

# The basics of Adobe® AIR™

*by* Anshudeep Mathur

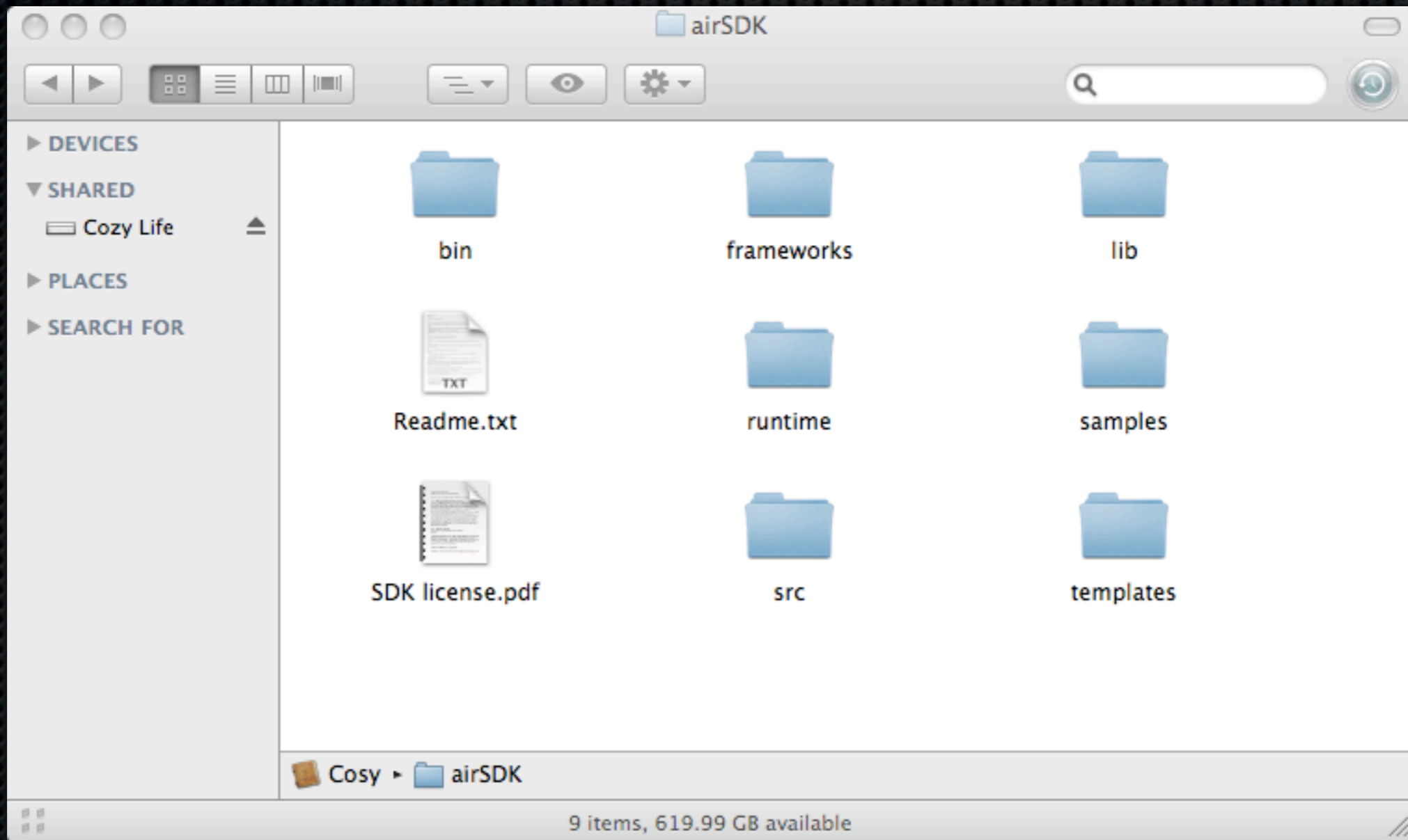
# Overview

- ✦ What is AIR?
- ✦ Ways to develop AIR applications
- ✦ Data options
- ✦ Positive aspects
- ✦ Limitations
- ✦ Demos

