Adobe Flash / AIR large memory footprints on Android platforms

Posted At : 8 February 2011 14:08 | Posted By : Shaun McCran
Related Categories: Development, Mobile

The Android market place is growing in popularity all the time, but does its rapid growth bring with it other issues about development best practices, and what sort of considerations should developers take into account when developing for mobile platforms.

This article examines how much memory footprint Adobe software needs to run on the Android platform, and the issue that arises because of it.

How Android memory works

To understand the issue we need to look at home Android memory works, I've written an article here that goes into detail about it.

http://www.mccran.co.uk/index.cfm/2011/1/14/How-Android-application-memory-works

Adobe Flash and Adobe AIR

Applications built using either of these two technologies do not inherently run on the Android platform.

Playing Flash movies or running AIR applications requires you to install specific interpreter applications, namely Flash player and the AIR runtime platform.

Installing either of these obviously requires installation space (RAM) and memory space (ROM) to allow them to run on your Android device.

In a desktop environment this is not an issue as you effectively have unlimited storage space, and virtually unlimited memory based on internal RAM and the page file system (using internal storage space as temporary memory).

When we compare this to installing these applications on the Android platform the problem becomes apparent.

After installing Adobe Flash player I can see in my system settings that it has an 11.29mb memory footprint. Adobe AIR is even larger at a 16.34 mb memory footprint. So together they have a combined memory usage of 27.63mb. That is 18.71% of your total available memory. Bear in mind that this is just for the Adobe applications, not any of the applications you actually want to run!

This leaves you with only 119.99mb of total free system ROM. Android systems effectively shut down when they reach less than 15mb of ROM space available. At 15mb free you will get a system message telling you that you are nearly out of memory and synchronisation routines stop working. At less than 8mb all system services shutdown.

Taking this into account means that after installing Flash player and AIR you only have around 100mb of system memory to actually run applications in.

On a platform that I'm already struggling to fit all my useful applications on the amount of memory these two applications use is simply too much, so they've had to come off.

It would be nice to see truly lightweight mobile versions of Adobe Flash and AIR.