



# DEVELOPING DESKTOP APPLICATION WITH ADOBE AIR: USING FLEX BUILDER 3, FLASH CS3 AND AJAX

## OVERVIEW

Adobe AIR is a multi-platform runtime system that Adobe is developing and that allows developers to use their web development skills (Flash, Flex, HTML, JavaScript, Ajax) to create and distribute Rich Internet Applications (RIAs) on the desktop. Web applications have transformed with time from simple web sites to more complex applications which have started to bring the development limitations of the browser to light. The web browser was originally thought of to display a document based on HTML language. For this reason, now that more and more applications, which function as true desktop software, are released on the web, a series of problems, linked to their deployment via the web browsers, arise. Among the greatest limitations for the developer, but also for the end user, one is surely the impossibility of interacting with the operative system. Operations that allow the application to copy, save or create files are made impossible by the security model of the web browser, which does not have access to the file system of the machine on which it is running. Adobe AIR provides a platform between the desktop and the browser which combines the simplicity of the development model and release model of the web with the rich functions of the desktop application model. Adobe AIR allows Rich Internet Applications to be distributed outside the web browser and to be able to access the functions of the operative system using Flash, Flex, HTML and AJAX as development technologies.

### Training objectives

This course introduces the participants to the development of Rich Applications with Adobe AIR using its capacity to be able to access the File System, to modify the Windows of the system, to be able to make it function even in offline mode and to use the notification mechanism of the operative system.

### Prerequisites

This course is aimed at Actionscript/Flash or Flex programmers who also have a knowledge of development on the web with HTML and Javascript. The requirements requested to participate in the course are as follows:

- A deep knowledge of Actionscript 2 and Flash 8 or Flex 2 environments
- A knowledge of object orientated programming
- Knowledge of web technologies: HTML and Javascript or AJAX

### Additional Prerequisites

- Basic knowledge of SQL language
- Knowledge of a server-side language (PHP/ASP/.NET/JAVA)

## PROGRAMME

### Introduction to Adobe AIR

Rich Internet Applications  
Limits of web applications  
Adobe AIR Runtime  
Installation of Adobe AIR

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- Adobe AIR Flash Technology, Actionscript 3 and Flex
- HTML Engine of AIR
- AIR and AJAX
- AIR and integration with PDF

### Using Adobe AIR

- System Requirements
- Software necessary to develop with AIR
- Adobe Flex Builder 3
- Flash CS3
- Dreamweaver CS3
- Aptana Studio
- AIR SDKs
- Creating the first application with AIR

### Using HTML and Javascript in AIR

- HTML and Javascript support
- Using the HTML Flex Component
- Using the HTMLControl class
- Communicating with Actionscript and Javascript

### Actionscript 3 for AIR

- The API Actionscript 3 for AIR
- Programming objects with Actionscript 3
- Extending classes with Actionscript
- Understanding the Interfaces

### Using the API for the File System

- Accessing a File or Directory
- Introduction to the File object
- Accessing the File System
- Understanding absolute and relative pathways for multi-platform use
- Creating and deleting files or directories
- Reading information of a File
- Writing and creating Files
- Serializing and deserializing ActionScript3 objects

### Developing Applications with Adobe AIR

- Creating a Project
- Arranging the Assets
- Interacting with Javascript
- Debug and testing
- Badge installation

### Working with the operative system

- Using drag and drop functions
- Using the clipboard
- Implementing the Native Menu API



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### **Remote connections and RPC with Adobe AIR 1**

- Using the Service Connectivity API
- AIR Service Connectivity
- XML an E4X in Flash/Flex
- HTTPService in Adobe AIR
- Using Web Service in AIR
- Using the local database: SQLITE
- Using the OFFLINE/ONLINE synchronisation with the LocalServer API

### **Window applications and integration with the operative system**

- Creating native windows for the operative system
- Creating customised windows
- Management techniques for multi-window applications
- System notifications, tray icons and docks

### **AIR command Line utilities**

- The AMXMLC wrapper
- Using the AMXMLC
- Using the ADL tool
- Using AT

### **AIR and security**

- Security in AIR
- Understanding the AIR sandbox
- Digital signature in AIR applications
- Permissions to access the system
- Priveleged resources
- Badge installation