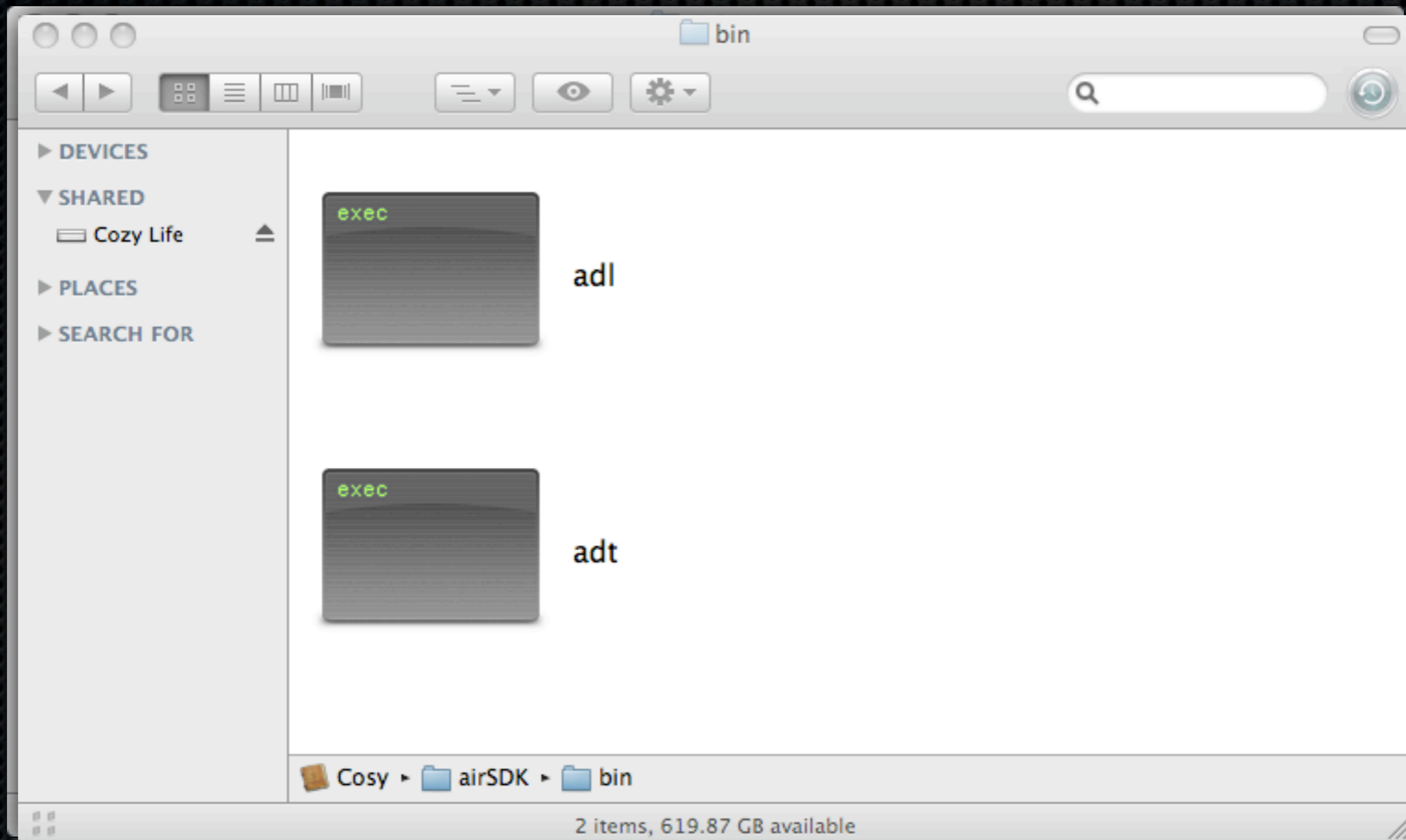
# What is AIR?

