Android mOcean SDK
Developer Guide

For Android SDK Version 2.11

Table of Contents

Overview 3
What’s new in 2.11:..3
How to upgrade from previous versions:..4
System requirements: 4
SDK contents: 4
Installation instructions:...4
SDK API reference: 9
Global functions: 9
Sample usage 13

Overview

This document provides a description of the following:

- What's new in 2.11
- How to upgrade from previous versions
- System requirements
- Installation Instructions (revised)
- SDK contents
- SDK API reference
- Sample of usage

What's new in 2.11:

- SDK now distributed in source form rather than as a binary jar library
- Namespace changed from com.adserver.adview to com.MASTAdView for all classes
- Class AdServerView renamed to MASTAdView
- Class AdLog renamed to MASTAdLog
- Deprecated class AdServerInterstitialView removed
- Ad request methods setMetro() and getMetro() marked as deprecated, use replacements steDma() and getDma() for future compatibility
- If (max) size X or Y parameter set to something less than minimum X or Y, log a warning and send the minimums in request to server
- Implement option for location listener to receive ongoing location updates with new properties to adjust the update frequency by elapsed time or distance moved. See setLocationMinWait() and setLocationMoveDistance() properties in MASTAdViewCore for more information
- No longer send device ID in ad server requests by default; caller can enable this with the setUseSystemDeviceId() property, or supply an alternative custom ID with the setDeviceId() property
- Advertiser ID and group ID properties removed
- Disable attempt to use sensors on emulator to avoid hangs
- Improve thread safety and handoff between UI thread and background threads when handling ad requests and ad code
- Removed setScaledOnDPI property, added new properties to customize the HTML code injected into the head and body of ad view with new setInjectionHeaderCode() an setInjectionBodyCode() properties
- Stop ad request update timer for various conditions such as when expanded ad is being viewed, video is playing, etc.
- Make sure ORMMA standard close ad button/region in upper right corner of ad is clickable in all cases
- The sample application was updated to include better sample ads, new settings and ability to view debug log without leaving app

How to upgrade from previous versions:

1. Replace usage of the AdServerView class under the com.adserver.adview namespace with the MASTAdView class under the com.mastadview namespace.
2. Replace usage of the AdLog class under the cm.adserver.adview namespace with the MASTAdLog class under the com.mastadview namespace.
3. Replace all uses of or references to classes under the namespace com.adserver.adview.* with the classes under com.mastadview.*.
4. Replace any usage of the class AdServerInterstitialView with the equivalent featuers of he MASTAdView class.
5. If the setScaledOnDPI property was used, replace this with a custom viewport property setting to achieve the same effect (see below.)

System requirements:

- Android SDK (platform version 2.0 or later)
- Eclipse 3.5 or later
- 10 Mb free disk space

SDK contents:

- Documentation - SDK documentation
- Lib - SDK library files
- Sample - sample usage/test app

Installation instructions:

