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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

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#### File Attachments

1) [Epitrochoid1.png](#), downloaded 1578 times

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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.

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#### File Attachments

1) [GeoFun-Linux-V026.gz](#), downloaded 503 times

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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

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#### File Attachments

1) [GeoFun-Win.7z](#), downloaded 427 times

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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.

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#### File Attachments

1) [GeoFun\\_W32\\_V026.zip](#), downloaded 437 times

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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.

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#### File Attachments

1) [GeoFun.7z](#), downloaded 393 times

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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.

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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.

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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?

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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

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Subject: Re: GeoFun -- Plot Spirograph  
Posted by [koldo](#) on Tue, 30 Sep 2014 15:23:14 GMT

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True :roll: . Thank you.

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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:  
8o ./GeoFun: error while loading shared libraries: libgtk-x11-2.0.so.0  
But the build from the sources in examples works well.

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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 definitely 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

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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

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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 363 times

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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.

Greetings

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.

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