- ✦ A cross-platform runtime environment
- ✦ Build rich Internet applications (RIA) using standard web technologies
  - ✦ Adobe Flash, Adobe Flex, HTML, or Ajax
- ✦ Applications can be deployed as desktop application
- ✦ Build and deploy applications with Adobe AIR SDK (version 1.3)

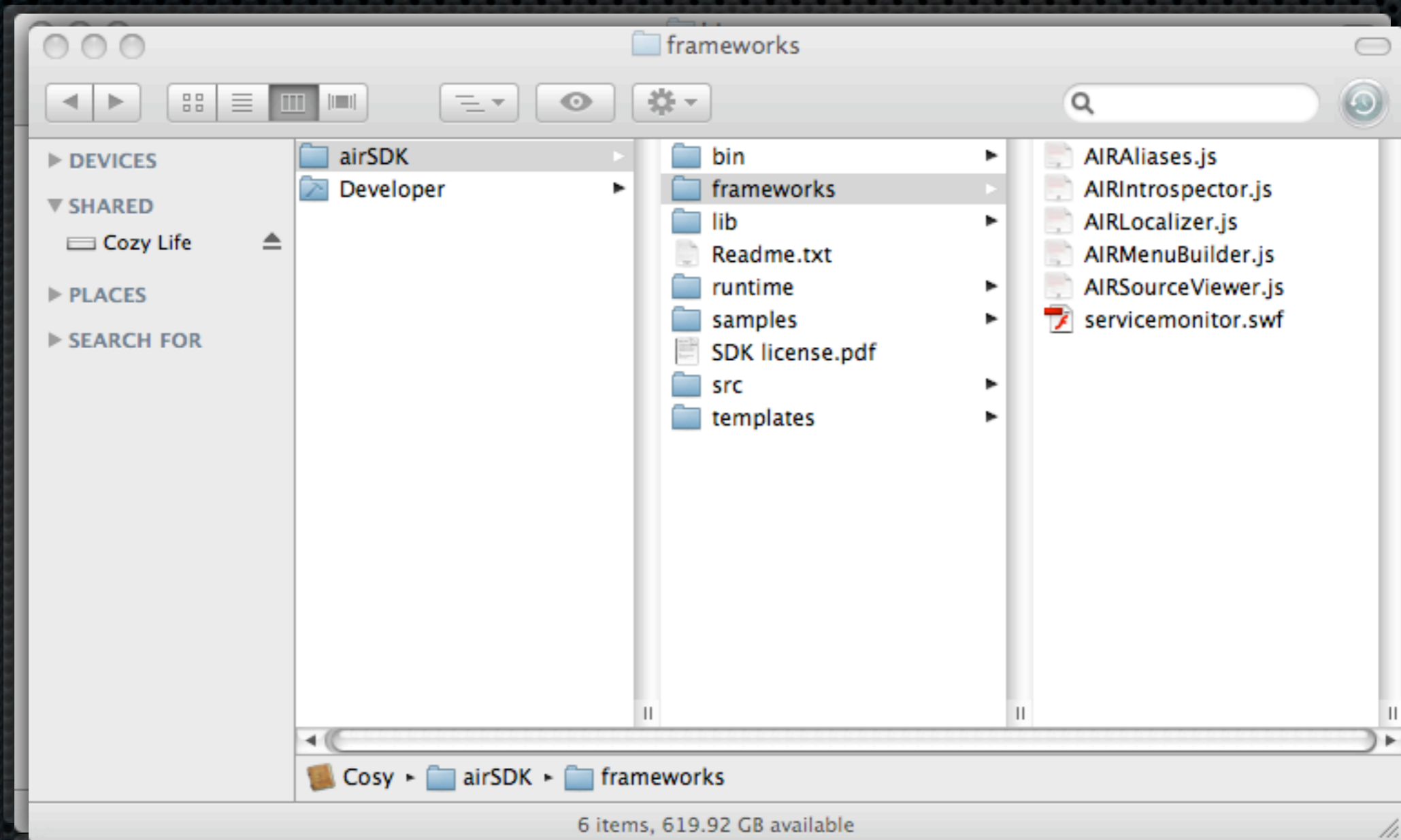
# AIR SDK



# AIR SDK\_bin



# AIR SDK frameworks



# Ways to develop AIR applications

## Adobe Flex

Open source framework for building and maintaining expressive web applications that deploy consistently on all major browsers, desktops, and operating systems.

