Subject: GeoFun -- Plot Spirograph
Posted by deep on Thu, 28 Feb 2013 15:38:00 GMT
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Hi,

I have made small program to plot spirographs.

These are Roulette (curves).

Program can save image(png/jpg), Autocad script (scr) and print.

Sample image attached.

Have some fun.

I am attaching the programs here for download. And also program is available from sourceforge.

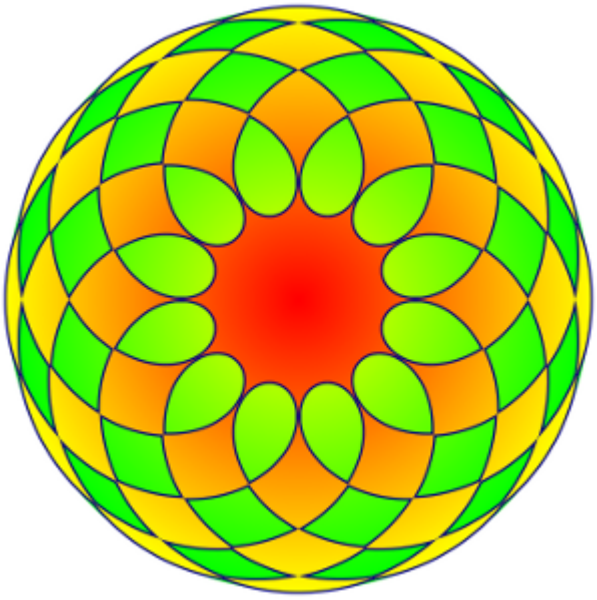
Program can be downloaded from

GeoFun

Epitrochoid image

File Attachments

1) Epitrochoid1.png, downloaded 1952 times



Subject: Re: GeoFun -- Plot Spirograph

Posted by deep on Fri, 01 Mar 2013 12:39:55 GMT
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I am attaching the programs for download here.

Linux program -- after download set execute bit (file permissions) to run.

V0.26 available.

New features 'plot animation' and save as SVG file.

This is now new version with Animation of curve draw.

File Attachments

1) GeoFun-Linux-V026.gz, downloaded 643 times

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Fri, 01 Mar 2013 12:45:04 GMT
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Attached windows exe.
This file is for win-64bit

File Attachments

1) GeoFun-Win.7z, downloaded 549 times

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Sun, 03 Mar 2013 17:59:34 GMT
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Here is windows 32 bit file

This is a new file with Plot animation

V0.26 available.

New features 'plot animation' and save as SVG file.

File Attachments

1) GeoFun_W32_V026.zip, downloaded 551 times

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Thu, 25 Sep 2014 17:47:54 GMT

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Hi,

This is updated version of GeoFun.

Added Save to SVG.
and some minor UI enhancements.

Here is new code.

File Attachments

1) GeoFun.7z, downloaded 505 times

Subject: Re: GeoFun -- Plot Spirograph
Posted by koldo on Fri, 26 Sep 2014 07:01:10 GMT
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Hello Deep

It is pretty. Would you like to upload it to Bazaar?.

You could have too a page where you could explain the package features. If you would have problems to do it I would help you.

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Sat, 27 Sep 2014 17:57:43 GMT
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Hello Koldo,

Thank you for reviewing my code.

This package is now in "Examples".
I have updated the code.
I don't mind if it is in Bazaar.
Any place it is fine with me.

Subject: Re: GeoFun -- Plot Spirograph
Posted by koldo on Mon, 29 Sep 2014 06:56:30 GMT
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Hello Deepak

I cannot find it in Upp/Examples. Where could I find it?

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Mon, 29 Sep 2014 13:24:02 GMT
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Hello Koldo,

GeoFun Example

Subject: Re: GeoFun -- Plot Spirograph
Posted by koldo on Tue, 30 Sep 2014 15:23:14 GMT
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True . Thank you.

Subject: Re: GeoFun -- Plot Spirograph
Posted by ManfredHerr on Wed, 01 Oct 2014 20:13:40 GMT
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To set the execution flag on LINUX is not enough:
./GeoFun: error while loading shared libraries: libgtk-x11-2.0.so.0
But the build from the sources in examples works well.

Subject: Re: GeoFun -- Plot Spirograph
Posted by Klugier on Wed, 01 Oct 2014 21:30:22 GMT
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Hello deep,

A small note on your code, you should never use following statement in your header file:

using namespace Upp;

This is definitly bad practice and it can lead to mistakes in the future.

You can improve your code quality by simply using:

```
// In header file (.h):
NAMESPACE_UPP

#define IMAGECLASS GFImg
#define IMAGEFILE <GeoFun/GeoFun.iml>
#include <Draw/iml_header.h>

// ...

END_UPP_NAMESPACE

// In implementation file (.cpp)
#include "GeoFun.h"

using namespace Upp;
```

Sincerely,
Klugier

Subject: Re: GeoFun -- Plot Spirograph
Posted by ManfredHerr on Fri, 03 Oct 2014 15:25:05 GMT
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Hi Deepak,

on my UBUNTU 14.04 I tried your new export as SVG. Neither SVG-viewer of mine (Emacs, Firefox, etc.) did show a roulette curve but garbage.
A short examination of your code revealed that you try to export the points in float format rather than integer. Applying the following change

```
  for ( int j = 0; j < p.GetCount(); j++ )
//    sXML << Format ( "%0.4f", p[j].x ) << "," << Format ( "%0.4f",  p[j].y ) << " ";
    sXML << Format ( "%d,%d ", p[j].x, p[j].y );
```

produced a file that shows a part of the curve at least. It is one (4.) quadrant only because the shift of the origin is missing.

I hope this is of some help to you.

Manfred

Subject: Re: GeoFun -- Plot Spirograph
Posted by deep on Wed, 08 Oct 2014 15:01:16 GMT
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Hi Manfred,

As per "SVG" specifications number is type float. Curves smoothness will be hampered if I change number to 'int' when image is scaled.

Thank you for your suggestions. Will check in Linux. If problem is there then will change the number format to 'int' for Linux compilation.

interface SVGNumber {
  attribute float value setraises(DOMException);
};
SVGNumber

InkScape opens the present saved image. Full image shown.

I checked in windows with Firefox, Chrome and IE all are showing the image. It is 1/4 (positive quadrant). By default internet browsers expect SVG image with all positive values. My calculated path is in all 4 quadrants.

I have made required change to shift image to have all positive values in exported image. Full image is visible in Windows browsers.

Thanks for your suggestion Klugier
Quote:
A small note on your code, you should never use following statement in your header file:

using namespace Upp;

Made changes suggested by you. It includes origin shift also.

File Attachments
1) GeoFun.7z, downloaded 471 times

Subject: Re: GeoFun -- Plot Spirograph
Posted by ManfredHerr on Wed, 08 Oct 2014 16:42:46 GMT
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Hi Deepak,

I think the problem in Linux is that your Format code produces floats with a comma rather than a point. So, the SVG interpreter sees four integers seperated by comma rather than two floats that are intended.
BTW, Point in UPP has integer coordinates as far as I know. To store them as floats or double

does not increase the resolution.

Greets
Manfred
Edit:
The reason, why I generate floats with a comma rather than a point, is my LOCALE setting: it is GERMAN.
If I include
setlocale(LC_NUMERIC,"C"); // C-Standard
in GUI_APP_MAIN then I also produce a SVG file with floating point values that can be interpreted by SVG viewers.
