
Subject: Scatter Control

Posted by [andrei-catalin](#) on Wed, 08 Nov 2006 08:29:46 GMT

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Hi!

Below you can see my first attempt to make a simple control for plotting data and functions. Certainly, many improvements are possible and any suggestion is welcome.

To test it unzip Scatter.zip in MyApps folder and open TestScatter package. I tested it in Windows, 610-dev3.

Andrei

Subject: Re: Scatter Control-Screenshot

Posted by [andrei-catalin](#) on Wed, 08 Nov 2006 10:36:18 GMT

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Subject: Re: Scatter Control-Screenshot

Posted by [zsolt](#) on Wed, 08 Nov 2006 11:03:30 GMT

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Looks cool!

Subject: Re: Scatter Control-Screenshot

Posted by [forlano](#) on Wed, 08 Nov 2006 11:34:40 GMT

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Wonderfull!

I was looking for something similar in U++.
Thanks a lot.

Luigi

Subject: Re: Scatter Control-Screenshot

Posted by [mirek](#) on Mon, 13 Nov 2006 16:14:08 GMT

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A small bug: you should place w.End to "close" w.Offset at the end of Paint method, otherwise it

kicks assertion...

Nice work. But `_maybe_` it should have little bit finer modularization, decoupling painting from Ctrl?

Mirek

Subject: Re: Scatter Control-Screenshot
Posted by [andrei-catalin](#) on Tue, 14 Nov 2006 05:56:10 GMT
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I've already fixed the bug.(Current version has many improvements.)

Thank for suggestion. I intend to use DrawingDraw for painting to allow printing.

Subject: Scatter v0.2
Posted by [andrei-catalin](#) on Thu, 16 Nov 2006 13:01:46 GMT
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Scatter v0.2 features:

- Unlimited number of data series or functions
- Performance improved using AddPick method
- Better appearance and interface in Layout Designer
- Added support for reporting and printing
- Labels for X-Y axis
- More options
- ...

Andrei

Subject: Re: Scatter v0.2
Posted by [Ulti](#) on Fri, 17 Nov 2006 00:27:09 GMT
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It's nice,it looks .usc is very useful.

Subject: Scatter v0.3

Posted by [andrei-catalin](#) on Fri, 01 Dec 2006 10:05:08 GMT

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New features:

- accepts parametric function
- smooth connection of points using cubic spline
- 7 styles of customisable marks (CIRCLE, RECTANGLE, SQUARE, TRIANGLE, CROSS, X, RHOMB)
- Legend with auto-arrangement
- access to chart image for export as PNG,JPG, etc.
- improvements in scatter.usc

Andrei

Subject: Re: Scatter v0.3

Posted by [masu](#) on Fri, 01 Dec 2006 10:16:30 GMT

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Where can we find it ?

Thanks
Matthias

Subject: Re: Scatter v0.3

Posted by [andrei-catalin](#) on Fri, 01 Dec 2006 10:18:03 GMT

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Subject: Re: Scatter v0.3

Posted by [masu](#) on Fri, 01 Dec 2006 11:29:17 GMT

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Looks great, thanks.

I had to change the following:

```
Konstruktor DrawExtension()  
DrawExtension()  
{  
// Draw::Draw();  
}
```

and changed function parameter 'XY & point' to 'XY point' in a few functions.

Tested on WinXP, 611-dev4.

Matthias

Subject: Re: Scatter v0.3

Posted by [andrei-catalin](#) on Fri, 01 Dec 2006 13:19:23 GMT

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Hello, Matthias!

Thank you for testing Scatter Chart!

Have you made the modifications to elude compilation errors or for code optimisation?

Andrei

Subject: Re: Scatter v0.3

Posted by [masu](#) on Fri, 01 Dec 2006 13:28:08 GMT

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I got an error about calling protected constructor.

And I got errors on function calls with XY(a,b), complaining about having type XY instead of XY&.

My compiler is gcc-4.1.1.

Matthias

Subject: Re: Scatter v0.3

Posted by [andrei-catalin](#) on Fri, 01 Dec 2006 13:43:22 GMT

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I tested Scatter only in MSC71.

Yours modifications are useful for GCC users.

Thanks.

Andrei

Subject: Re: Scatter v0.3

Posted by [masu](#) on Fri, 01 Dec 2006 14:29:19 GMT

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BTW, I had to also delete your library definitions for the Scatter package.
The required libraries should already be included by the used packages (CtrlCore etc.).

