

## Problem Reporting and Basic Debug

v1.0

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We've all seen the post in the forum that goes something like this:

*"Tried to compile my app, and it doesn't work! Please help!"*

Or maybe it goes something like this:

*"Got errors when I tried to compile my app, and it won't run on my device. What do I do?"*

The people who participate in the Buzztouch forum are some of the most amazing and intelligent people I have ever been involved with, but the only way they can help you fix your problems is if you give as much information as possible in your problems reports, and you provide as much debug help as possible. Without some basic information in the initial post, we all have to spend time asking a set of questions that should **always** be answered right from the start. I believe that the following should be included in every problem report you put in the forums:

1. Buzztouch Version : **v1.4** or **v1.5**
2. **Android, iOS** or **Both**
3. What version of **Xcode/iOS SDK**?
4. What version of **Eclipse/Android SDK**?
5. The **most complete problem description** you can give. More details are better than fewer details, and actual error messages pasted into the post are very helpful. Don't just say it doesn't work or that there are errors...tell us **how** it's not working, and **what** the actual error messages are!
6. **Screen captures** so we can see what's going on are often extremely helpful. Remember the saying; a picture is worth a thousand words! DropBox is a great place to host images, and best of all it's FREE! (use this link to sign up and I'll get an extra 250MB of space free when you do!  
<http://db.tt/TCxVvk8>)

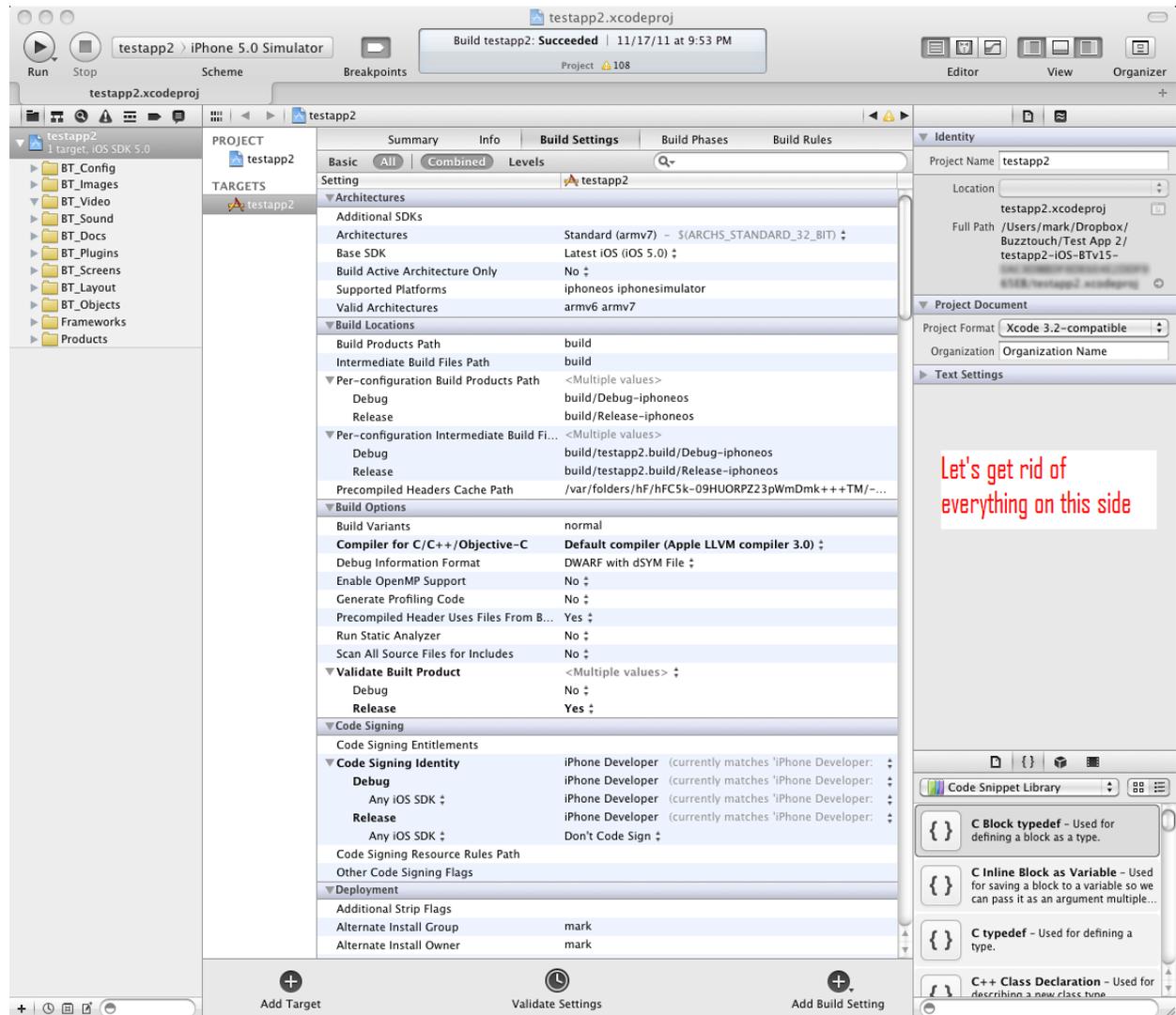
You will be amazed and how much help you will get from your fellow forum users if you provide this basic information. Lots of times we can look at what you post and the answer is obvious because we've run into the same issues before ourselves. But sometimes there's literally not enough information to

