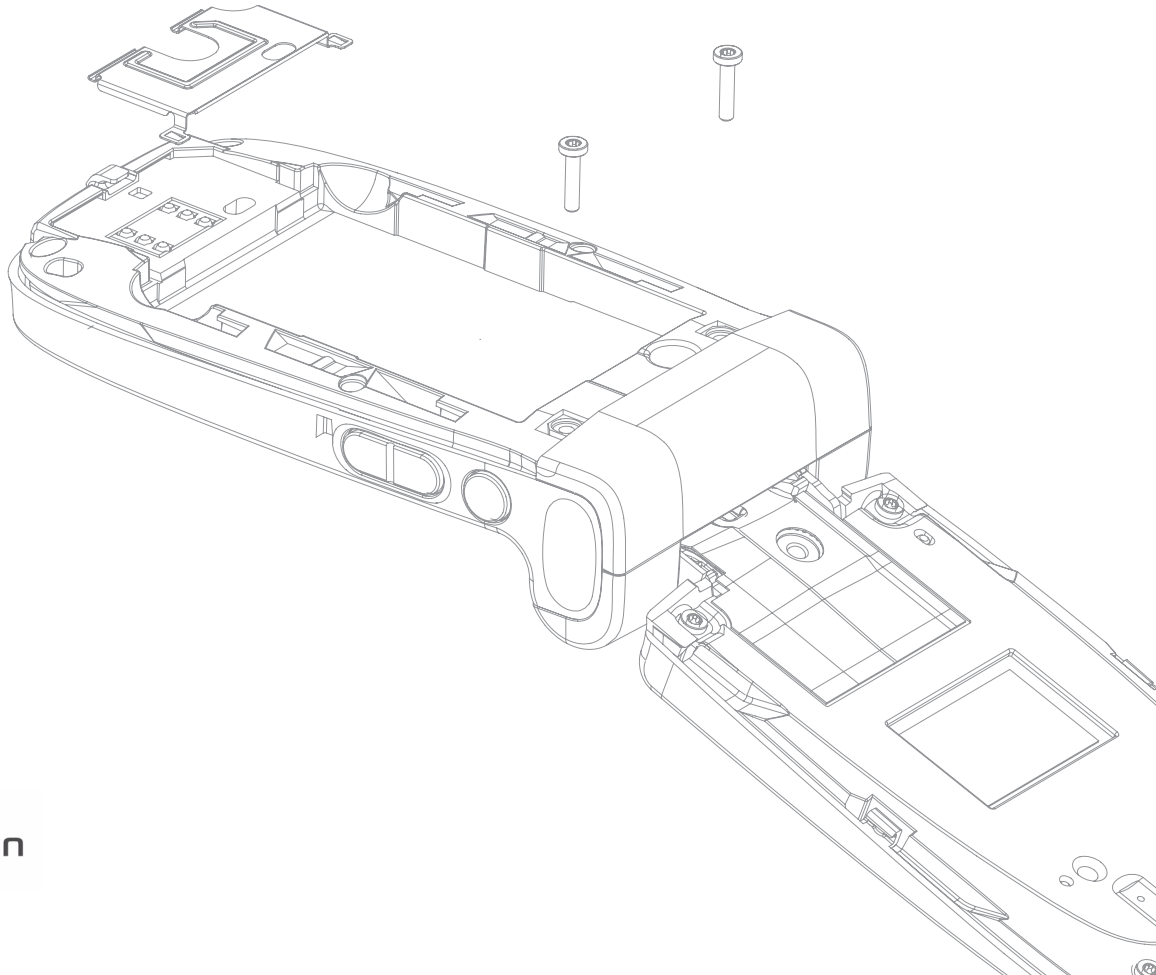
Tutorial

DEVELOPER WORLD THE FAST TRACK FROM MIND TO MARKET

June 2007

Flash Lite™ development using Adobe™ Device Central™

for Sony Ericsson phones



Sony Ericsson

Preface

About this tutorial

This tutorial has been authored by Chris Petty who has been working in multimedia for 6 years before helping to found BlueskyNorth Ltd. a Smashing Ideas company, www.blueskynorth.com, where he is currently Communications Director.

The document how Flash Lite™ development can be more efficient by making use of some of the features in Adobe™ Device Central™.

Prerequisites

To carry out this tutorial Adobe Flash™ CS3 Professional with Adobe Device Central™ with the latest Device Profile pack installed is required, see www.adobe.com/products/creativesuite/devicecentral.