Matthias

Subject: Re: Scatter v0.3
Posted by [mirek](#) on Sat, 02 Dec 2006 16:42:46 GMT
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masu wrote on Fri, 01 December 2006 09:29BTW, I had to also delete your library definitions for the Scatter package.
The required libraries should already be included by the used packages (CtrlCore etc.).

Matthias

Very nice. I feel happy that number of capable U++ programmers seems to grow quickly now

Comments:

Maybe instead of XY, I would use Pointf (in fact, even

typedef Pointf XY;

would work here

Capitalisation of plotFunction and some of other methods seems inconsistent with both rest of class and U++...

Using Win32 API is generally OK, but causes cross-platform problems. I think it should be possible to implement DrawPie and DrawRoundRect using existing primitives (second one is primitive, DrawPie is somewhat harder, but hey, you are drawing cubic splines there, so you can do it

Mirek

Subject: Re: Scatter v0.3
Posted by [mirek](#) on Sat, 02 Dec 2006 16:52:28 GMT
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Also, Print preview is off, most likely wrongly placed (see the right edge).

Mirek

Subject: Re: Scatter v0.3

Posted by [andrei-catalin](#) on Sat, 02 Dec 2006 22:43:23 GMT

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Quote:Maybe instead of XY, I would use Pointf (in fact, even

typedef Pointf XY;

would work here

Definitely, I will use Pointf type.

Quote:Capitalisation of plotFunction and some of other methods seems inconsistent with both rest of class and U++...

Necessary, but I don't read too well your hint. Could you give me a piece of advice?

Quote:I think it should be possible to implement DrawPie and DrawRoundRect using existing primitives

I will try.

Quote:Print preview is off, most likely wrongly placed (see the right edge)

Only on screen; on paper (or PDF) is OK.

Thank you very much!

Andrei

Subject: Re: Scatter v0.3

Posted by [mirek](#) on Sun, 03 Dec 2006 12:34:25 GMT

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Quote:

Quote:Capitalisation of plotFunction and some of other methods seems inconsistent with both rest of class and U++...

Necessary, but I don't read too well your hint. Could you give me a piece of advice?

If there is no special reason, I would use "PlotFunction"

Quote:

Quote:Print preview is off, most likely wrongly placed (see the right edge)

Only on screen; on paper (or PDF) is OK.

Yes, but should be OK even on the screen.

Mirek

Subject: Re: Scatter v0.3

Posted by [andrei-catalin](#) on Sun, 03 Dec 2006 17:37:04 GMT

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Quote:Capitalisation of plotFunction and some of other methods seems inconsistent with both rest of class and U++...

Quote:Necessary, but I don't read too well your hint. Could you give me a piece of advice?

Quote:If there is no special reason, I would use "PlotFunction"

Thank for illustration. I've translated "capitalisation" as "exploitation"...

I will analyse better PrintPreview method.

Andrei

Subject: Scatter v0.3, PieChart v0.1

Posted by [andrei-catalin](#) on Sat, 23 Dec 2006 18:43:44 GMT

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This is the new package containing both scatter and pie charts adapted for upp 612-dev2.

Season's greetings!

Andrei

File Attachments

1) [ScatterV0.4.zip](#), downloaded 601 times

Subject: Scatter-new version

Posted by [andrei-catalin](#) on Tue, 17 Apr 2007 03:54:56 GMT

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Scatter v0.5 & Pie v0.2

Changes:

added a info box to show x-y coordinate at left click

customisable format for grid labels

axis label supports special characters via WString

a new more extensible testScatter package

many other optimizations

tested with MINGW & MSC71 compilers
(Win32, UPP 2007.1)

Andrei

File Attachments

1) [Scatter_v0.5.zip](#), downloaded 607 times

Subject: Re: Scatter-new version
Posted by [ebojd](#) on Thu, 19 Apr 2007 20:12:21 GMT
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Thanks Andrei,

I get a number of errors starting with:

Scatter.cpp:546 WinMetaFileDraw not declared in scope... It looks like it includes the appropriate files. Any quick ideas on what to look into?

I'm currently running the final release of 2007.1 with gcc-4.1.1 on gentoo linux.

EBo --

ps: I would love to cut and paste the error messages from upp, but for some reason the text is not being copied to the publicly accessible clipboard.