## Adobe Flash

## HTML/CSS/Ajax



AOL

finetune

eBay

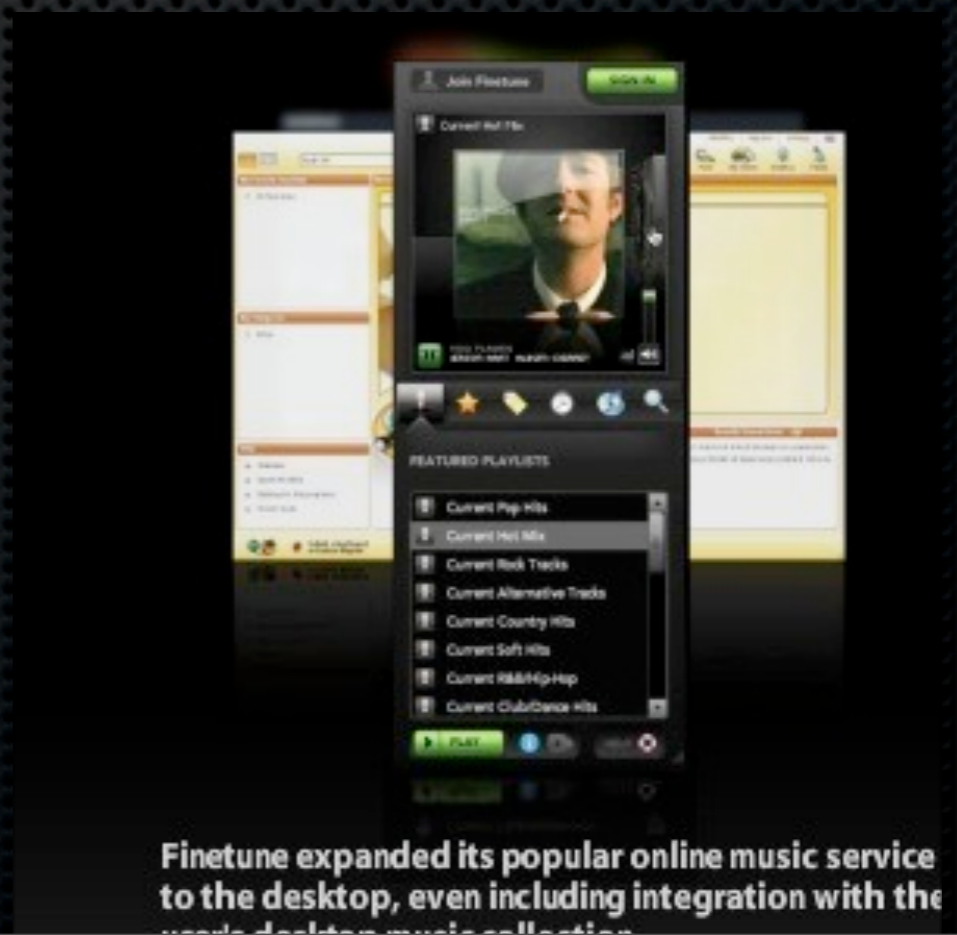
NASDAQ

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NICKELDEON

Finetune expanded its pc to the desktop, even inc user's desktop music coll

[Get application >](#) [Learn](#)



Join Finetune

Current Hit 7th

FEATURED PLAYLISTS

- Current Pop Hits
- Current Hit Mix
- Current Rock Tracks
- Current Alternative Tracks
- Current Country Hits
- Current Soft Hits
- Current R&B/Hip-Hop
- Current Club/Dance Hits

Finetune expanded its popular online music service to the desktop, even including integration with the user's desktop music collection.

