

Tutorial | Making Your First Pocket PC Flash Animation version 1.0

The zip file should contain the following tutorial files:

- Making Your First Pocket PC Flash Animation.pdf
- my animation.fla
- my animation.swf
- my animation.html

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Introduction

1. What you will learn:

This tutorial is designed to allow anyone that has some basic experience with Macromedia Flash 4 or 5 to be able to create Flash content for the Pocket PC platform. Currently there aren't any "tutorials" on how to develop a Flash animation for Pocket PC devices from scratch and that's why I decided to create this tutorial. It's meant to be easy to follow, simple and to the point, and I've included the source files for the tutorial so you can follow along and dissect the code to better understand the example.

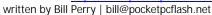
I hope you find this tutorial beneficial and informative, if you have any feedback please contact me via e-mail: bill@pocketpcflash.net.

2. Overview:

Ever since February 2001 when Macromedia released the Flash 4 player for the Pocket PC platform, many developers have begun to create various types of Flash applications for the platform. Ranging from utilities, games, entertainment, cartoons, maps, etc... all of these Flash animations have one thing in common- they follow a certain set of guidelines for developing Flash content for the Pocket PC platform (PPC). These guidelines are very well documented in the Macromedia Flash Player for the Pocket PC Developer Release Authoring Kit, which you can download and view: http://www.macromedia.com/software/flashplayer/pocketpc/authoring/

The Authoring Kit is a must have resource was put together by Phillip M. Torrone and Chris Wiggins of Fallon Interactive as well as other talented individuals and it contains the authoring guidelines in PDF format, Flash examples with source files, middleware for detecting devices on a server as well as other really useful information.

A lot of other developers have created some very unique, imaginative, useful Flash animations that you can download and view from my web site (http://www.pocketpcflash.net/). The Flash examples are located in the "Examples\Flash-static" and "Examples\Flash-wireless" sections of my site. As of this writing there are about 55 examples with new ones being created all the time.





3. Requirements:

- Macromedia Flash 4 or higher

(if you don't have this you can download a 30 day trial version from Macromedia): http://www.macromedia.com/software/flash/trial/

- A Pocket PC device

(there are a lot of different devices that you can choose from, for a comprehensive list visit Microsoft's Pocket PC web site): http://www.microsoft.com/mobile/pocketpc/hardware/compare_devices.asp

- Macromedia Flash 4 player for the Pocket PC

(you can download it from Macromedia's web site):

http://www.macromedia.com/software/flashplayer/pocketpc/download/contents.html

- Windows based PC

(98/Me/2000/XP)

- Microsoft Activesync 3.5 or 3.1

(this comes on a CD with the Pocket PC device when you purchase it. You can also download it from Microsoft's Pocket PC web site): http://www.microsoft.com/mobile/pocketpc/downloads/activesync35.asp

- Pocket PC HTML Publishing Template

(the file "PocketPC.html" needs to be placed in the HTML template folder in the Macromedia Flash 5/HTML folder. This file is included with the Macromedia Flash Player for the Pocket PC Developer Release Authoring Kit)

Let's Start!

1. Setting up your Pocket PC:

Before we get into creating the Flash animation let's make sure that your PPC device is already to go by verifying the following things:



Activesync:

First, make sure that you have Activesync installed so you can copy the HTML and SWF files from your computer to your PPC device. You should already have this installed on your computer from when you first purchased or received your PPC device. If not go ahead and install Activesync, making sure to follow the on-screen prompts and warnings.

PPC Flash Player:

Second, if you want to see Flash content on your PPC then you need to make sure you have the correct Flash player installed. Neither the Pocket PC 3.0 nor Pocket PC 2002 OSs currently come with the Macromedia Flash player preinstalled so you will need to go and download the Flash player that is appropriate for your device. Refer to the requirements section above for the URL link for this. After downloading the .exe file just double-click on the .exe file to begin the install- make sure that you have your PPC device is on and connected to your computer via Activesync. After a few minutes the Flash player will be installed on your PPC device and now you're ready to view Flash on your device.