Subject: Re: Scatter-new version

Posted by [guido](#) on Thu, 19 Apr 2007 21:35:01 GMT

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ebojd wrote on Thu, 19 April 2007 22:12 Thanks Andrei,

I get a number of errors starting with:

Scatter.cpp:546 WinMetaFileDraw not declared in scope... It looks like it includes the appropriate files. Any quick ideas on what to look into?

I'm currently running the final release of 2007.1 with gcc-4.1.1 on gentoo linux.

EBo --

ps: I would love to cut and paste the error messages from upp, but for some reason the text is not being copied to the publicly accessible clipboard.

EMF is a win32 thing not yet supported elsewhere.

I have attached a version with WIN32 platform conditionals.

Except IsMetaFile() checks, which I just removed out of laziness.

Also gcc4 didn't like mixing enum with bool (BOTTOM, TOP), so I hacked it up with #define.

I investigated EMF support for Unixes. But it is tricky as already existing libs, like libwmf and libemf, make use of Wine headers, inheriting the LGPL license that way.

PS:

Forgot to explain: I allowed myself to change "BUTTON" to "BOTTOM"

Guido

File Attachments

1) [Scatter_X11.zip](#), downloaded 549 times

Subject: Re: Scatter-new version

Posted by [andrei-catalin](#) on Fri, 20 Apr 2007 04:49:06 GMT

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Quote:I have attached a version with WIN32 platform conditionals.

Very nice to hear that Scatter can run on Linux. Thanks.

Andrei

Subject: Re: Scatter-new version
Posted by [ebojd](#) on Fri, 20 Apr 2007 15:44:18 GMT
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Just got it to work (I put my U++ source trees on an NTFS partition so they are the same for both Linux and XP -- for some reason writing to the NTFS partition from Linux pukes every once and awhile)...

Thanks again for the pointer!

It will have to be this weekend before I can look seriously in the code, but it looks like it has at least some of the functionality I need.

One of the reason I was looking at gnuplot was the ability to process the data on the fly (like histograms, box-wisker plots, switching between log-log, log-normal, and linear plots which we use all the time). With any luck Scatter will provide enough of the base functionality to justify writing all the other stuff

EBo --

Subject: Re: Scatter-new version
Posted by [fallingdutch](#) on Wed, 09 May 2007 10:08:01 GMT
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Hi Andrei,

nice work!

i have two questions:

1st which license do you apply to your code? BSD?

2nd what about using DrawText with angle in Scatter::SetDrawing, so you can turn the gridLabels as needed.

Bas

Subject: Re: Scatter-new version
Posted by [andrei-catalin](#) on Wed, 09 May 2007 12:18:59 GMT
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1. Yes, likewise Upp
2. thanks for suggestion

Andrei

Subject: Re: Scatter-new version
Posted by [jlfranks](#) on Mon, 11 Jun 2007 16:36:11 GMT
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I need to extend this to do a histogram of the style in the first example figure at <http://en.wikipedia.org/wiki/Histogram>

My first thought is to sub-class from Scatter to create the required functionality. Do you think this is the way to go?

Any suggestions would be helpful?

--jlf

Subject: Re: Scatter-new version
Posted by [andrei-catalin](#) on Tue, 12 Jun 2007 05:11:03 GMT
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Actually, scatter package contains only scatter chart and pie chart types. IMO, the histogram chart could be implemented rather easy from scratch, without scatter class derivation.

Andrei

Subject: Re: Scatter-new version
Posted by [forlano](#) on Thu, 20 Sep 2007 11:51:04 GMT
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Hello,

I'm using the scatter ctrl. It is very useful.
I miss, maybe I do not find it, a method to clear the screen from all the points.

Luigi

Subject: Re: Scatter-new version
Posted by [andrei-catalin](#) on Fri, 21 Sep 2007 04:05:32 GMT
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Hi Luigi,

RemoveSeries(series number) method should work.

Andrei

Subject: Re: Scatter-new version
Posted by [forlano](#) on Fri, 21 Sep 2007 11:31:13 GMT
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andrei-catalin wrote on Fri, 21 September 2007 06:05Hi Luigi,

RemoveSeries(series number) method should work.

Andrei

Hi Andrei,

yes, it works:

```
for (int i=scatter.GetPData().GetCount() - 1; i>=0; i--) scatter.RemoveSeries(i);
```

It doesn't work if I start from 0 and move toward the last serie. Maybe some interaction with GetCount() that is changing during the removal.