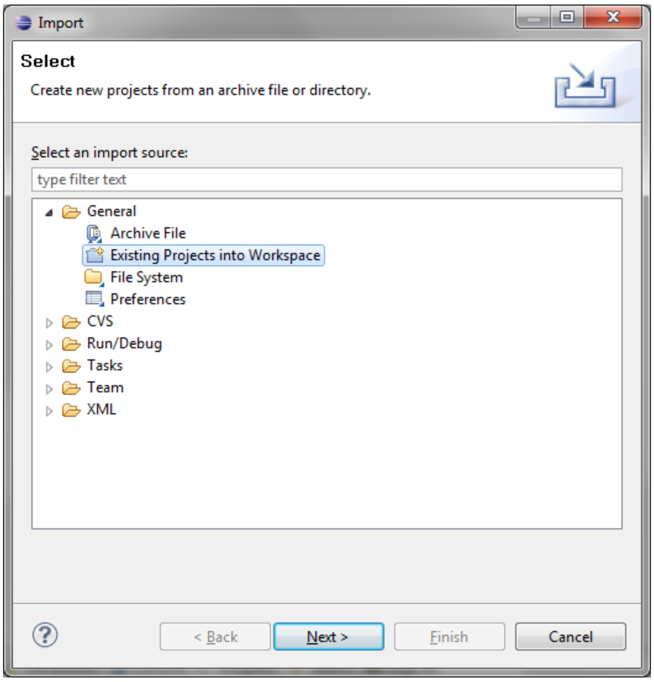
Installing Android SDK

Download and install Android SDK (http://developer.android.com/sdk/index.html).
Follow installation instructions provided by Android SDK. Once SDK has been installed follow to the next step to install Android mOcean SDK.

Installing Android mOcean SDK

The SDK is distributed as a library source code project, but still includes a pre-compiled jar library. To add the SDK to a project, the developer must configure the project properties to indicate the location of SDK files, as well as the names of library dependencies.

1. Unpack the SDK zip file into a convenient location in your source code working area.
2. Open or create a new Android project in the Eclipse development environment.
3. Import the SDK project into your workspace as an existing Android project.
    a. Choose Import from the File menu, then Existing Projects into Workspace as show in Figure 1 below.



Import

Select

Create new projects from an archive file or directory.

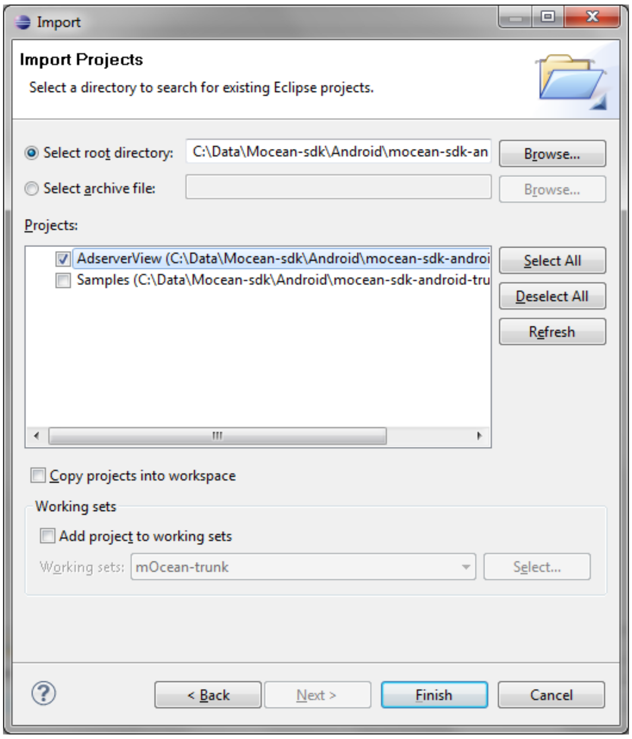
Select an import source:

type filter text

- General
  - Archive File
  - Existing Projects into Workspace
  - File System
  - Preferences
- CVS
- Run/Debug
- Tasks
- Team
- XML

Figure 1- Import Existing Project

b. Browse to the location where you unpacked the SDK file and import the AdserverView project; you can also optionally import the Samples project if you want to work with the SDK sample application. See Figure 2 below for an example.



Import

Import Projects

Select a directory to search for existing Eclipse projects.

● Select root directory: C:\Data\Mocean-sdk\Android\mocean-sdk-an

○ Select archive file:

Projects:

☑ AdserverView (C:\Data\Mocean-sdk\Android\mocean-sdk-androi

□ Samples (C:\Data\Mocean-sdk\Android\mocean-sdk-android-tru

□ Copy projects into workspace

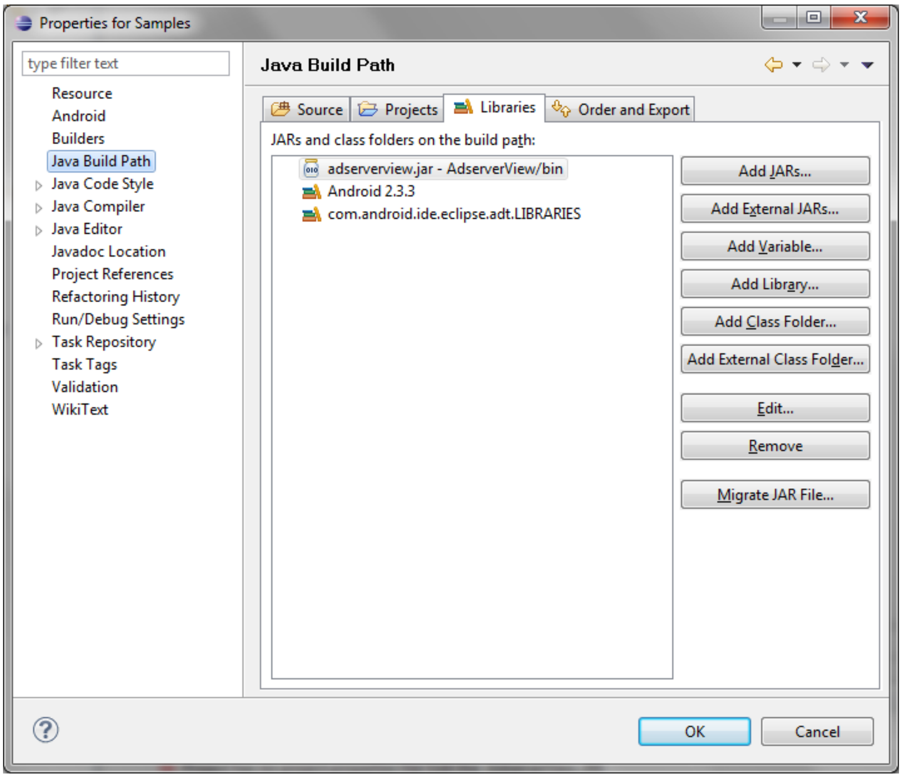
Working sets

□ Add project to working sets

Working sets: mOcean-trunk

Figure 2 - Import Projects into SDK

c. Choose Properties from the Project menu, and then select the Java Build Path category followed by the Libraries tab, as shown in Figure 3 below.

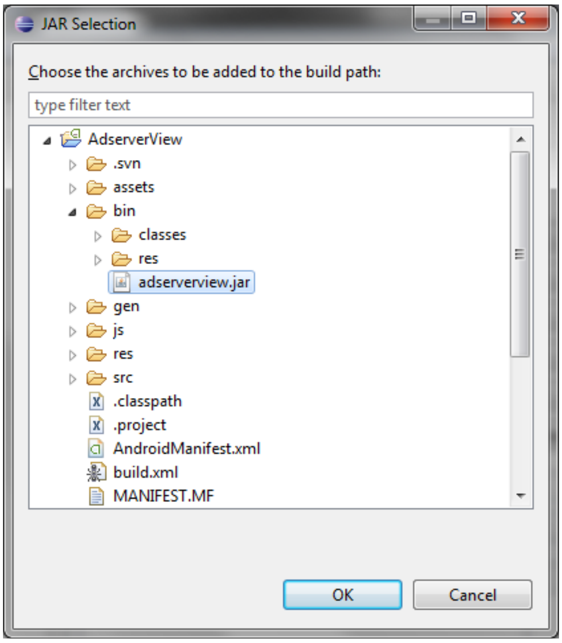


JARs and class folders on the build path:

- adserverview.jar - AdserverView/bin
- Android 2.3.3
- com.android.ide.eclipse.adt.LIBRARIES

Figure 3 - Add Library Jar

d. Choose the Add Jar button, and then navigate into the bin folder of the AdserverView project and choose the adserverview.jar Jar file as shown in Figure 4 below.