It is also beneficial to have access to the target phones, in this case the W610i and W850i.

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Phone: +46 46 19 40 00
Fax: +46 46 19 41 00
www.sonyericsson.com/

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Sony Ericsson Developer World

On www.sonyericsson.com/developer, developers find documentation and tools such as phone White papers, Developers guidelines for different technologies, SDKs (Software Development Kits) and relevant APIs (Application Programming Interfaces). The Web site also contains discussion forums monitored by the Sony Ericsson Developer Support team, an extensive Knowledge base, Tips and tricks, example code and news.

Sony Ericsson also offers technical support services to professional developers. For more information about these professional services, visit the Sony Ericsson Developer World Web site.

Trademarks and acknowledgements

Document history

Change history		
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Contents

Introduction

The advent of Adobe Flash Lite™ has opened up whole new horizons for developers seeking to bring their content to wider audiences. Varying phones and implementations present different opportunities, but as developers we all look for the most efficient way to get our work on as many screens as possible.

As an example we are going to take a look through a basic Flash Lite project, identifying some of the development challenges and looking at ways to address these. Our brief for this project is to deploy a piece of animated content for use as a wallpaper on two Sony Ericsson phones, the W610i and W850i.

Previously, when undertaking a multi-target project we would rely on the device profiles within the publishing options for Flash Lite to give us an idea of look and feel for each phone. For more detailed testing of processor speeds and even colour depths the best option was to place the content on an actual target phone and test “in-situ”. While this approach provides a very accurate picture of how the content will work, it is not without disadvantages. For example, it is expensive for a developer to purchase every phone they need to develop for, and time consuming to constantly transfer and open files across a number of devices.