even begin to debug the problem, and it's highly unlikely that a person will visit your post again to see if you've updated it with more test info. Do it right the first time, and you'll get your problem solved quicker!

Now that you know what sort of information is most helpful to people in the forum, let's take a look at how to set up your environment to show helpful debug info. Both Xcode and Eclipse provide some tools that let you know exactly what's going on with every step of your app compiling and running. I'll show you how to configure some of that now.

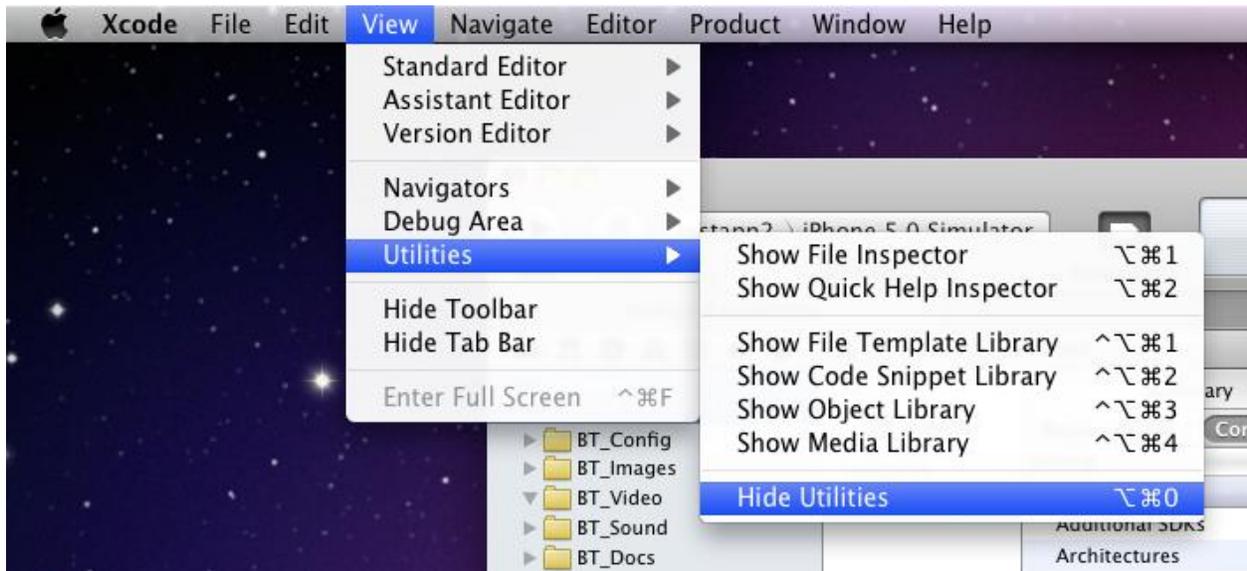
## Configuring Xcode For Debug Information

Here is what a typical Xcode 4.x environment might look like:

