MultiFractals

COLLABORATORS			
	TITLE : MultiFractals		
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NUMBER	DATE	DESCRIPTION	NAME

Contents

Chapter 1

MultiFractals

1.1 main

Short:

MultiFractals is a fractal generator for the EGS-System. It make full use of the multitasking capabilities of the Amiga and the color capabilities of the EGS-System. Limitations only exist by your system.

Sections:

1.2 requirements

Requirements:

Amiga with an EGS-System, 68020+, 68881+, 1 MB of RAM only to start the program, (EGS-Screen 800x600x65536) and about 350 KB of RAM for each calculation (Resolution 400x400).

1.3 installation

Installation:

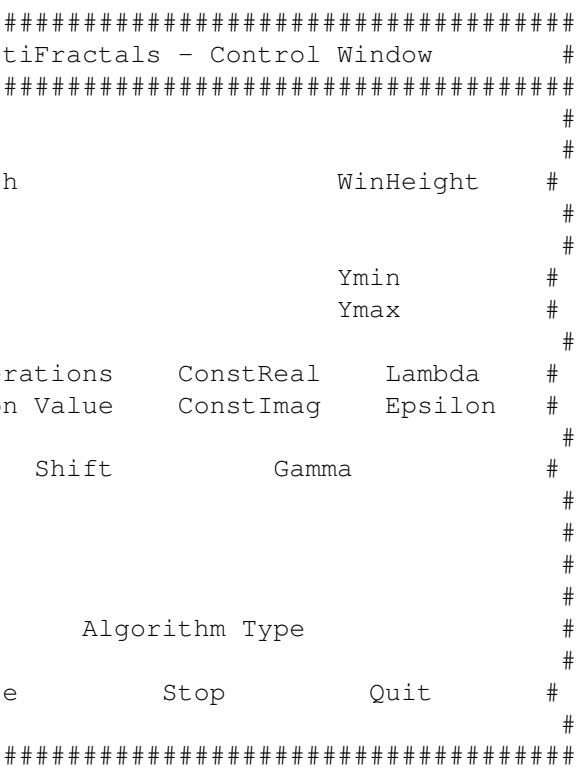
Simply drag the drawer to your harddisk. Consider that you must have

a working EGS-System for this program.

1.4 usage

Usage

You get the following control-window when you start the program:



You get also a new window for each new calcultion.

Task Priorities:

The Control-Window works with a priority of ’2’.
All Generation-Tasks works with a priority of ’-1’ which calculation, and ’1’ when they are waiting on the user. Don’t try to change the priority with programs like RSys, ARTM or others. Also never change the names of the subtasks or the program can’t terminate.

1.5 winsize

WinSize:

Adjust here the size of the fractal-image.
These gadgets are not set to current window size after zooming.

1.6 coordin

Coordinates:

Enter here the coordinates for the view in the fractals.
Modyfied by zooming.

1.7 mxit

Max Iterations:

The maximum number of interation, identical with the number of
possible colors.
Set by zooming to current window.

1.8 abval

Abortion Value:

The limitation value when the iteration should terminate and gets
the appropriate color.
Set by zooming to current window.

1.9 const

Real/Imag Constants:

Constants to modify the behavior of some algorithms, available for
Julia, Biomorph and Magnet.
Set by zooming to current window.

1.10 lambda

Lambda Constant:

Constant to modify the behavior of some algorithms, available for
Lcos(z) and Lexp(z).
Set by zooming to current window.

1.11 epsilon

Epsilon Constant:

Constant to modify the behavior of some algorithms, available for Esin(z).
Set by zooming to current window.

1.12 shift

Shift Colors:

Value to shift the color. Positive values mean shift-left so you have a lighter picture, negative values the opposite.
Set by zooming to current window.

1.13 gamma

Gamma Correction of colors:

Value to manipulate the color by the gamma-correction.
Set by zooming to current window.

1.14 color

Color modifications:

Modify the 3 basic colors by shifting and the gamma-correction.

1.15 stop

Stop Calculations:

This gadget will stop all calculation of all windows.

1.16 quit

Quit All:

This gadget will terminate all subtasks and quit the main program.

1.17 algtype

Algorithm Type:

Select the fractal type with this gadget.

Available Algorithms:

- Mandelbrot: The all known Mandelbrot-Fractals.
- Julia: Try Rconst=-1.25 and Iconst=0.
- Epsilon SIN(z): Try Rconst=0.4, Iconst=0. The program-icon is constructed with this type and parameter.
- Lambda COS(z)
- Lambda EXP(z)
- Biomorph Z^3+C
- Newton-Raphson Z^3-C
- Magnet 1x

For more informations look at 'Frac' on Fish 371, written by Ronnie Johansson Linköping, Sweden, 900421.
Most algorithms are from this program. Consider that the last 3 algorithms (Biomorph, Newton and Magnet 1x) not the same in this program.

1.18 generate

Generate:

This gadget will start the calculation. A new task will created which will open a new window and draw into it.

1.19 genwindow

Generation Window:

In the Generation Window you can stop and continue the algorithm at any line by menu selection.
Use the left mouse-button to zoom in. This will modify the parameters directly in the control window (Happy Multitasking!).

1.20 features

Features:

- Separate Selection-Window
- Many Fractal Algorithms
- Inner Multitasking
- Zooming with the Mouse
- Color Selection by Shifting and Gamma-Factor

1.21 bugs

Bugs:

- with more than 3 calculations at the same time
  global system speed breaks down (Maybe this is
  an error of the piccolo-software).

Please report other bugs to me, if there are any.
(Via Internet: andersen@or1.nat.tu-bs.de, or
telephone +49-531-343780.)

1.22 todo

What's to do:

- Needs of Load/Save for the pictures and parameters
- More algorithms
- Better closeup of the program
- Shifting the fractals online

1.23 version

Version Info:

V 1.0 (25-Feb-94): Very first release

1.24 copyright

Copyright:

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