Thank you,

Luigi

Subject: Re: Scatter-new version
Posted by [andrei-catalin](#) on Mon, 24 Sep 2007 04:01:46 GMT
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To simplify your task you must use the current version of Scatter.

Scatter v0.6 features:

4 new methods (tested in "Operations" tab):

```
void RemoveAllSeries();
```

```
void RemoveAllFSeries();
```

```
const Vector<String> & GetPLegend() const {return vLegend;}
```

```
const Vector<String> & GetFLegend() const {return vFLegend;}
```

Added PopUpInfo class to show the coordinates outside of plotting area

3 new tests: Dynamic, Log and Operations

Added conditional compilation directives for WinMetafile

Andrei

File Attachments

1) [Scatter_v.06.zip](#), downloaded 532 times

Subject: Re: Scatter-new version

Posted by [forlano](#) on Mon, 24 Sep 2007 14:14:31 GMT

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andrei-catalin wrote on Mon, 24 September 2007 06:01To simplify your task you must use the current version of Scatter.

Scatter v0.6 features:

4 new methods (tested in "Operations" tab):

```
void RemoveAllSeries();
```

```
void RemoveAllFSeries();
```

```
const Vector<String> & GetPLegend() const {return vLegend;}
```

```
const Vector<String> & GetFLegend() const {return vFLegend;}
```

Added PopUpInfo class to show the coordinates outside of plotting area

3 new tests: Dynamic, Log and Operations

Added conditional compilation directives for WinMetafile

Andrei

Thanks Andrei, this control is becoming better and better.

I've compiled the example using mingw of latest dev version and got some error that I removed as reported:

1. in Scatter.cpp

```
popText.SetColor(::Color(200,220,255));
```

instead of:

```
popText.SetColor(class::Color(200,220,255));
```

2. in Pie.h

```
static void DrawPie(Draw& w, Point centre, int r, int start, int alpha, int width=0, class::Color  
fill=NULL, class::Color outline=Black,uint64 pattern=0,class::Color background=White);
```

(just added 'static' to remove the mismatch of declaration)

3. in testScatter2.h

```
scatter7.PlotFunction(f1,String("funct")+AsString(topIndex));  
...  
scatter7.AddSeries(s,String("series")+AsString(topIndex),true);
```

instead of

```
scatter7.PlotFunction(f1,String("funct")<<topIndex);  
...  
scatter7.AddSeries(s,String("series")<<topIndex,true);
```

Luigi

Subject: Re: Scatter-new version

Posted by [andrei-catalin](#) on Tue, 25 Sep 2007 05:26:43 GMT

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Thanks,

I've updated Scatter v.06 archive to remove reported errors.

Andrei

Subject: Re: Scatter-new version

Posted by [Mindtraveller](#) on Wed, 02 Apr 2008 14:44:15 GMT

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Andrei, thanx for such a good control. I use it in my U++ based program.

One thing could be useful in control properties: property changing format of displaying numbers at axes tickes. Or by default we may have following:

Look at numbers at vertical axis of top graph. It would be good to enter something like "%.2f" to view only needed significant digits.

File Attachments

1) [axes.JPG](#), downloaded 1239 times

Subject: Re: Scatter-new version

Posted by [andrei-catalin](#) on Wed, 02 Apr 2008 20:37:06 GMT

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You may use your own format:

```
void FormatY(String& s, int i, double d)
{
    s=Format("%.2f",d);
}
```

and apply it for Y axis

```
scatter6.cbModifFormatY=THISBACK(FormatY);
```

Andrei

File Attachments

1) [test.png](#), downloaded 1248 times

Subject: Re: Scatter-new version

Posted by [Mindtraveller](#) on Wed, 02 Apr 2008 21:39:05 GMT

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Thanx!

Is there any documentation on your control?

Subject: Re: Scatter-new version

Posted by [andrei-catalin](#) on Thu, 03 Apr 2008 04:51:14 GMT

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Unfortunately not yet. But you can investigate the test package who contains many examples.

Andrei

Subject: Re: Scatter Control
Posted by [mr_ped](#) on Tue, 08 Apr 2008 15:13:39 GMT
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Andrei, you should ask unodgs or Mirek for sourceforge SVN access (create user account on sourceforge firstly), than add Scatter control to bazaar directory at SVN, this way you will make it part of next ultimate++ release.

I think it's worth of it, just for the sake of nice little demo application which can be used to study how to do animated graphics output in window and how to draw pixels and images (which are total evergreen questions here at forum anyway).