Storing files on your device:

Next, let's make sure that you have enough space on your PPC to store your HTML and SWF files that you will be creating. Most PPC devices have at least 32 MB of built in memory (RAM) with some of the newer devices having 64 MB. Most devices also have some type of ability for external storage, whether it's a Compact Flash (CF) card or PCMCIA types of memory (IBM microdrive). In this case we are going to just concentrate on setting up a directory on your PPC's internal memory to save the HTML and SWF files.



On your desktop you should have a folder called "Pocket_PC My Documents", this folder is what Activesync uses to copy files from your computer to your device. So if you create a directory and place files in here then the next time you sync your device with your computer these new files and folders will be copied over.

Seems pretty easy huh? OK, let's go ahead and set up a folder called "Flash" in the "Pocket_PC My Documents" folder like shown:

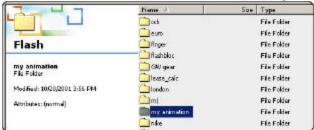


You will probably have more than one Flash animation/application on your device at any one time so it's a good idea to create separate folders for each Flash animation/application. Whether they are Flash animations that you create yourself or ones that you download, it's a good practice to keep each one in its own folder. Below is a screen shot of how I have my subfolders setup:



(note: you can create any type of folder hierarchy you want, I'm just suggesting one way)

Create a folder under the "Flash" folder for the example we're going to make, lets call it "my animation".



Good, now your PPC is already for your first PPC Flash animation so lets move onto the next section which is making the PPC Flash animation.

2. Making your Pocket PC Flash animation:

I'm going to assume that you have a basic understanding of Flash, how to use the various tools, a basic understanding of actionscripting, and how to make animations using the software. If you don't know these items then I suggest you spend time going through the built in lessons included with Flash, which are available under "Help\Lessons".

Now for this example I'm just going to go over and do a very simple animation with some MC objects, text and some actionscripting to



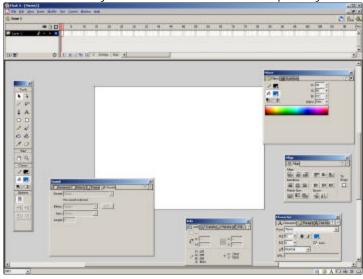


give you an interactive example that you can experiment with on your device. We're going to make a Flash file that animates a ball bouncing across the screen after the user taps a button. Please feel to vary your Flash file as you follow along, you don't need to follow my examples exactly- the steps below have room for individual interpretation.

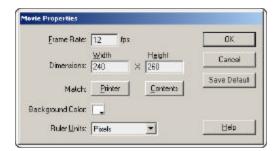
OK, so enough of the reading let's get started:

Making your animation:

- 1. Open up Flash.
- 2. You should see your timeline and whichever tool panels you had open the last time you were using Flash.

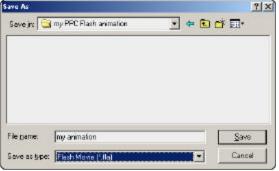


- 3. First lets change your Movie Properties so your Flash animation will display correctly on your PPC device:
- Open up your Movie Properties by going to "Modify\Movie..." or using the keyboard shortcut "Ctrl+M" (I prefer to use keyboard shortcuts whenever possible).



- > Make the following changes:
- Frame Rate= 12 (frame rates between 10 and 15 work best)
- Dimensions= 240 for the width and 260 for the height
- Background color= anything you want, in this case I'm leaving it white
- Ruler Units= leave as pixels
- > Everything else you can leave as is.
- > Hit "OK"

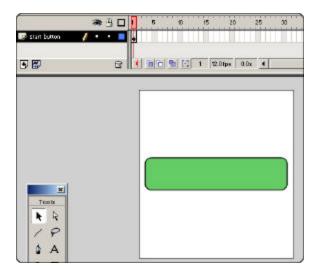
4. Lets save our movie right now so we have something we can revert back to. Save your file as "my animation" and save it to a folder on your hard drive where you can find it. I would suggest creating a folder on your desktop called "my PPC Flash animation" and saving your files into this folder.



