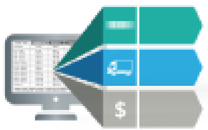

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# EasySize - Dialog resizing in no time!

**Marc Richarme**, 24 Mar 2007

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An easy way to position controls in resizable dialogs or property pages using just a few macros

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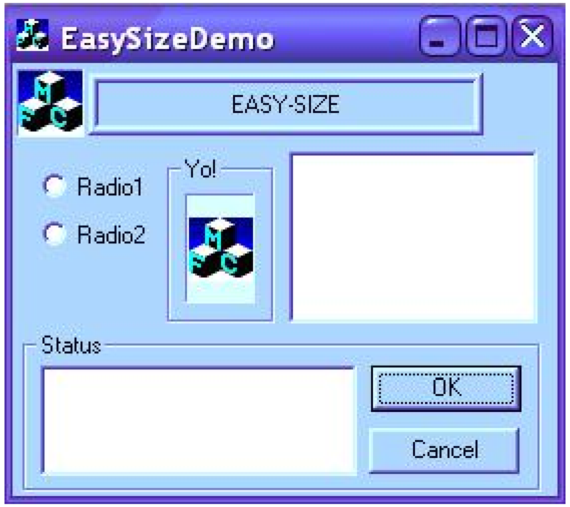
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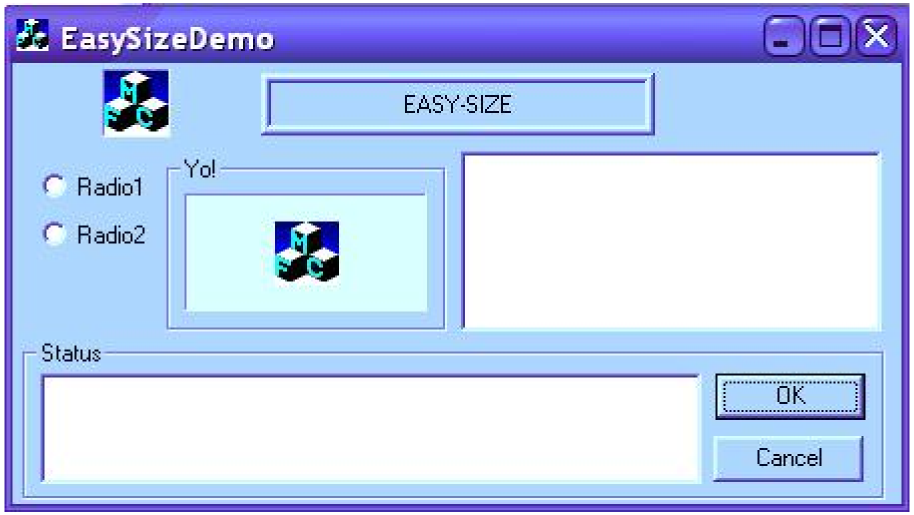
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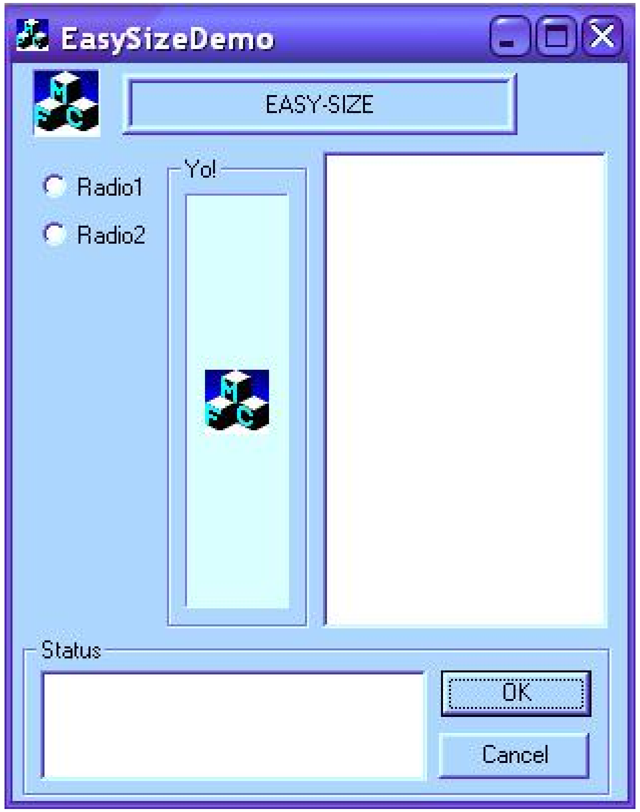