Although the source did feel a bit dodgy to me (like way too many things going on directly in the header), it still did help me a lot and I like the control itself too.

Subject: Re: Scatter Control
Posted by [andrei-catalin](#) on Fri, 11 Apr 2008 15:10:55 GMT
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I've followed your advice so I've added Scatter into Bazaar directory.

Thanks,

Andrei

Subject: Re: Scatter Control
Posted by [emomartin](#) on Tue, 21 Oct 2008 20:26:43 GMT
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Hi,
is the scatter control still actual? Are there new versions available? Or is there any other charting component available for U++?

Regards
emomartin

Subject: Re: Scatter Control
Posted by [koldo](#) on Fri, 29 May 2009 21:41:24 GMT
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Hello all

I use daily Scatter control.
It works well and it has nice looking.

Is it going to be a new release?

A thing I would add is to scroll dragging the mouse and zoom rolling the middle mouse button.

Best regards
Koldo

Subject: Re: Scatter Control
Posted by [koldo](#) on Fri, 17 Jul 2009 20:29:50 GMT
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Hello Andrei

Mirek has done some changes in Draw class so that now there is no IsDrawing and it is not possible to compile Scatter.

It is commented inside post <http://www.ultimatepp.org/forum/index.php?t=msg&th=4523> & amp;.

Please as soon as possible fix this in Bazaar.
Meanwhile I have done a copy of Scatter package changing w.IsDrawing() with
(dynamic_cast<const DrawingDraw *>(&w)).

Best regards
Koldo

Subject: Re: Scatter Control
Posted by [andrei-catalin](#) on Sun, 19 Jul 2009 10:39:57 GMT
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I'll try to solve this problem. It may be significant changes needed.
Until then, would you like to post your working copy?

Thanks,

Andrei

Subject: Re: Scatter Control
Posted by [andrei-catalin](#) on Sun, 19 Jul 2009 16:09:36 GMT
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Fortunately have not been many changes.
I hope to upgrade it in svn soon.

Andrei

Subject: Re: Scatter Control
Posted by [koldo](#) on Sun, 19 Jul 2009 19:50:16 GMT
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Yes, it is only a matter of changing `w.IsDrawing()` with `(dynamic_cast<const DrawingDraw*>(&w))`.

But if you want to add more features, they will be welcome!

Best regards
Koldo

Subject: Re: Scatter Control
Posted by [andrei-catalin](#) on Mon, 20 Jul 2009 14:01:50 GMT
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I made some small changes to the scatter control in order to eliminate compilation errors and other small problems.

I would be grateful if someone could update these files in svn. (I currently do not have svn access).

Andrei

File Attachments

1) [Scatter.zip](#), downloaded 416 times

Subject: Re: Scatter Control
Posted by [tojocky](#) on Mon, 20 Jul 2009 19:35:15 GMT
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andrei-catalin wrote on Mon, 20 July 2009 17:01 I made some small changes to the scatter control in order to eliminate compilation errors and other small problems.

I would be grateful if someone could update these files in svn. (I currently do not have svn access).

Andrei

Committed!
Thanks!

Subject: Re: Scatter Control
Posted by [koldo](#) on Mon, 20 Jul 2009 20:23:44 GMT
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Hello andrei-catalin

Both scatter and pie samples and an application where I use scatter work perfectly with no changes.

Best regards
Koldo

Subject: Re: Scatter Control
Posted by [andrei-catalin](#) on Tue, 21 Jul 2009 14:34:17 GMT
[View Forum Message](#) <> [Reply to Message](#)

Nice! Thanks!

Andrei

Subject: Re: Scatter Control
Posted by [tojocky](#) on Sun, 27 Dec 2009 17:21:47 GMT
[View Forum Message](#) <> [Reply to Message](#)

andrei-catalin wrote on Tue, 21 July 2009 17:34Nice! Thanks!

Andrei
Hello Andrei,

Exist any updates to Scatter control?

With respect, Ion (tojocky)

Subject: Re: Scatter Control
Posted by [ktj9](#) on Fri, 16 Apr 2010 00:35:44 GMT
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Hello,

I tried to run TestScatter2, but it is stuck in infinite loops in Scatter::SetRange and Scatter::SetMajorUnits. Callers are scatter2.SetRange(12,60) and scatter2.SetMajorUnits(2,10) in Tab2::Tab2().

I am using UPP2232, MSC8, on XP.