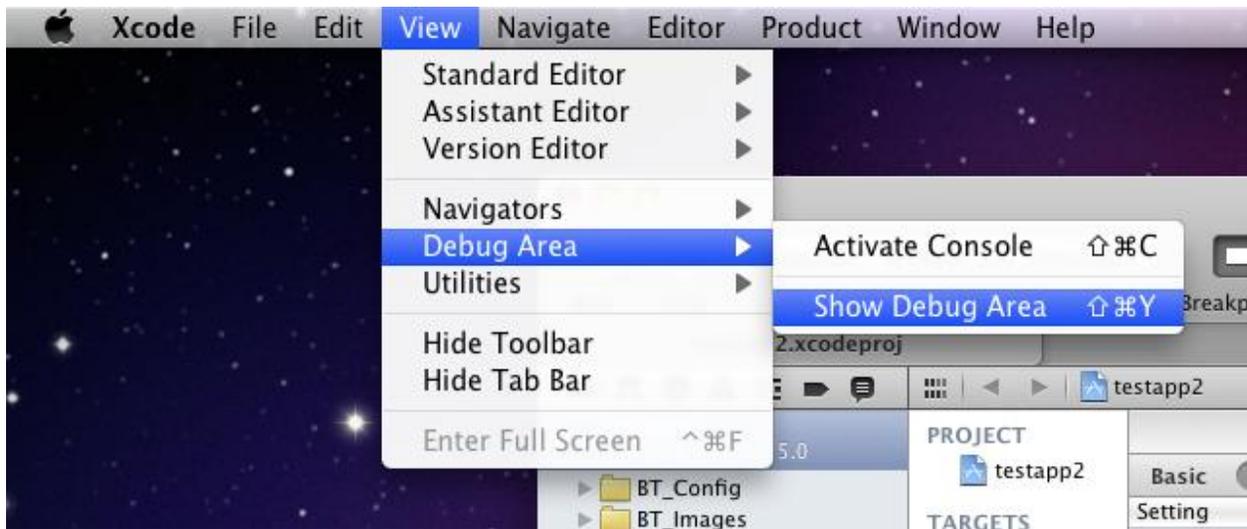


There is TONS of information here, but not all of it is really necessary for the average Buzztouch user. For instance...all that stuff on the right-hand side...pretty much useless. So, let's get rid of that and add in some more useful screen.

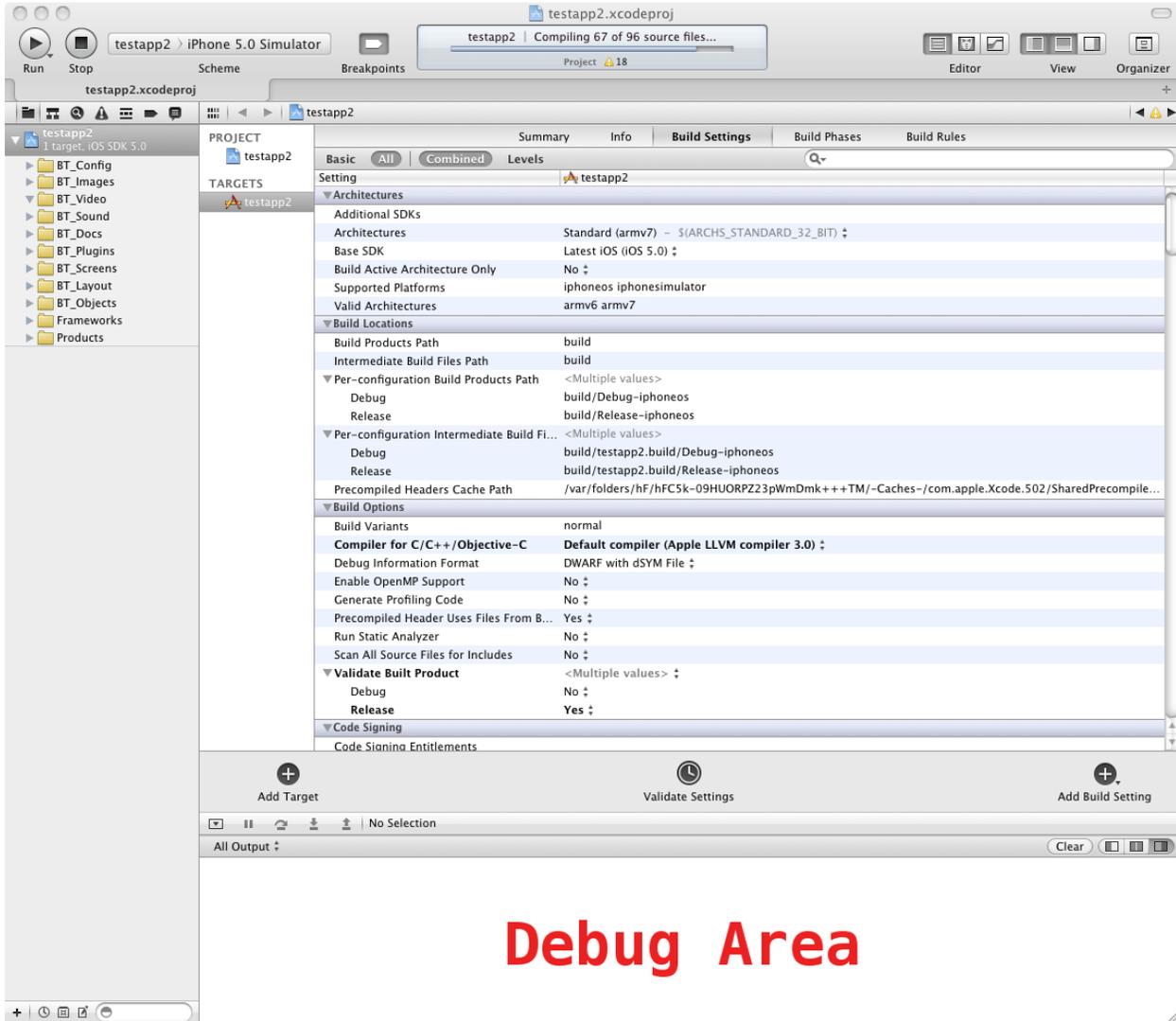
In order to get rid of everything on the right-hand side of the screen, also called Utilities, just follow this path:



Now let's add a Debug area:

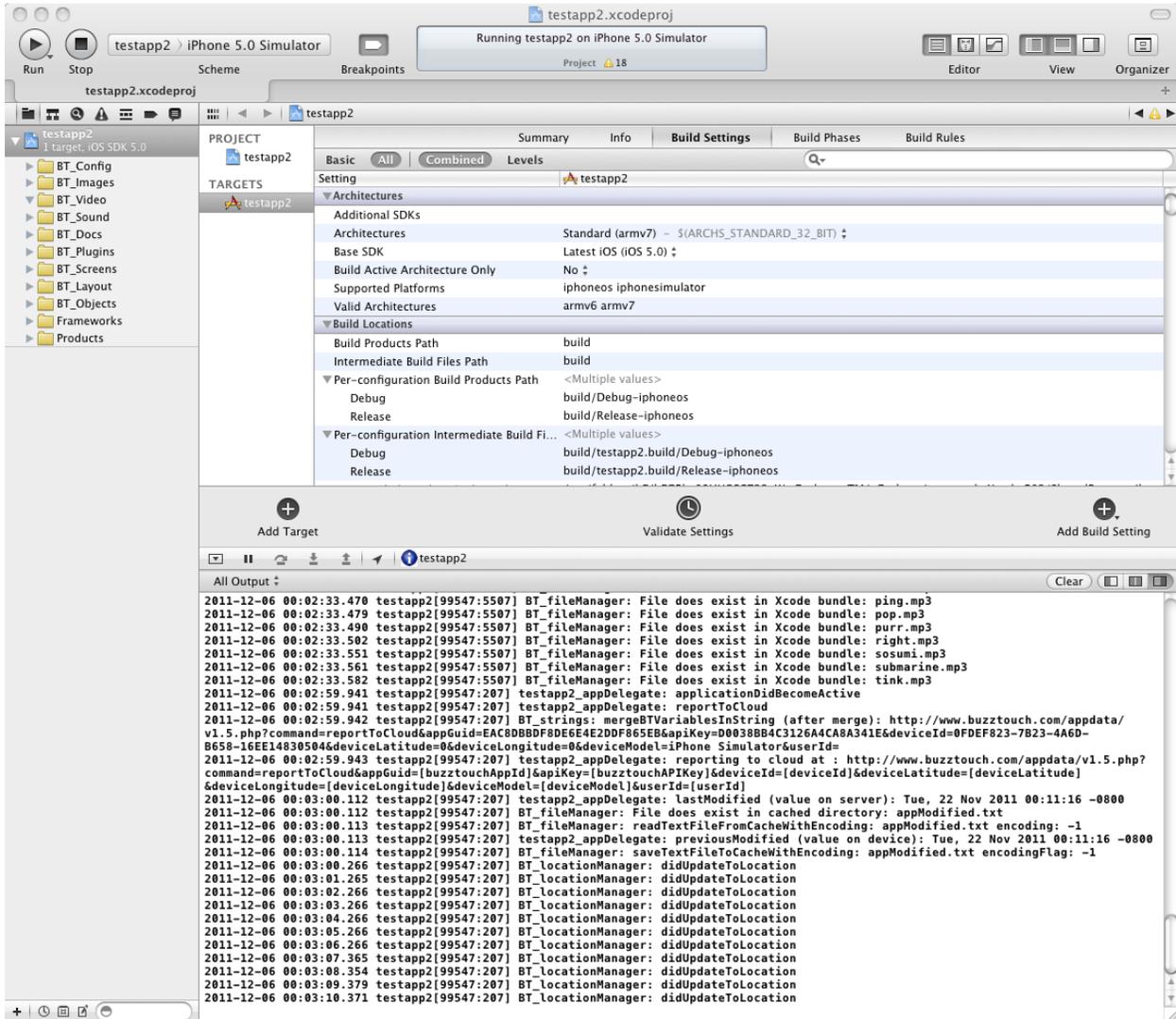


After all is said and done, your Xcode environment should look something like this:

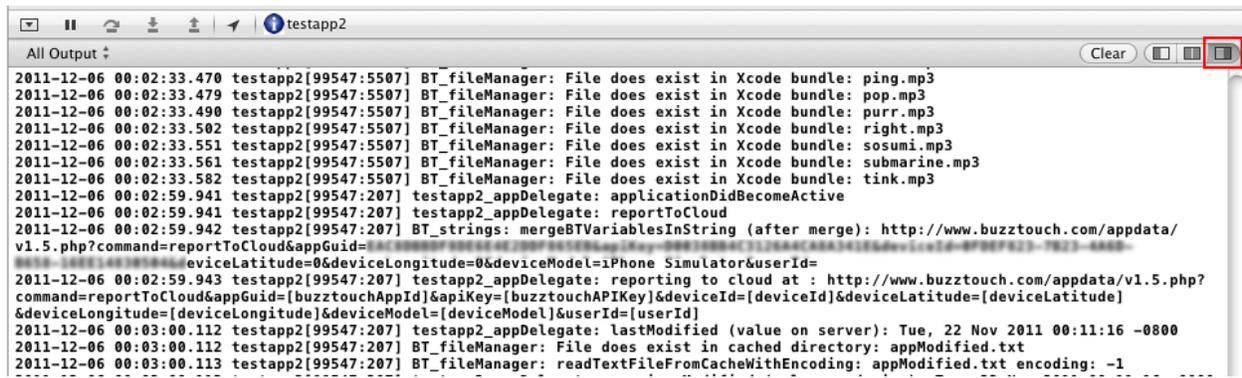


**Debug Area**

When you start to run your applications in the simulator, you should see output in the Debug area, noted above. You will find lots of amazingly helpful information here, as it literally tells you everything that is going on with an app. If you click a button in your app expecting to load a PDF, it'll tell you why it didn't. Click a link and nothing happens...look in the Debug area for more information. This area literally records every move that your app makes!



Here's a closer look at what's in the debug area:

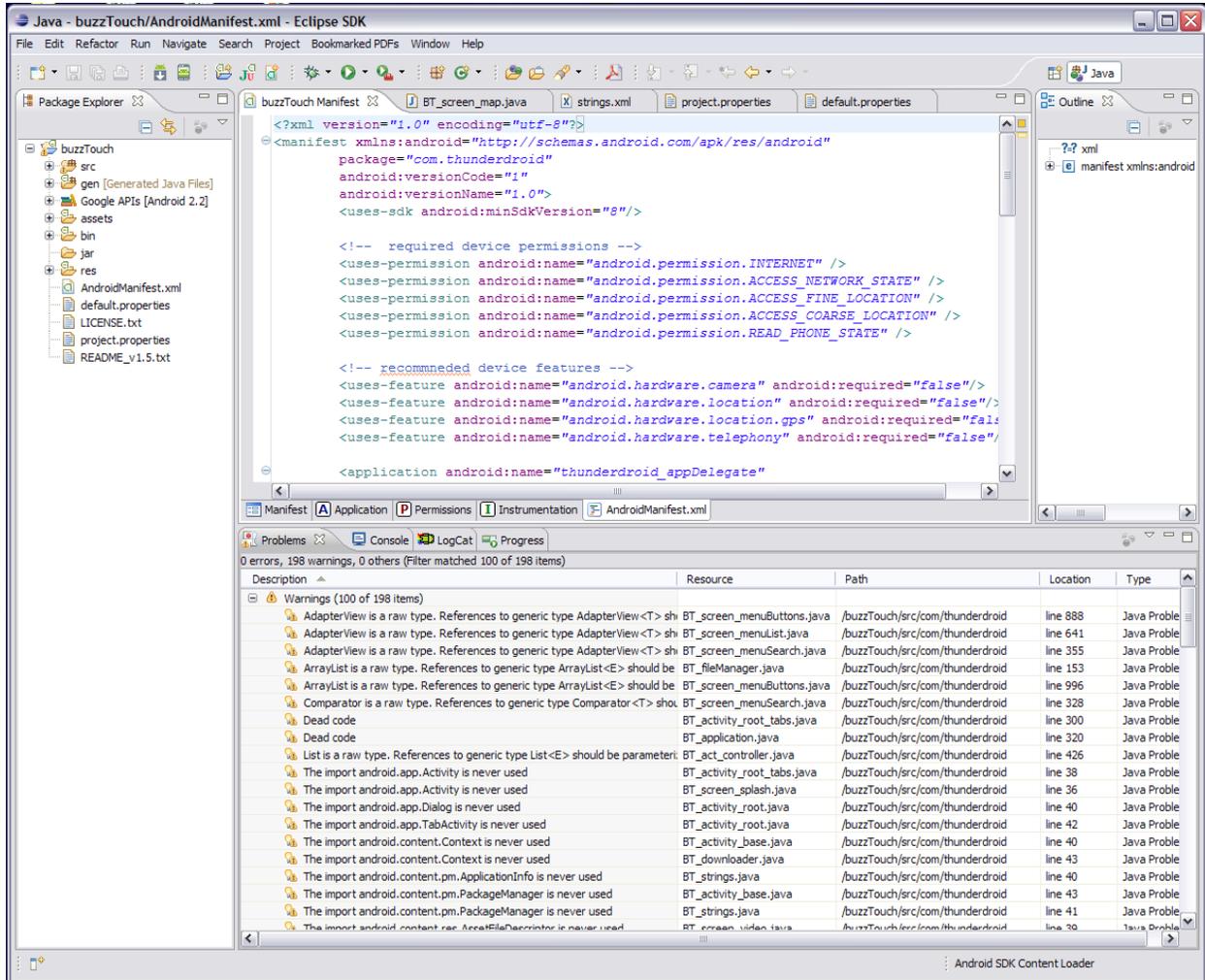


```
testapp2
All Output
Clear
2011-12-06 00:02:33.470 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: ping.mp3
2011-12-06 00:02:33.479 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: pop.mp3
2011-12-06 00:02:33.490 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: purr.mp3
2011-12-06 00:02:33.502 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: right.mp3
2011-12-06 00:02:33.551 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: sosumi.mp3
2011-12-06 00:02:33.561 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: submarine.mp3
2011-12-06 00:02:33.582 testapp2[99547:5507] BT_fileManager: File does exist in Xcode bundle: tink.mp3
2011-12-06 00:02:59.941 testapp2[99547:207] testapp2_appDelegate: applicationDidBecomeActive
2011-12-06 00:02:59.942 testapp2[99547:207] testapp2_appDelegate: reportToCloud
2011-12-06 00:02:59.942 testapp2[99547:207] BT_strings: mergeBTVariablesInString (after merge): http://www.buzztouch.com/appdata/v1.5.php?command=reportToCloud&appGuid=[redacted]&deviceLatitude=0&deviceLongitude=0&deviceModel=iPhone Simulator&userId=[redacted]
2011-12-06 00:02:59.943 testapp2[99547:207] testapp2_appDelegate: reporting to cloud at : http://www.buzztouch.com/appdata/v1.5.php?command=reportToCloud&appGuid=[redacted]&apiKey=[redacted]&deviceId=[redacted]&deviceLatitude=[redacted]&deviceLongitude=[redacted]&deviceModel=[redacted]&userId=[redacted]
2011-12-06 00:03:00.112 testapp2[99547:207] testapp2_appDelegate: lastModified (value on server): Tue, 22 Nov 2011 00:11:16 -0800
2011-12-06 00:03:00.112 testapp2[99547:207] BT_fileManager: File does exist in cached directory: appModified.txt
2011-12-06 00:03:00.113 testapp2[99547:207] BT_fileManager: readTextFileFromCacheWithEncoding: appModified.txt encoding: -1
```

As you can see...tons and tone of great information that can help you, or somebody in the forum, pinpoint the exact issue you have. Much better than just saying "My app won't work," don't you agree?! Grab some of this info...post it...and you'll get a resolution much quicker than without it.