## Introduction

Have you ever thought of how annoying it actually was to spend a lot of time doing a basic GUI for your simple applications instead of focusing on the actual 'content'? Take for example a resizing dialog or property page. You need to write code for each control that will tell it where to go when the thing is resized, and this can take up a lot of time. Now I know that I'm not the first one to give a solution to this (CResizableDialog), but this article is on my approach.

## Description

Basically, all you need to do is design your dialog the way you want it to look in the resource editor (don't forget to make it resizable), and then define how the controls will behave when the dialog is resized using one single macro for each control.

## Usage

Note that all this works exactly the same way with both `CDialog` and `CPropertyPage`

1. `#include` *EasySize.h* to your *stdafx.h* (or put it in your include directory and `#include` <*EasySize.h*> , which I recommend)
2. Add `DECLARE_EASYSIZE` anywhere in your class declaration:

   Hide Copy Code

   ```
   class CEasySizeDemoDlg : public CDialog
   {
   DECLARE_EASYSIZE
   ...
   ```

3. Create an `OnInitDialog` handler if it doesn't already exist, and put this in the end of it: "`INIT_EASYSIZE;`" :

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   ```
   BOOL CEasySizeDemoDlg::OnInitDialog()
   {
       CDialog::OnInitDialog();
   ...
       INIT_EASYSIZE;
       return TRUE; // return TRUE  unless you set the focus to a control
   }
   ```

4. Create an `OnSize` handler and add the `UPDATE_EASYSIZE;` macro to it:

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   ```
   void CEasySizeDemoDlg::OnSize(UINT nType, int cx, int cy)
   {
       CDialog::OnSize(nType, cx, cy);
       UPDATE_EASYSIZE;
   }
   ```

5. Optional - If you want your dialog to have a minimum size, then create an `OnSizing` handler and add the `EASYSIZE_MINSIZE` macro as below:

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   ```
   void CEasySizeDemoDlg::OnSizing(UINT fwSide, LPRECT pRect)
   {
       CDialog::OnSizing(fwSide, pRect);
       EASYSIZE_MINSIZE(280,250,fwSide,pRect);
   }
   //(in this example, 280 is the minimum width and 250 the
   //minimum height we want our dialog to have)
   ```

6. Now you have to create the "EasySize Map" (or whatever you want to call it) in which you will specify the behavior of each dialog item. It can be placed anywhere inside your class implementation. The map looks like this:

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   ```
   BEGIN_EASYSIZE_MAP(class_name)
       ...
       EASYSIZE(control,left,top,right,bottom,options)
   ```

```
    ...
END_EASYSIZE_MAP
```

The map from the demo application looks like this:

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```
...
    //}}AFX_MSG_MAP
END_MESSAGE_MAP()