# Creating an AIR Application

- ✦ Download and install the Adobe AIR SDK

<http://www.adobe.com/products/air/tools/sdk>

- ✦ Create the project files

1. Application descriptor file

2. Top-level HTML page

- ✦ Test + Package using adl and adt

- ✦ Install the Adobe AIR runtime

<http://get.adobe.com/air/>

# Data Options

- ✦ Database server via Web services
- ✦ Local XML file
- ✦ Local SQLite database
- ✦ Encrypted local storage
- ✦ Encrypted local database (as of v. 1.5)



# Application descriptor file

app.xml

```
<?xml version="1.0" encoded="UTF-8"?>
<application xmlns="http://ns.adobe.com/air/application/1.5">
  <id>RIM.testing.HelloWorld</id>
  <version>0.1</version>
  <filename>HelloWorld</filename>
  <initialWindow>
    <content>HelloWorld.html</content>
    <visible>true</visible>
    <width>500</width>
    <height>250</height>
  </initialWindow>
</application>
```

## Other paramets include:

- *installFolder*
- *programMenuName*
- *description*
- *copyright*
- *title*
- *systemChrome*
- *transparent*
- *minimizable*
- *maximizable*
- *resizable*
- *x*
- *y*

# Top-level HTML page

HelloWorld.html

```
<html>

  <head>

    <title>HelloWorld</title>

    <script type="text/javascript" src="AIRAliases.js"></script>

    <script type="text/javascript">

      function appLoad(){

        air.trace("Hello World");

      }

    </script>

    <style type="text/css"> body {font-family:Verdana; font-size:0.9em; padding:1em; text-align:center; } </style>

  </head>

  <body onLoad="appLoad()">

    <h1>Hello</h1><h2>World</h2>

  </body>

</html>
```

# Testing + Packaging

- ✦ AIR Debug Launcher (ADL) utility is used to test
  - ✦ **adl app.xml**
  - ✦ `adl [-runtime runtime-directory] [-publisher publisher-id] [-nodebug] application.xml [root-directory] [--arguments]`

# Testing + Packaging

- ✦ For generating the AIR installer:
  - ✦ Generating a self-signed certificate and key pair
    - ✦ **adt -certificate -cn SelfSigned 1024-RSA myCert.pfx myPassword**
      - ✦ *adt -certificate -cn name [-ou org\_unit] [-o org\_name] [-c country] key\_type pfx\_file filepassword*
  - ✦ Installer
    - ✦ **adt -package -storetype pkcs12 -keystore myCert.pfx HelloWorld.air app.xml HelloWorld.html AIRAliases.js**

# Positive aspects

- ✦ Cross-platform
- ✦ Easy installation
- ✦ Ability to operate offline (Service monitor framework)
- ✦ Local database
- ✦ Advanced sandbox
- ✦ Use other JavaScript libraries and frameworks
- ✦ Uses WebKit for rendering (and supports Squirrelfish)
- ✦ Update frameworks
- ✦ Easy AIR application distribution (using browser API)
- ✦ Native OS-operations support (Clipboard, Drag and drop support, Filesystem integration)

# Limitations

- ✦ Somewhat limited extensibility
- ✦ Database access limited to SQLite
- ✦ Proprietary technology
- ✦ Security concerns
- ✦ ...still in early stages of development

# Samples

- ✦ To-do List

Developer: Jonathan Snook

- ✦ BlackBookSafe

Developers: Mirela Budaes, Horia Olaru, Alex Chiculita, Raul Hudea, Maurius Ioana, and Tudor Muscalu

- ✦ HTMLScout

Developer: Christian Cantrell

- ✦ RoadFinder

Developer: Raul Hudea, Dragos Georgita

- ✦ QATRS Supplier Evaluation Forms

# Resources

## 1. Adobe AIR Developer Center for AIR

<http://www.adobe.com/devnet/air/>

## 2. Adobe AIR Forum

<http://www.adobe.com/support/forums/>

## 3. Adobe AIR Codebook

[http://www.adobe.com/go/air\\_cookbook](http://www.adobe.com/go/air_cookbook)

## 4. Developing AIR Applications Docs

[http://www.adobe.com/go/learn\\_air\\_html\\_en](http://www.adobe.com/go/learn_air_html_en)