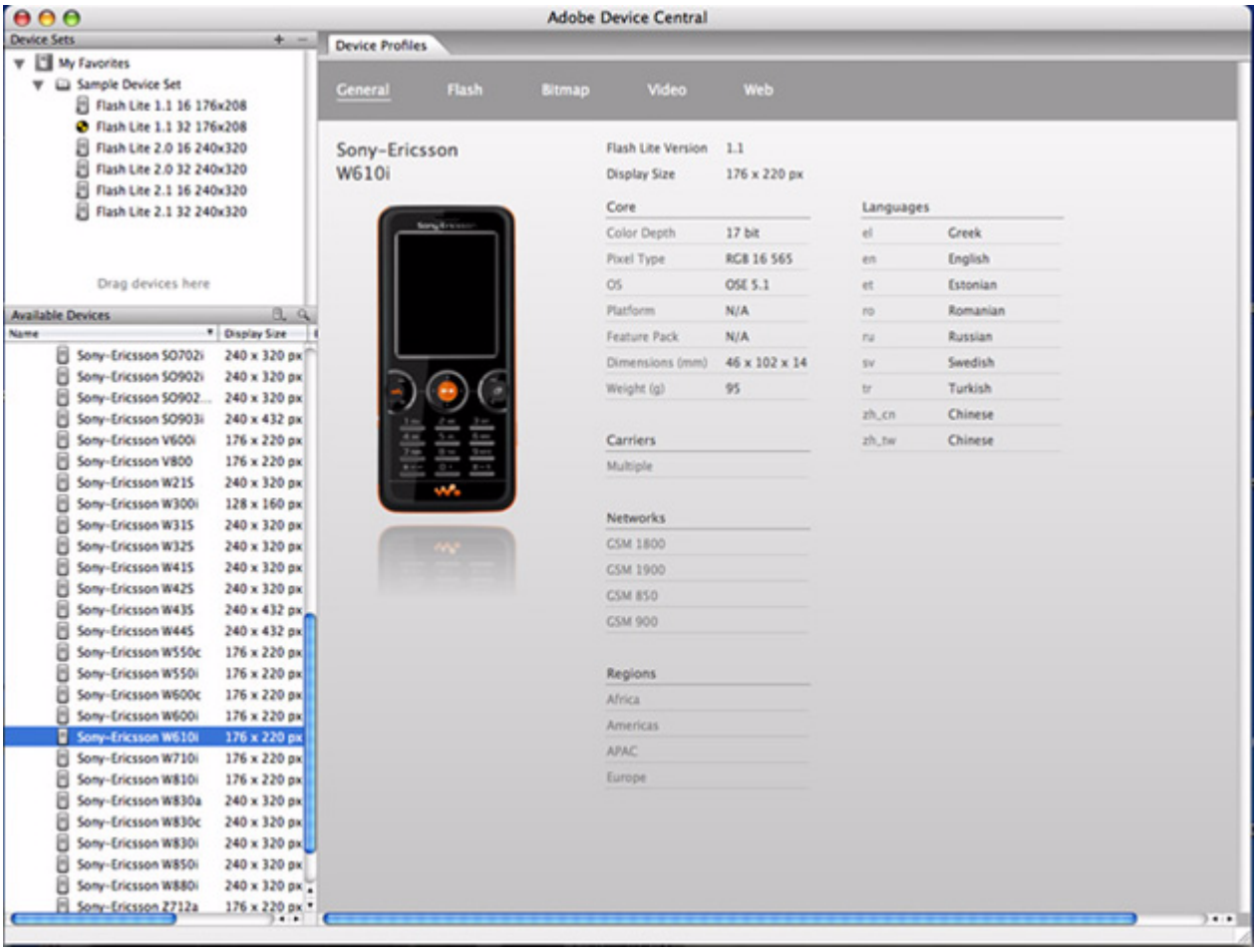
About Device Central

As part of the Adobe commitment to placing rich content on Mobile and Devices, they have recently released Device Central as part of the latest Creative Suite. Device Central is an independent application, not just a publishing tool within Flash. In fact Device Central makes it easy to bring content from other Creative Suite applications including Adobe Illustrator™ and Adobe Photoshop™ to the mobile screen. Its real strength is that it allows us to easily set up and manage multi-phone projects with precise at-a-glance information about each device. This allows effective project planning, letting us know the technical similarities and differences across our target range of devices and therefore plan the “porting” required to run the content effectively on each. Device Central also allows an unrivalled set of device emulation options, meaning an application can be tested on screen on different devices with a wide range of differing parameters, giving the developer instant feedback as to how well their content will deploy. Adobe also supply periodic updates for Device Central, meaning when new phones are released, new profiles can be placed in the application to keep it up to date.