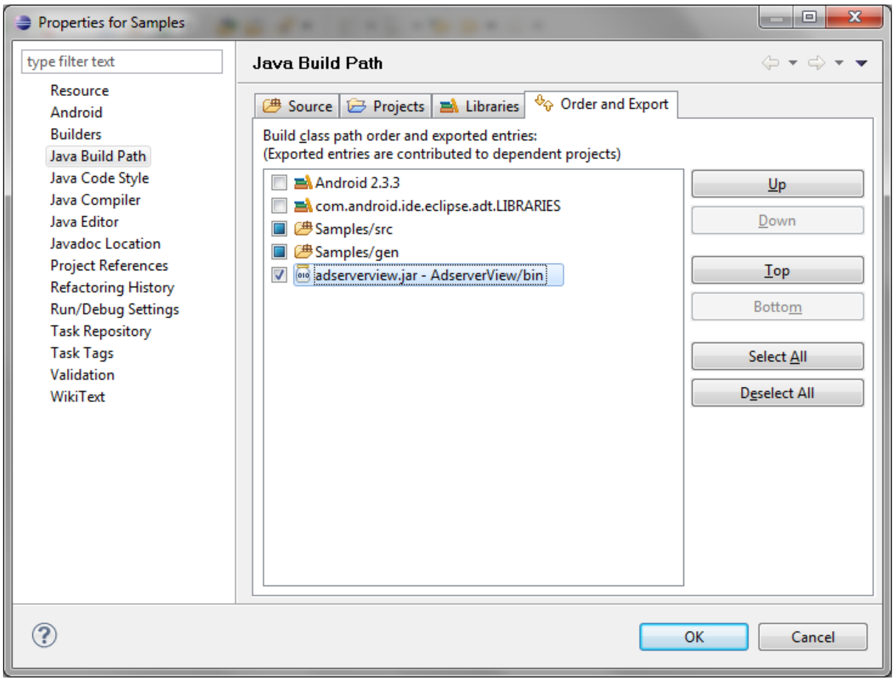
Choose the archives to be added to the build path:

```
AdserverView
  .svn
  assets
  bin
    classes
    res
    adserverview.jar
  gen
  js
  res
  src
  .classpath
  .project
  AndroidManifest.xml
  build.xml
  MANIFEST.MF
```

Figure 4 - Ad SDK Jar File

e. **IMPORTANT**: If using release 18 or later of the Android SDK tools, choose the Order and Export tab, and check the box to export the SDK Jar file as shown in Figure 5 below.

Without this, applications will compile but the resulting apk file will not include the required SDK code and the app will crash at runtime due to missing symbols.



Properties for Samples

Java Build Path

Build class path order and exported entries:
(Exported entries are contributed to dependent projects)

□ Android 2.3.3
□ com.android.ide.eclipse.adt.LIBRARIES
■ Samples/src
■ Samples/gen
☑ adserverview.jar - AdserverView/bin

Figure 5 - Export SDK Jar File

Updating the manifest file (AndroidManifest.xml)
Add “minSdkVersion” parameter in project manifest file (AndroidManifest.xml)
Example: <uses-sdk android:minSdkVersion="5" />

Set the security permissions in your manifest file (AndroidManifest.xml)

Permission	Description & Manifest XML fragment
INTERNET	Access the Internet. Required for ad content download. <uses-permission android:name="android.permission.INTERNET"></ uses-permission>
Network State	Access the network state. Required for ad request parameter setting, and ORMMA support. <uses-permission android:name="android.permission.ACCESS_NETWORK_STATE"></ uses-permission>
Fine Location	Use GPS to obtain location information. Needed if SDK or ORMMA ad enables location detection; off by default. <uses-permission android:name="android.permission.ACCESS_FINE_LOCATION"></ uses-permission>
Phone State	Read state of phone data connection. Required for ad request parameter setting. <uses-permission android:name="android.permission.READ_PHONE_STATE"></ uses-permission>
Read Calendar	Read calendar events. Required if ORMMA ad makes use of calendar features. <uses-permission android:name="android.permission.READ_CALENDAR"></ uses-permission>
Write Calendar	Write calendar events. Required if ORMMA ad makes use of calendar features. <uses-permission android:name="android.permission.WRITE_CALENDAR"></ uses-permission>
Call Phone	Initiate a phone call. Required if an ad makes use of the ORMMA feature to place a phone call. <uses-permission android:name="android.permission.CALL_PHONE"></ uses-permission>
Send SMS	Send an SMS (text) message. Required if an ad makes use of the ORMMA feature to send a text message. <uses-permission android:name="android.permission.SEND_SMS"></ uses-permission>
Camera	Use camera to take a picture. Required if an ad makes use of the ORMMA feature to capture photos. <uses-permission android:name="android.permission.CAMERA"></ uses-permission>
External Storage	Access the SD card storage area. Required for debug logs, photo, and file access to support SDK logging and ORMMA features. <uses-permission android:name="android.permission.WRITE_EXTERNAL_STORAGE"></ uses-permission>
Wake Lock	Allows using PowerManager WakeLocks to keep processor from sleeping or screen from dimming . <uses-permission android:name="android.permission.WAKE_LOCK" / >