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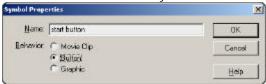


5. Let's create a button that will allow us to start the animation.

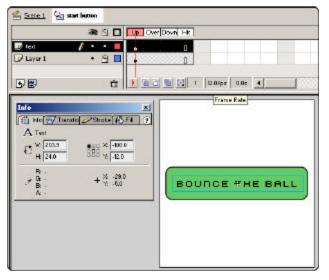


- > I'm going to use the rectangle tool to create the button. I used the following settings (yours can vary):
- corner radius= 10 points
- outline= black, stroke of 1
- fill= greenish color (#66CC66)
- size= 220 for width and 50 for height
- > Align tool to center the rectangle both vertical and horizontal to the stage and name the layer "start button".

6. Now lets make this object a button. Use the Arrow tool and select the entire rectangle graphic. Hit "F8" and call the new object "start button" and make sure you make it a button object. Hit "OK".



7. Now lets modify the button object so it will have a text label and it behaves properly on the PPC device.



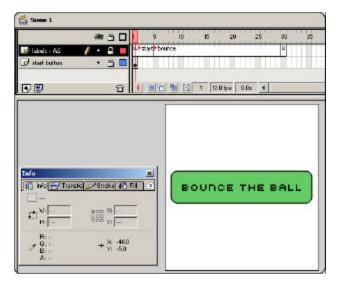
Note: the PPC doesn't use a mouse for input so there is no "over" state. When making buttons be sure to not have any keyframes set for the over state, even if you do you may have unexpected results.

- > Edit your button object and extend the visible frame of the rectangle to all four frames (from the "up" state t hrough "hit" state)
- > Lock the rectangle graphic layer.
- > Add a new layer above the rectangle graphic layer and name it "text".
- > With your text tool select a font, size and style and type "Bounce the Ball".
- > Center the text over the button and then using the Info panel make sure that the position of the text is set to a whole integer value, not a decimal value.
- Make sure you're using the top left registration point and not the center option when checking the x and y position.
- This is because the PPC will display text fuzzy if it's not on an integer value for its x and y positions.
- example: use -100.0, not -100.2
- > Go back to the main timeline.



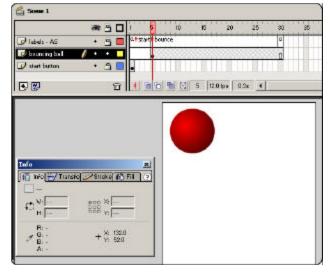


8. Now lets setup some labeled keyframes and actionscript.



Note: you need to make sure that your on (event) needs to be "press" and not "release". The PPC Flash player doesn't recognize the "release" command because the PPC

- has a stylus for input so the "press" is recognized.
- 9. Next we're going to create the bouncing ball effect.



- > In the main timeline make a new layer and label it "labels AS".
- This is where we'll put the labels and actionscript.
- > We won't worry about making a preloader because the size of this file will be small.
- > In frame 1 set a "stop" action and make a label called "start".
- > In frame 5 set a keyframe and make a label called "bounce".
- > In frame 30 set the following actions: stop (): gotoAndStop ("start");

Now we have our labels and actionscript set up for the main timeline, now lets make the actionscript for the button.

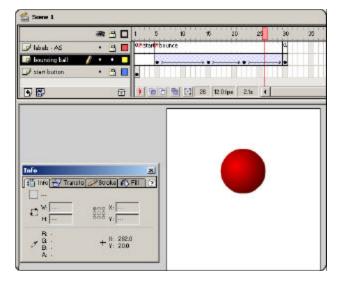
- > Set the following actions for the button: on (press) { gotoAndPlay ("bounce");
- > Lock the "labels AS" and "start button" layers, we're done with them for now.
- > Save your file.

All of the necessary actionscripting and labels have been setup.