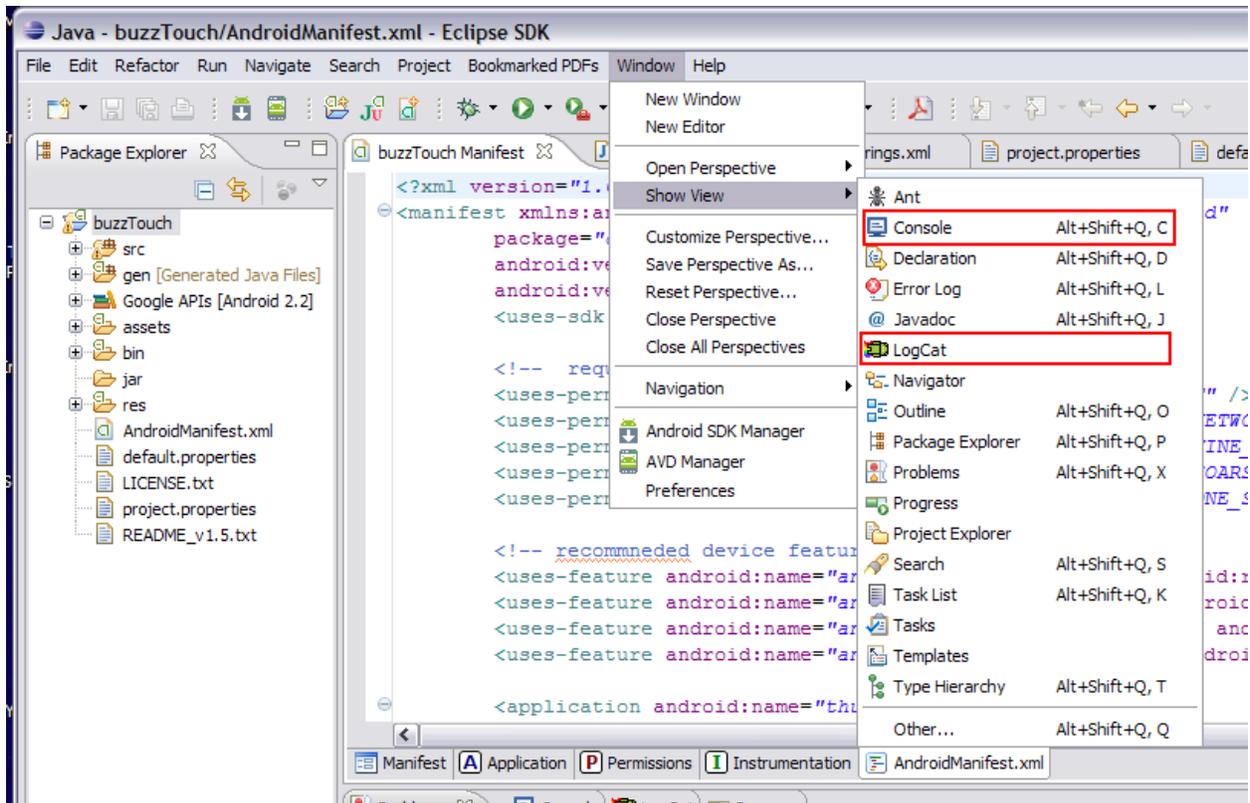
## Configuring Eclipse For Debug Information

Similar to Xcode, Eclipse provides many useful options for debugging your application. Here's what a typical screen might look like running Eclipse 3.7.1 (Indigo) that has the Android SDK installed in it.



There's a lot going on here, and you can add or subtract what you want by clicking on the X for a particular pane, or by adding views and such through the tool bar. Just click around and you'll eventually get things configured the way you want them.

The area at the bottom of your screen is where you'll find most of the debug screens that will be helpful to you as you try and figure out what's going on in your application. If for some reason you don't see the same panes that I do, you can enable them pretty easily by going to **Window...Show View** and selecting the views that you wish to see. Here's what that looks like:



I've highlighted two views...**Console** and **LogCat**...as being the most useful for debugging. Let's take a look at what each does.

The Console view pretty much gives you an indication on whether your app is being loaded into the Android Virtual Device (AVD) you created and tied to your app. If there are problems launching the console, installing the app, or anything related to that, those will be logged here. Here's an example of what you hope to see in the Console, because, in this case, it means your app loaded successfully and you're off and running!

```

[2011-12-09 00:42:15 - buzzTouch] -----
[2011-12-09 00:42:15 - buzzTouch] Android Launch!
[2011-12-09 00:42:15 - buzzTouch] adb is running normally.
[2011-12-09 00:42:15 - buzzTouch] Performing com.thunderdroid.BT_activity_root activity launch
[2011-12-09 00:42:15 - buzzTouch] Automatic Target Mode: launching new emulator with compatible AVD 'Buzztouch_v1.5'
[2011-12-09 00:42:15 - buzzTouch] Launching a new emulator with Virtual Device 'Buzztouch_v1.5'
[2011-12-09 00:42:27 - buzzTouch] New emulator found: emulator-5554
[2011-12-09 00:42:27 - buzzTouch] Waiting for HOME ('android.process.acore') to be launched...
[2011-12-09 00:42:51 - buzzTouch] HOME is up on device 'emulator-5554'
[2011-12-09 00:42:51 - buzzTouch] Uploading buzzTouch.apk onto device 'emulator-5554'
[2011-12-09 00:42:57 - buzzTouch] Installing buzzTouch.apk...
[2011-12-09 00:43:29 - buzzTouch] Success!
[2011-12-09 00:43:30 - buzzTouch] Starting activity com.thunderdroid.BT_activity_root on device emulator-5554
[2011-12-09 00:43:31 - buzzTouch] ActivityManager: Starting: Intent { act=android.intent.action.MAIN cat=[android.in