SDK API reference:

Global functions:

MASTAdLog.setDefaultLogLevel`(int logLevel)`

AdLog.LOG_LEVEL_NONE	none
AdLog.LOG_LEVEL_1	only errors
AdLog.LOG_LEVEL_2	+warning
AdLog.LOG_LEVEL_3	+server traffic

AdLog.*setFileLog*(String fileName) file to output

MASTAdView(Context context, java.lang.String site, java.lang.String zone)
Creation of view showing ad content.

void **show**()
Show Interstitial advertising.

void **SetLogLevel**(int logLevel).

All settings can be set by means of methods get and set (for example: getCity() and setCity(String city)).

java.lang.String	getAdserverURL()	Optional.
java.lang.String	getArea()	Optional.
java.lang.String	getBackgroundColor()	Optional.
java.lang.String	getCarrier()	Optional.
java.lang.String	getCity()	Optional.
java.lang.String	getCountry()	Optional.
java.util.Hashtable<java.lang.String,java.lang.String>	getCustomParameters()	Optional.
java.lang.Integer	getDefaultImage()	Optional.
String	getInjectionBodyCode()	Optional, get code fragment to be injected into HTML body.
String	getInjectionHeaderCode()	Optional, get code fragment to be injected into HTML header.
boolean	getInternalBrowser()	Get the flag which operates advertising opening.
java.lang.String	getKeywords()	Optional.
java.lang.String	getLatitude()	Optional.

float setLocationMoveDistance()

Optional; get distance device must move to trigger a location update.

int setLocationMinWait()

Optional; get time interval in milliseconds between location updates.

java.lang.String getLongitude()

Optional.

java.lang.Integer getMaxSizeX()

Optional.

java.lang.Integer getMaxSizeY()

Optional.

java.lang.String getDma()

Optional.

java.lang.Integer getMinSizeX()

Optional.

java.lang.Integer getMinSizeY()

Optional.

AdServerViewCore.OnAdClickListener getOnAdClickListener()

Get interface for advertising opening.

AdServerViewCore.OnAdDownload getOnAdDownload()

Get interface for advertising downloading.

java.lang.Integer getPremium()

Optional.

java.lang.String getRegion()

Optional.

java.lang.String getSite()

Get the id of the publisher site.

java.lang.String getState()

java.lang.Boolean getTest()

Optional.

java.lang.String getTextColor()

Optional.

java.lang.Integer getUpdateTime()

Optional.

java.lang.String getZip()

Optional.

java.lang.String getZone()

Get the id of the zone of publisher site.

void setAdserverURL(java.lang.String adserverURL)

Optional.

void setArea(java.lang.String area)

Optional.

void setBackgroundColor(java.lang.String backgroundColor)

Optional.

void setCarrier(java.lang.String carrier)

Optional.

void setCity(java.lang.String city)

Optional.

void setCountry(java.lang.String country)
Optional.

void setCustomParameters(java.util.Hashtable<java.lang.String,java.lang.String> customParameters)
Optional.

void setDefaultImage(java.lang.Integer defaultImage)
Optional.

void setInternalBrowser(boolean internalBrowser)
Set the flag which operates advertising opening.