- > In the main timeline make a new layer below the "labels AS" layer and name it "bouncing ball".
- > Set a keyframe at frame 5.
- > Use the oval tool and create a sphere in frame 5. I used the following settings (yours can vary):
- outline= none
- fill= red gradient
- size= 70 for both width and height
- > Now lets make this object a MC.
- Use the Arrow tool and select all of the sphere graphic.
- Hit "F8" and call the new object "ball" and make sure you make it a MC obiect.
- Hit "OK".
- > Place the sphere in the top left part of the stage, it doesn't matter exactly where you place it because we're going to animate the ball movina

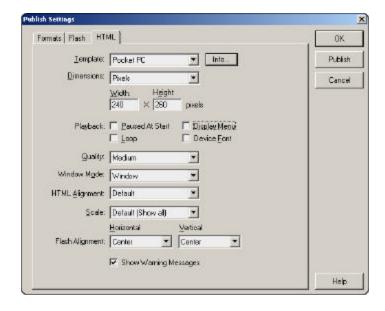


10. It's time to animate the ball. There are several ways of doing this, individual keyframing or motion keyframing. I'm going to set 3 keyframes and then do a motion tween between them.



You can use any number of keyframes, I'm just providing an example.

- > Set a keyframe at frame 15 and then move the ball down to the bottom right part of the stage.
- > Set another keyframe at frame 22 and then move the ball to the middle left of the stage.
- > Set the last keyframe at frame 30 and then move the ball to the top right part of the screen.
- > Create motion tweens at frames 5, 15 and 22.
- > You can adjust your easing for these keyframes if you want to further tweak the movement.
- this ball movement is not the best but it's a quick way to animate for our purposes.
- > Preview your movie to see how your Flash animation is coming along.
- > Save your file.
- 11. Now we're going to set the publish settings.



- > Go to Publish Settings "File\Publish Settings..."
- > Make sure the Flash and HTML check boxes are checked. You will only need these two files to export.
- > For the Flash tab settings:
- leave all defaults
- version= Flash 4

(this is the important part, make sure that you export as Flash 4)

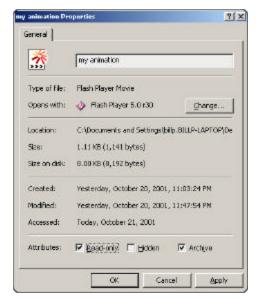
- > For the HTML tab settings:
- Template= choose the "Pocket PC" option
- Dimensions= Pixels
- Playback options = none checked
- Quality= Medium
- Leave everything else as is
- > Hit "Publish" and then "OK"
- > Close your file and if prompted to save choose "Yes".

3. Copying the files to your Pocket PC:

You should now have three files in your "my PPC Flash animation" folder, the FLA, SWF and HTML files. Before we copy the files to the "Pocket_PC My Documents\Flash\my animation" folder we need to prepare the SWF and HTML files for the PPC device.



Prepare the SWF file:



- > Right-click on the "my animation.swf" file and choose "properties".
- > At the bottom of the General tab make sure you check the "read-only" check box.
- This is necessary because the PPC OS will delete any SWF files after they have been viewed in Pocket IE.
- It's a known bug and hopefully it will be addressed in the next release of the Macromedia PPC Flash player.

That's it for the SWF file, it's now ready to be copied over but before we do let's modify the HTML code.

Prepare the HTML file:

We want to make the Flash file we created to be up against the Pocket IE borders, and also no scroll bars. To do this we're going to set the margin width's to "0". Let's open up the "my animation.html" file in notepad or another program you use to edit HTML code.

You want to put the following code into the <Body> portion of your HTML code: leftmargin="0" topmargin="0" marginwidth="0" marginheight="0"

Also you need to make sure that you have an <OBJECT> ID value set to something. It can be anything but you need to have the ID variable with a value present in your code, if you don't then your Flash file will not display properly on your device. The Pocket PC publishing template that we choose does this for us already and sets "ID=rapier4".