BEGIN_EASYSIZE_MAP(CEasySizeDemoDlg)
    EASYSIZE(IDC_TITLE,ES_BORDER,ES_BORDER,
        ES_BORDER,ES_KEEPSIZE,ES_HCENTER)
    EASYSIZE(IDC_RADIO1,ES_BORDER,ES_BORDER,
        ES_KEEPSIZE,ES_KEEPSIZE,0)
    EASYSIZE(IDC_RADIO2,ES_BORDER,ES_BORDER,
        ES_KEEPSIZE,ES_KEEPSIZE,0)
    EASYSIZE(IDC_CONTENT,ES_BORDER,ES_BORDER,
        ES_BORDER,ES_BORDER,0)
    EASYSIZE(IDC_STATUSFRAME,ES_BORDER,ES_KEEPSIZE,
        ES_BORDER,ES_BORDER,0)
    EASYSIZE(IDC_STATUS,ES_BORDER,ES_KEEPSIZE,
        ES_BORDER,ES_BORDER,0)
    EASYSIZE(IDOK,ES_KEEPSIZE,ES_KEEPSIZE,
        ES_BORDER,ES_BORDER,0)
    EASYSIZE(IDCANCEL,ES_KEEPSIZE,ES_KEEPSIZE,
        ES_BORDER,ES_BORDER,0)
    EASYSIZE(IDC_MYICON1,ES_BORDER,IDC_RADIO2,IDC_CONTENT,
        IDC_STATUSFRAME,ES_HCENTER|ES_VCENTER)
    EASYSIZE(IDC_MYICON2,ES_BORDER,ES_BORDER,IDC_TITLE,
        ES_KEEPSIZE,ES_HCENTER)
END_EASYSIZE_MAP

///////////////////////////////////////////////////////////////
// CEasySizeDemoDlg message handlers
...
```

Looks confusing? It's not once you get the point (and I know I'm not good at explaining it) Read on.

## EASYSIZE Macro

The `EASYSIZE` macro is used in the EasySize Map to specify what behavior your controls will have on dialog resize. It looks like this:

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```
EASYSIZE(control,left,top,right,bottom,options)
```

`control` is the ID of the dialog item you want re-positioned (which will be referred to as the 'current control' further on).

`left, top, right and bottom` can be either the ID of another control in the dialog (not the current control), or one of the special values, `ES_BORDER` and `ES_KEEPSIZE`.

Basically, if you specify an ID, the distance from the current control and the item designated by the ID will remain the same when the dialog is resized: The current control will 'stick' to the other item. `ES_BORDER` works the same way as if you had specified a control ID, except that it's the distance between the current control and the dialog border that will be kept constant. Specifying `ES_KEEPSIZE` in, let's say `left`, will keep the width of the current control the same, and will make the current control right-aligned to whatever you specified in `right`. The width (or height, if you specified `ES_KEEPSIZE` in `top` or `bottom`) of the current control will always remain what it is in the dialog resource. (I know this explanation sucks, but look at the demo application if you are confused or post you question in the board below). Obviously `ES_KEEPSIZE` cannot be specified in both `"left` and `right"` or `"top` and `bottom"`.

`options` can be a combination of `ES_HCENTER`, `ES_VCENTER` and 0 (use 0 if you don't want any of the other). `ES_HCENTER` horizontally centers the control between the two items specified in `left` and `right` (both of those can not be `ES_KEEPSIZE`!). The width of the current control will always remain the same as in the dialog resource. `ES_VCENTER` works the same way, but for vertical centering (using `top` and `bottom`, and where the height will remain constant).

## Conclusion

Well I hope you figured out how this works, because it really can make your life easier. Note that using these macros will probably make your compiled code slightly bigger and slower than if you had coded the resizing routines manually, but in most cases the change is so small not even you will notice.

Last Update - Just corrected a few typos.

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## About the Author

## Marc Richarme

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My programming experience started a long time ago in
QBasic (on a 25MHz 486).
I'm now mainly using Java, C++, C, MFC, Perl and PHP, but have used quite a number of other languages as well for various projects.

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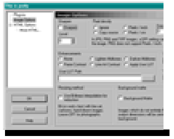

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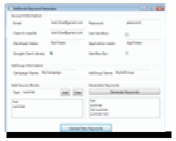

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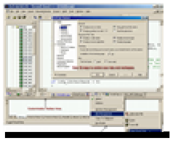

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