Tutorial

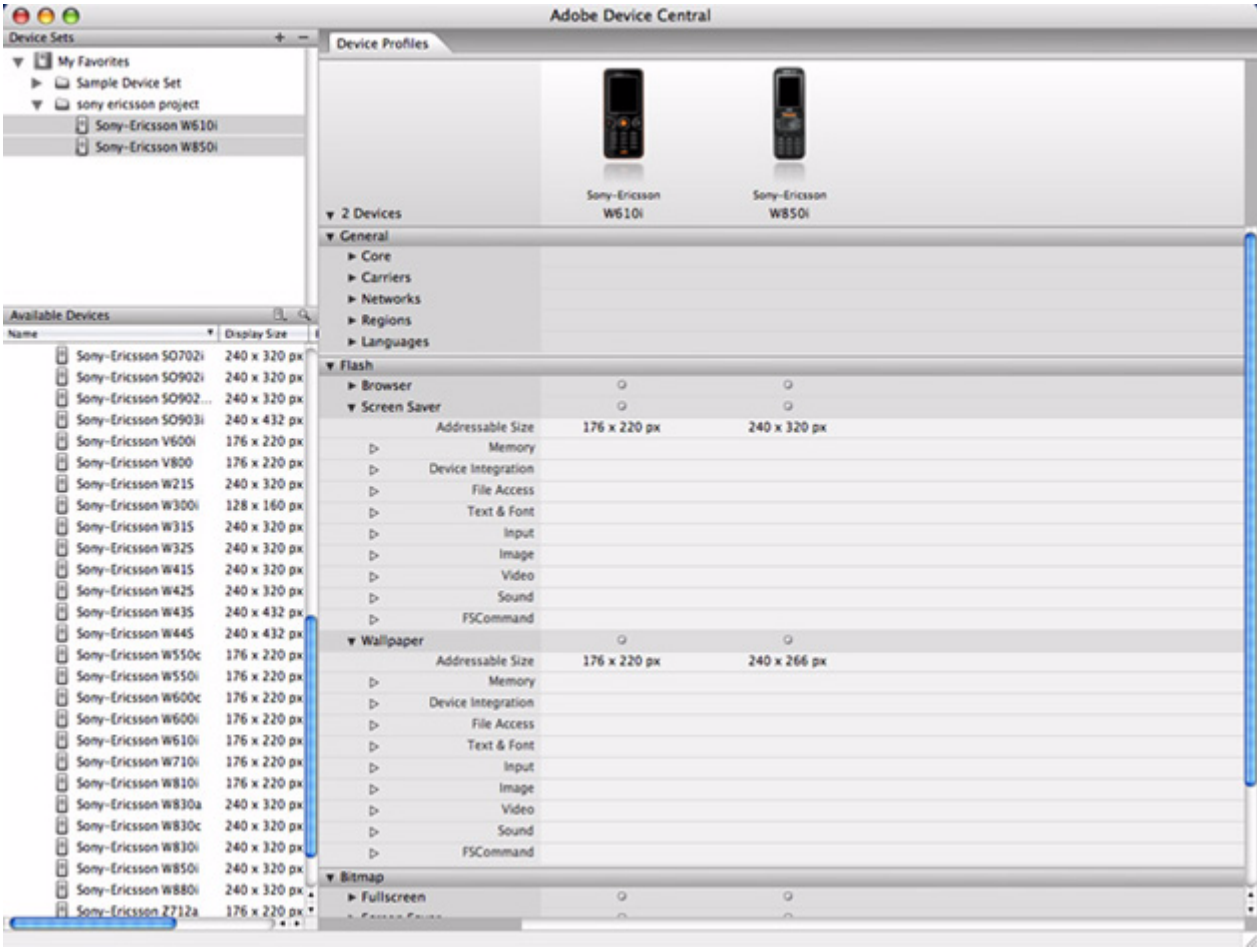
Planning the project

Our first step in planning how to undertake this project is to open the Device Central application.



On viewing the main interface, we see the *Available Devices* box in the lower left-hand column. Here we have a wide choice of devices we can access, but our target devices are the Sony Ericsson W610i and W850i, so by selecting the Sony Ericsson section we get a drop down menu of available models. By selecting the W610i, as in the figure, we now see the main *Device Profiles* window displays an image of the phone along with useful data on a variety of parameters, for instance Flash Lite version.

We also need to view the profile for the W850i to check how far the phone requirements differ. Device Central offers us the ability to view device profiles side by side and we achieve this by creating a new *Device Set*, which is added to the list in the top left-hand of the interface. In this case the new device set has been named "sony ericsson project". Once the new set has been created, device profiles can be dragged into it from the *Available Devices* window. By highlighting both devices we now have a side-by-side view of the devices and their capabilities in the *Device Profiles* window.