I use magic numbers to solve the problem, but I bet there are better solutions, if I understand the meaning of those members.

After the hack, the example looks great! Thanks!

```
Scatter &Scatter::SetRange(double rx, double ry, double ry2)
```

```
{
    xRange=rx;
    yRange=ry;
    yRange2=ry2;
    xMajorUnit=xRange/10;
    int count=0;
    while (xMinUnit > xMajorUnit && count < 1000){
        xMinUnit -= xMajorUnit;
        ++count;
    }
    yMajorUnit=yRange/10;
    count = 0;
    while (yMinUnit > yMajorUnit && count < 1000){
        yMinUnit -= yMajorUnit;
        ++count;
    }
    yMajorUnit2=yRange2/10;
    count = 0;
    while (yMinUnit2 > yMajorUnit2 && count < 1000) {
        yMinUnit2 -= yMajorUnit2;
        ++count;
    }
    return *this;
}
```

```
Scatter &Scatter::SetMajorUnits(double ux, double uy)
```

```
{
    //if (ux > xRange) throw (Exc(t_("Invalid X major units!")));
    //if (uy > yRange) throw (Exc(t_("Invalid Y major units!")));
    xMajorUnit=ux;
    yMajorUnit=uy;
    yMajorUnit2=yRange2*yMajorUnit/yRange;
    int count=0;
    while (xMinUnit > xMajorUnit && count < 1000){
        xMinUnit -= xMajorUnit;
        ++count;
    }
}
```

```

}
count = 0;
while (yMinUnit > yMajorUnit && count < 1000){
    yMinUnit -= yMajorUnit;
    ++count;
}
count = 0;
while (yMinUnit2 > yMajorUnit2 && count < 1000){
    yMinUnit2 -= yMajorUnit2;
    ++count;
}
return *this;
}

```

Subject: Re: Scatter Control

Posted by [koldo](#) on Fri, 16 Apr 2010 04:50:27 GMT

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ktj9 wrote on Fri, 16 April 2010 02:35Hello,
I tried to run TestScatter2, but it is stuck in infinite loops in Scatter::SetRange and Scatter::SetMajorUnits. Callers are scatter2.SetRange(12,60) and scatter2.SetMajorUnits(2,10) in Tab2::Tab2().

I am using UPP2232, MSC8, on XP.

I use magic numbers to solve the problem, but I bet there are better solutions, if I understand the meaning of those members.

After the hack, the example looks great! Thanks!

```

Scatter &Scatter::SetRange(double rx, double ry, double ry2)
{
    xRange=rx;
    yRange=ry;
    yRange2=ry2;
    xMajorUnit=xRange/10;
    int count=0;
    while (xMinUnit > xMajorUnit && count < 1000){
        xMinUnit -= xMajorUnit;
        ++count;
    }
    yMajorUnit=yRange/10;
    count = 0;
    while (yMinUnit > yMajorUnit && count < 1000){
        yMinUnit -= yMajorUnit;
        ++count;
    }
}

```

```

}
yMajorUnit2=yRange2/10;
count = 0;
while (yMinUnit2 > yMajorUnit2 && count < 1000) {
    yMinUnit2 -= yMajorUnit2;
    ++count;
}
return *this;
}
Scatter &Scatter::SetMajorUnits(double ux, double uy)
{
    //if (ux > xRange) throw (Exc(t_("Invalid X major units!")));
    //if (uy > yRange) throw (Exc(t_("Invalid Y major units!")));
    xMajorUnit=ux;
    yMajorUnit=uy;
    yMajorUnit2=yRange2*yMajorUnit/yRange;
    int count=0;
    while (xMinUnit > xMajorUnit && count < 1000){
        xMinUnit -= xMajorUnit;
        ++count;
    }
    count = 0;
    while (yMinUnit > yMajorUnit && count < 1000){
        yMinUnit -= yMajorUnit;
        ++count;
    }
    count = 0;
    while (yMinUnit2 > yMajorUnit2 && count < 1000){
        yMinUnit2 -= yMajorUnit2;
        ++count;
    }
    return *this;
}

```

Hello ktj9

I have run TestScatter2 in Bazaar and it works well for me. The code you have submitted seems not to be the last one.

The version I use is 2322.

Subject: Re: Scatter Control
 Posted by [ktj9](#) on Sat, 17 Apr 2010 01:26:35 GMT
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Thank you, koldo.

Now I sync to depot. The example runs smoothly.
