
Subject: Scatter: new zoom and scroll mechanism!
Posted by [tojocky](#) on Tue, 07 Sep 2010 14:39:34 GMT
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Hello all,

I propose to change a little zoom and scroll mechanism:

1. scroll horizontal: When mouse (wheel) and the buttons "alt" "shift" and "ctrl" is not pressed
2. scroll vertical: when mouse (wheel) and is pressed the "alt" button
3. zoom horizontal proportional by mouse position: when mouse (wheel) and is pressed the "shift" button
4. zoom vertical proportional by mouse position: when mouse (wheel) and is pressed the "ctrl" button

The future: in the same time can zoom by X and Y axes by pressing "ctrl" "shift" and mouse wheel. The zoom is proportional by mouse position like google picassa and other photo viewers.

The code is:

```
void Scatter::MouseWheel(Point p_point, int p_zdelta, dword p_other){
    double v_scale = p_zdelta/10000.;
    if(GetAlt()){
        SetXYMin(GetXMin(), GetYMin()+GetYRange()*v_scale, GetYMin2());
        SetMinUnits(GetXMinUnit(), GetYMinUnit()-GetYRange()*v_scale);
    }
    else{
        bool v_is_ctrl = GetCtrl();
        bool v_is_shift = GetShift();

        if(v_is_ctrl){ // zoom y
            double v_zoom_v = GetYRange()*v_scale;
            double v_mouse_pos_v = GetYByPoint(p_point) - GetYMin();
            if(v_mouse_pos_v>0){
                SetXYMin(GetXMin(), GetYMin()-v_zoom_v*v_mouse_pos_v/GetYRange(), GetYMin2());
            }
            SetRange(GetXRange(), GetYRange()+v_zoom_v, GetY2Range());
        }
        if(v_is_shift){ // zoom x
            double v_zoom_v = GetXRange()*v_scale;
            double v_mouse_pos_v = GetXByPoint(p_point) - GetXMin();
            if(v_mouse_pos_v>0){
                SetXYMin(GetXMin()-v_zoom_v*v_mouse_pos_v/GetXRange(), GetYMin(), GetYMin2());
            }
            SetRange(GetXRange()+v_zoom_v, GetYRange(), GetY2Range());
        }

        if(!((v_is_ctrl)||v_is_shift)){
            SetMinUnits(GetXMinUnit()-GetXRange()*v_scale, GetYMinUnit());
        }
    }
}
```

```
    SetXYMin(GetXMin()+GetXRange()*v_scale, GetYMin(), GetYMin2());
}
}
Refresh();
}
```

I'm waiting for your opinions.

If need, I can upload a compiled test-case

Subject: Re: Scatter: new zoom and scroll mechanism!

Posted by [koldo](#) on Tue, 07 Sep 2010 22:00:03 GMT

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Hello Ion

I am not sure which is the best mouse behavior.

This is like the cooling system in an office. Nobody agrees and everyone is frozen or sweating.

I propose you another option. To have a list of keys, mouse buttons and actions. It is more complicated but everybody would agree.

Just a draft:

```
enum MouseActions {NO_ACTION, SCROLL_H_POS, SCROLL_H_NEG, SCROLL_V_POS,
SCROLL_V_NEG, ZOOM_H_ENL, ZOOM_H_RED, ZOOM_V_ENL, ZOOM_V_RED,
SHOW_INFO};
```

```
struct MouseBehaviour = {
bool ctrl;
bool alt;
bool shift;
bool left;
bool middle;
int middleWheel;
bool right;
int action;
};
```

Some of your proposals would be like these:

```
MouseBehaviour ionMap[] {
{false, false, false, false, false, 1, false, SCROLL_H_POS},
{false, false, false, false, false, -1, false, SCROLL_H_NEG},
{false, true, false, false, false, 1, false, SCROLL_V_POS},
{false, true, false, false, false, -1, false, SCROLL_V_NEG},
{false, false, false, false, false, 0, false, NO_ACTION}};
```

Subject: Re: Scatter: new zoom and scroll mechanism!
Posted by [tojocky](#) on Wed, 08 Sep 2010 05:48:58 GMT
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Your method is more universal!

It is a good idea because will be possibility to change the shortcut by users!

koldo wrote on Wed, 08 September 2010 01:00Hello Ion

I am not sure which is the best mouse behavior.

This is like the cooling system in an office. Nobody agrees and everyone is frozen or sweating.

I propose you another option. To have a list of keys, mouse buttons and actions. It is more complicated but everybody would agree.

Just a draft:

```
enum MouseActions {NO_ACTION, SCROLL_H_POS, SCROLL_H_NEG, SCROLL_V_POS,
SCROLL_V_NEG, ZOOM_H_ENL, ZOOM_H_RED, ZOOM_V_ENL, ZOOM_V_RED,
SHOW_INFO};
```

```
struct MouseBehaviour = {
bool ctrl;
bool alt;
bool shift;
bool left;
bool middle;
int middleWheel;
bool right;
int action;
};
```

Some of your proposals would be like these:

```
MouseBehaviour ionMap[] {
{false, false, false, false, false, 1, false, SCROLL_H_POS},
{false, false, false, false, false, -1, false, SCROLL_H_NEG},
{false, true, false, false, false, 1, false, SCROLL_V_POS},
{false, true, false, false, false, -1, false, SCROLL_V_NEG},
{false, false, false, false, false, 0, false, NO_ACTION}};
```

Subject: Re: Scatter: new zoom and scroll mechanism!
Posted by [koldo](#) on Fri, 22 Oct 2010 10:54:21 GMT
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Hello Ion

Sorry for the delay. I am so involved in the other package you know that I do not spend almost any time in other subjects.

It is just implemented and documented (this evening in SVN).

The main function is:

```
bool SetMouseBehavior(MouseBehaviour *_mouseBehavior);
```

that sets the array of mouse conditions and due actions.

The MouseBehaviour struct contains these elements:

```
struct MouseBehaviour {  
    bool ctrl; // Conditions  
    bool alt;  
    bool shift;  
    bool left;  
    bool middle;  
    int middleWheel;  
    bool right;  
    MouseAction action; // Action  
};
```

The default array is:

```
Scatter::MouseBehaviour defaultMouse[] = {  
    {false, false, false, true, false, 0, false, Scatter::SHOW_INFO},  
    {false, false, false, false, true, 0, false, Scatter::SCROLL},  
    {false, false, false, false, false, 1, false, Scatter::ZOOM_H_RED},  
    {false, false, false, false, false, 1, false, Scatter::ZOOM_V_RED},  
    {false, false, false, false, false, -1, false, Scatter::ZOOM_H_ENL},  
    {false, false, false, false, false, -1, false, Scatter::ZOOM_V_ENL},  
    {false, false, false, false, false, 0, false, Scatter::NO_ACTION}};
```

Subject: Re: Scatter: new zoom and scroll mechanism!
Posted by [koldo](#) on Mon, 01 Nov 2010 21:29:13 GMT
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Hello Ion

I was ok for you?

Subject: Re: Scatter: new zoom and scroll mechanism!
Posted by [tojocky](#) on Tue, 09 Nov 2010 08:22:50 GMT

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koldo wrote on Mon, 01 November 2010 23:29Hello Ion

I was ok for you?

Sorry for Delay Koldo,

Your realization is very welcome!

I didn't use this, only tested, but I thing that your idea need to be used in other controls.

Ion Lupascu.
