't forget to run SegTracker also, otherwise

the Enforcer output has almost zero value...)

c) Write down your hardware configuration. Useful information is:

- Your machine (A500, A4000, etc.)

- Main processor (68000, 68010, 68020, 68030, 68040, 68060, PPC)

- Operating system version (2.0, 2.1, 3.0, 3.1, etc.)

- If you're using CyberGraphics, EGS or Picasso96 (or something

similar) please tell me your graphics configuration.

- Amount of CHIP and FAST RAM and an estimate of how much was

in use at the time of the bug appearance. If you're using

virtual memory, please tell which program you use (VMM,

GigaMem) and how much of it is allocated.

- Any Commodities you are using (like MCP, MultiCX, Yak,

PatchPointers, etc.)

- Any non-standard hacks you're using (FastIPrefs, SysIHack,

etc.) Try to run PPT without them, as well...

- If you get Software Failures (or Enforcer hits), please

check the task name that crashed! It may have been one

of the subtasks instead of the main program. (BTW: you should

be able to quit PPT if one of the subtasks crashed. Neat, huh?)

- And last, but not least, which version of PPT you were

running at the time the bug happened.

d) Send everything you wrote down to me .

1.50   There's no warranty

The headline says it all. I will not be held responsible for any

damage that might happen to anyone through the use of this program.

1.51   The author revealed!

I would greatly like your feedback from this package. If you have any

comments, bug reports, wishes, etc. please send mail (either electronic

or regular) to the addresses below:

Internet: Janne.Jalkanen@iki.fi

Snail Mail: Janne Jalkanen

Tavaststjernankatu 1 A 23

00250 Helsinki

FINLAND

E-mail via the Internet is definately preferred.

PPT has a support page on the Web. The URL is

http://www.iki.fi/~jalkanen/PPT.html

Check out the newest versions.

1.52   What Does Alpha Mean?

Alpha is the first letter in Greek alphabet. When used in software

development, it means that the program is still inherently unstable,

crashes without any serious reason and is generally more of a

nuisance than of actual use. See beta .

1.53   What Does Beta Mean?

Beta is the second letter in Greek alphabet. In software development

it means that the program is in much better condition than Alpha

link Alphatest} but you definately don't want to spread it around,

except to some brave individuals who are called beta-testers

link Betatesters}. These men and women boldly risk their

hard-drives, machines and sanities to try out the program and submit

their bug reports to the Author , who, in turn, will

create more beta-test versions for them to test.

Sometimes there are even additional phases (surprisingly called

Gamma, etc.), but most of the time the next phase after Beta is the

real release, which should be bugfree.

1.54   Betatesters

Thanks go to the brave betatesters of PPT, who have sacrificed their
mental health and their hard drives (no kidding) in the valiant
search for yet another bug. Here's a Hall of Fame. (Or more
accurately, the names of those people who have found an alarming
number of bugs...)

- Peter Bornhall

- Gary T. Nelson

- Patrik Nydensten

- Brian Jones

- Ivo Kroone

And don't forget: Faith Manages

1.55   Archimedes

Archimedes (c. 287-212 BC)

Archimedes was a Greek mathematician, physicist, and inventor. He is
generally regarded as the greatest mathematician of antiquity. His
rigorous geometrical technique of measuring curved lines, areas, and
surfaces anticipated modern calculus, and he laid foundations of
mechanics, statistics and hydrostatics.

Dictionary of Mathematics

(used without permission)

1.56   Bessel

Friedrich Wilhelm Bessel (1784 - 1846)

A German Astronomer, who calculated the orbit of Halley's comet
while a 20-year-old warehouseman. He later made the first accurate
measurements of stellar positions and became Professor of Astronomy
at Königsberg.

Dictionary of Mathematics

(used without permission)

See also Archimedes

1.57 Baron Augustin Louis Cauchy

Augustin Louis Cauchy (1789 - 1857)

French mathematician and physicist whose work had great impact on,
and introduced rigour to, virtually all branches of mathematics. In
particular, he laid the foundations of modern analysis in terms of
limits and continuity, and developed the theory of functions of
complex variables. After serving as an engineer in the force
preparing Napoleon's abortive invasion of Britain, he was encouraged
to pursue a mathematical career by Laplace (whom he had met when his
family fled from the Reign of Terror) and by Lagrange. He became
Professor at the École Polytechnique, the Sorbonne, and the Collège
de France. Because of his political and religious views, he refused
to take the oath of allegiance to Louis-Philippe on 1830 and
followed Charles X into exile; the University of Turin appointed him
to a specially created Char, but the left to tutor the grandson of
Charles X. He published a total of 789 works, including monographs
on definite integrals and on wave propagation, and papers on
geometry, number theory, elasticity, the theory of error, astronomy,
and optics.

Dictionary of Mathematics

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See also Archimedes ,

Bessel