void setKeywords(java.lang.String keywords)
Optional.

void setLatitude(java.lang.String latitude)
Optional.

void setLongitude(java.lang.String longitude)
Optional.

void setMaxSizeX(java.lang.Integer maxSizeX)
Optional.

void setMaxSizeY(java.lang.Integer maxSizeY)
Optional.

void setDma(java.lang.String metro)
Optional.

void setMinSizeX(java.lang.Integer minSizeX)
Optional.

void setMinSizeY(java.lang.Integer minSizeY)
Optional.

void setOnAdClickListener(AdServerViewCore.OnAdClickListener adClickListener)
Set interface for advertising opening.

void setOnAdDownload(AdServerViewCore.OnAdDownload adDownload)
Set interface for advertising downloading.

void setPremium(java.lang.Integer premium)
Optional.

void setRegion(java.lang.String region)
Optional.

void setSite(java.lang.String site)
Required.

void setTest(java.lang.Boolean enabled)
Optional.

void setTextColor(java.lang.String textColor)
Optional.

void setUpdateTime(java.lang.Integer updateTime)
Optional.

void setZip(java.lang.String zip)
Optional.

void setZone(java.lang.String zone)
Required.

void update()
Immediately update banner contents.

void setInjectionHeaderCode(String value)

Optional; customize code added to HTML header when creating ad content web view, to setup the viewport that will contain ad content. Default value is:

```
<meta name="viewport" content="target-densitydpi=device-dpi"/ >
```

void setInjectionBodyCode(String value)

Optional; customize code added to create the HTML body when creating the ad content web view. This ***must*** define the HTML body open tag. Default value is:

```
<body style=\"margin: 0px; padding: 0px; width: 100%; height: 100%\">";
```

Or if the isContentAligned property is set:

```
<body style="margin: 0px; padding: 0px; width: 100%; height: 100%; display:-webkit-box;-webkit-box-orient:horizontal;-webkit-box-pack:center;-webkit-box-align:center;">
```

void setLocationMoveDistance(float meters)

Optional; set distance (in meters) device must move to trigger a location update. Default value is 1000 meters. Only relevant if the setLocationDetection property has been set to true.

void setLocationMinWait(int millis)

Optional, set the delay (in milliseconds) between periodic location updates from the OS. Default value is 5 minutes. Only relevant if the setLocationDetection property has been set to true.

void setUseSystemDeviceId(boolean value)

Optional; set flag indicating permission to use the system device ID, or not.

Sample usage

See the Sample project source code included with the SDK for a more complete example.

To create view of advertising and to add it to the form, use one of the following two variations:

1. Dynamic creation, is created in a form **class**; for example:

```
MASTAdView adserverView = new MASTAdView(this, "5441", "9312");
adserverView.setLayoutParams(new ViewGroup.LayoutParams(ViewGroup.LayoutParams.FILL_PARENT,
250));
adserverView.setTest(false);
adserverView.setPremium(MASTAdView.PREMIUM_STATUS_PREMIUM);
adserverView.setKeywords("test");
adserverView.setMinSizeX(200);
adserverView.setMinSizeY(40);
adserverView.setMaxSizeX(320);
adserverView.setMaxSizeY(50);
adserverView.setBackgroundColor("33CCFF");
adserverView.setTextColor("11CC22");
adserverView.setInternalBrowser(false);
adserverView.update();                          // fetch initial ad content
linearLayout.addView(adserverView);             // insert ad view into layout for current activity
```

2. Template creation, is created in XML layout; for example:

```
<com.adserver.adview.MASTAdView
        android:id="@+id/adViewer1"
        android:layout_width="fill_parent"
        android:layout_height="50dip"
        site="5441"
        zone="6365"
        isTestModeEnabled="false"
        defaultImage="@drawable/test_banner"
/>
```

To show View of interstitial advertising, create view as above and invoke the show() method after calling update():

```
// create or obtain reference to view object…
adserverView.show();
```

-- END OF DOCUMENT --