Your HTML code should now look like the following (I went ahead and rearranged the code to make it easier to read):

- <HTML>
- <HEAD>
- <TITLE>my animation</TITLE>
- </HEAD>
- <BODY bgcolor="#FFFFFF" leftmargin="0" topmargin="0" marginwidth="0" marginheight="0">
- <!-- URL's used in the movie-->
- <!-- text used in the movie-->
- < OBJECT classid="clsid:D27CDB6E-AE6D-11cf-96B8-444553540000"

codebase=http://active.macromedia.com/flash2/cabs/swflash.cab#version=4,0,0,0

- ID=rapier4 WIDTH=240 HEIGHT=260>
- <PARAM NAME=movie VALUE="my animation.swf">
- <PARAM NAME=loop VALUE=false>
- <PARAM NAME=menu VALUE=false>
- <PARAM NAME=quality VALUE=medium>
- <PARAM NAME=bgcolor VALUE=#FFFFFF>
- <EMBED src="my animation.swf" loop=false menu=false quality=medium bgcolor=#FFFFFF WIDTH=240 HEIGHT=260 TYPE="application/x-shockwave-flash"

PLUGINSPAGE="http://www.macromedia.com/shockwave/download/index.cgi?P1_Prod_Version=ShockwaveFlash"></EMBED></OBJECT>

- </BODY>
- </HTML>



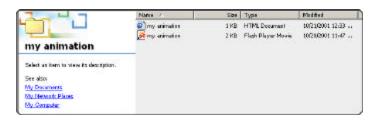


Save and close your file.

Copy files to sync folder:

Don't worry we're almost through here, you'll have your first PPC Flash animation playing on your device very soon.

We've successfully made the necessary tweaks to both the SWF and HTML files and they are now ready to be copied over to the device. The trick is we're not going to actually copy the files to our PPC device, we have Activesync to do that for us.



- > Copy the two files (both SWF and HTML) from the "my PPC Flash animation" folder to the "Pocket_PC My Documents\Flash\my animation" folder.
- > Click the "Sync" button in Activesync to begin copying the files to your PPC device.
- > After Activesync tells you your device is synchronized we can then move on to the fun part - testing!

4. Testing your animation:

Last part and we're through. Undock your PPC device and let's take a look at your creation.





- > Go to "Start \File Explorer".
- > Find the folder named "Flash" and tap on it to open it up.
- > Find the folder named "my animation" and tap on it to open it up.
- > You should see two files:
- my animation.swf and my animation.html
- > Tap on the HTML file (it has a blue IE icon with a white paper next to it)
- > Pocket IE should open up and you will see your "Bounce Ball" button.
- tap the button to play the animation.
- after playing the screen should return to the "Bounce Ball" button.

Congratulations! You've done it. Now I realize that the animation that you came up with may not look the same as the one in my screen shots which is fine. You can also view this animation on a desktop/laptop PC without changing anything, that's the beauty of Flash- you can develop it for one platform and be able to view the same files on different platforms (depending on the device).

The important thing is you should now understand the process and limitations for developing Flash content for Pocket PC devices.

Wrapping Up

1. Things to remember:

We covered a lot of things in this tutorial and you should use this as a reference as your developing PPC Flash content if you have any questions. I'll go ahead and list some of the more important tips you should remember:

- Save your SWF files as version "Flash 4"
- SWF files should always have the "read-only" attribute checked.
- Maximum SWF movie size is 240x260
- To eliminate scroll bars in Pocket IE add the "margin widths=0" values into the <BODY> portion on your HTML file.
- Make sure your HTML file has an <OBJECT> ID variable and a value (if you're using the Pocket PC publishing template then you should be fine).
- Be creative and have fun!

Flash Development Resource for the Pocket PC Platform



written by Bill Perry | bill@pocketpcflash.net



2. Web sites of interest:

You might find these web sites interesting and helpful as you continue to develop Flash content for the PPC platform:

Pocketpcflash.net

http://www.pocketpcflash.net

- this is my web site that I update daily with information on Flash and Pocket PC devices. It contains Flash examples, FAQs, tutorials, news and more.

Flashenabled

http://www.flashenabled.com/mobile

- an awesome site created and maintained by Phillip Torrone. It has lots of interesting articles and downloads for Flash on every type of device you can imagine- definitely check it out.

Macromedia

http://www.macromedia.com/software/flash

- here you can find a lot of valuable information about Flash, also check out the tech notes area.

Pocket PC

http://www.pocketpc.com

- Microsoft's up-to-date information site about Pocket PC devices: hardware, software, downloads and news.

Comments

Please send any comments to me at bill@pocketpcflash.net

I hope you enjoyed this tutorial, this is the first of several to come.

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