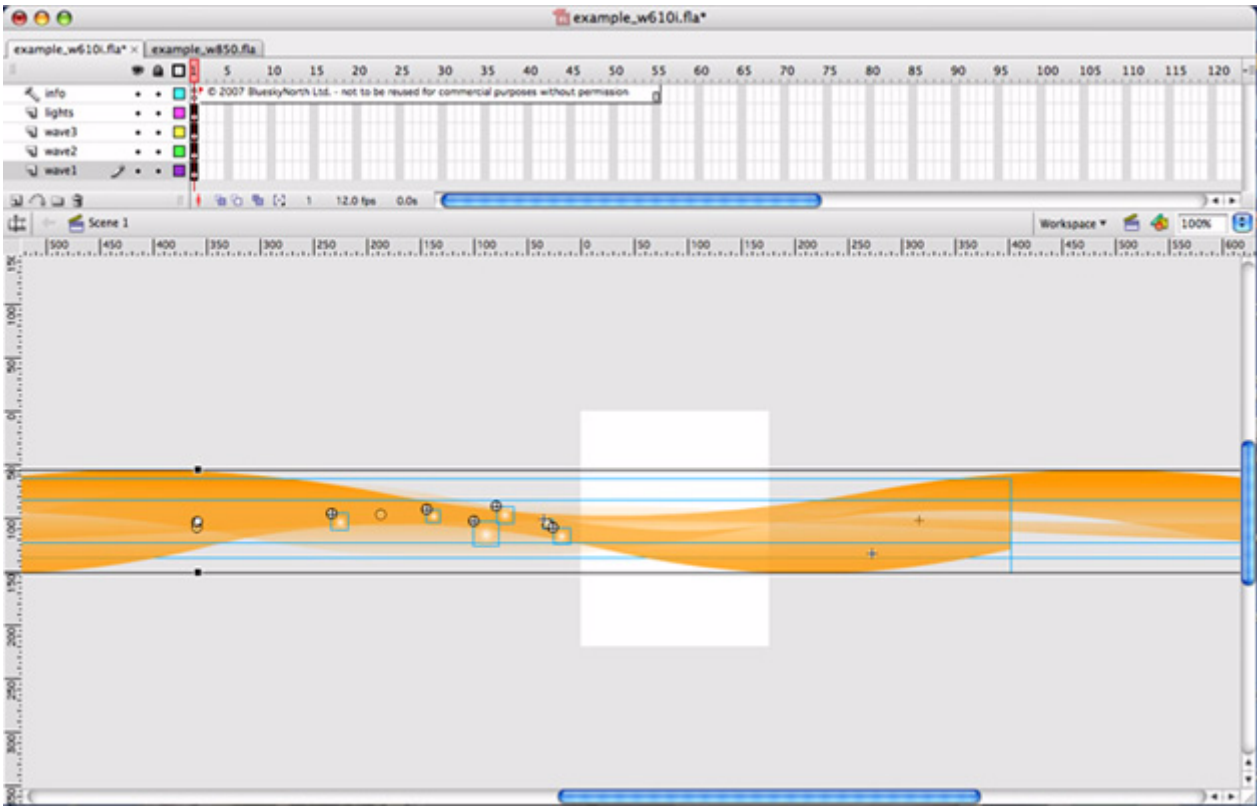
Of particular interest to us at this stage is the wallpaper addressable size, located in the Flash drop down. This shows us the pixel dimensions at which a wallpaper can be displayed. We can see that these dimensions differ considerably between our target phones, so we now know that we must create our content with this in mind. Thus, we need to develop an example of animated content to work across two different screen sizes. We can therefore plan how best to achieve this in Flash. For instance, do we make two completely separate files from scratch, or can we make one file and construct our different size versions from this? Generally it is possible to take the second approach, although it really depends on the nature of the content being produced. For instance, while vector shapes within Flash can be resized without losing quality, any bitmap elements will have to be constructed for the exact screen size required.

Preparing the content

Now that we have planned our project and made key decisions on how to achieve our objectives, it is time to open Flash and create the actual content. We do this directly from Device Central by selecting *File – New Document In – Flash*. This offers us the option to select a new Flash document of the appropriate size for either of our target phones. In this case though, fla files have been provided as part of the tutorial, so we can move across to our Flash Authoring Environment by selecting *File – Jump to Flash*. Once in Flash we can open the *example_w850.fla* file.

In *example_w850.fla* some simple graphics are placed to create an ambient wave animation, which will work well as a wallpaper (it is important to remember that a wallpaper will have other information, such as operator name, date and time, superimposed over it, so designs should bear this in mind). As the file name suggests, this is the version we use for our W850i, and you notice the screen size is set accordingly at 240 x 266. We also have the file set up to publish as Flash Lite 1.1 as this is the version that our device profile stated for this phone.

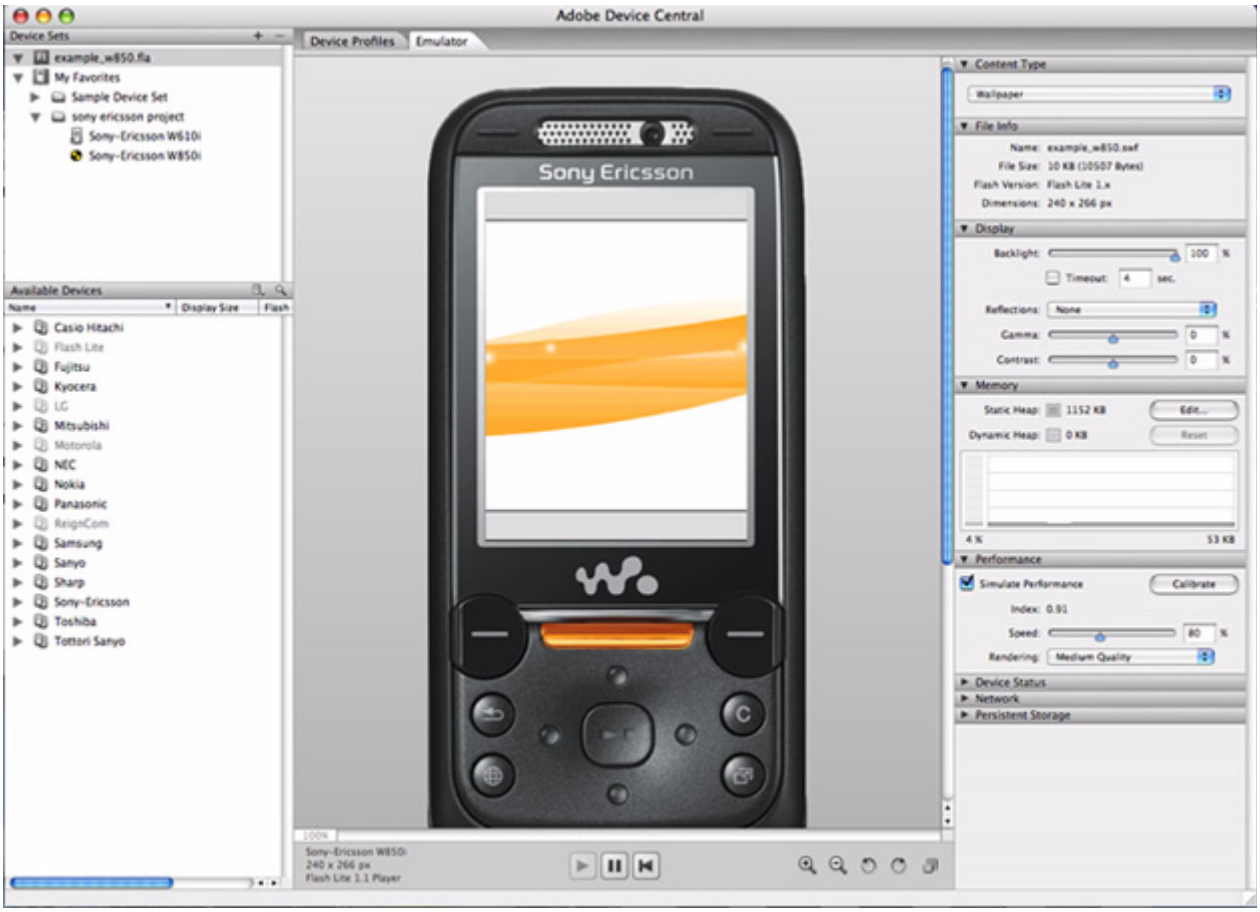
We now need our version for the W610i. By opening *example_w610i_start.fla* you see that we have the stage set at 176x220. What we need to do now is copy across our animated elements from *example_w850.fla* and resize them accordingly to fit this smaller stage.



So now we have our content placed on the correct screen sizes, we need to publish our swf files and test them to see how they will run.

Testing the content

Testing is the second major area where Device Central really helps our workflow. We can view the content we have just created by either using the *Publish Preview* feature in Flash, or by opening our swf files directly in Device Central. Making sure the *Emulator* tab is selected in our main window, we can see our content running within the selected phone, accompanied by a number of options menus on the right hand side of the screen.



These menus allow us to configure the emulator to run exactly as we require for a given type of content. You can see the *Content Type* is set to *Wallpaper* and our *File Info* provides feedback on file size, version and file dimensions. The *Display* menu allows us to set our backlight strength and duration, as well as the ability to emulate a wide range of lighting conditions that users may experience in the real world.

A couple of other features to take special note of are the *Memory* and *Performance* boxes. These can be used in conjunction to give a highly realistic view of how content will run on the actual phones. By pressing the *Calibrate* button within *Performance*, the emulator will run a quick sequence to calculate actual performance. We can then see what percentage of the available phone memory will be required to run the animation. We can also change parameters such as *Rendering Quality* and *Speed* at this point. Generally Sony Ericsson Flash Lite 1.1 enabled phones have a default rendering quality of medium, so it is worth setting this at the emulation stage. It is also useful to set the speed to around 50 to 75%. If your content still works fine at these levels, then there should be no performance issues on the actual phone.

Once both versions have been tested thoroughly using these tools we can have a very high level of confidence that they will work as required on the actual phones. It is at this point where it is still prudent to test on the phones if this is possible.

Conclusion

We have seen in this brief tutorial how the Adobe Device Central application allows us far greater control in the planning and implementation of Flash Lite projects requiring content to be deployed across more than one phone. Using the Device Profiles we can plan our project more effectively, and using the emulation tools we can test our content thoroughly and efficiently across our target phone range. For more information on Device Central and its capabilities, see www.adobe.com/products/creativesuite/devicecentral.