```

If for some reason the AVD has a problem initializing and launching, or the app won't install to the AVD, you'll get errors logged here.

The next place of interest is **LogCat**. This view logs pretty much every move made in your app. It reports on the existence, or non-existence of files or other resources. It tells you which files are being loaded, and from where. It tells you if there was an error, and what it was. If you experience a problem with your app, this is the first place you should look for information on what went wrong. Here's a peek at what you can expect to find.

```

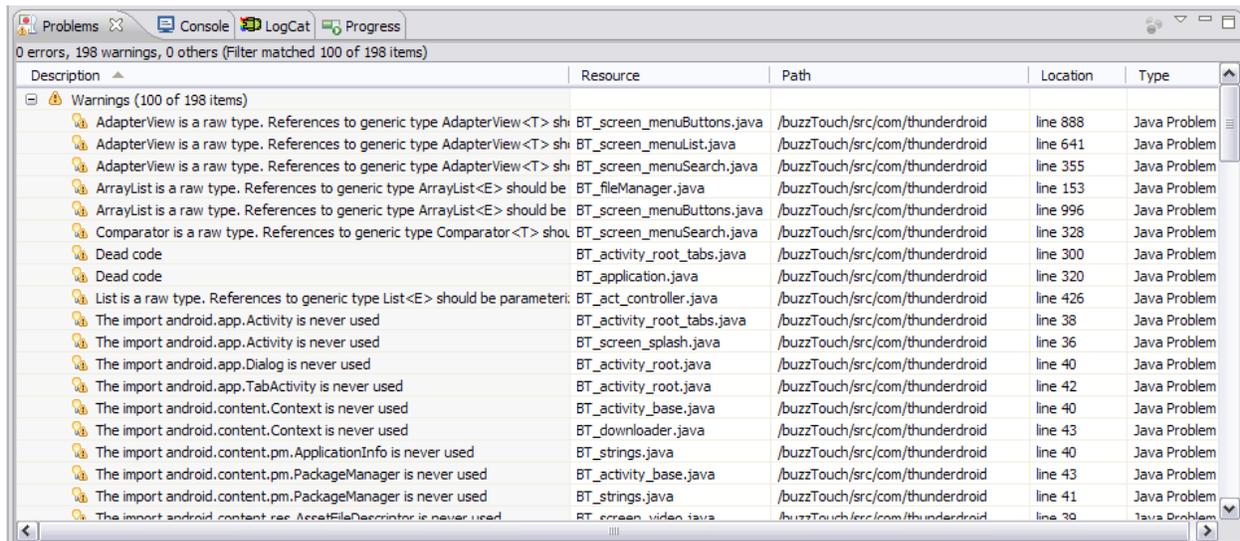
Search for messages. Accepts Java regexes. Prefix with pid;, app;, tag; or text: to limit scope.
verbose
D Application Tag Text
.0 com.thun... 22 BT screen menuList: icon for this row: "outlet white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList:handleItemTap loads screen with itemId: "97C20CB261738FDEB9385B2"
.0 com.thun... 22 BT application:getScreenDataByItemId screenType is BT screen rssReader for screen with nickname: Fe...
.0 com.thun... 22 BT application:getScreenDataByItemId screenType is BT screen rssReader for screen with nickname: Fe...
.0 com.thun... 22 BT act controller:loadScreenObject for screen with nickname "Feed Test" and type "BT screen rssReader"
) system p... Ac... Starting activity: Intent { cmp=com.thunderdroid/.BT screen rssReader }
.0 com.thun... 22 BT screen menuList: icon for this row: "airplane white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList: icon for this row: "outlet white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList: icon for this row: "airplane white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList: icon for this row: "outlet white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList: icon for this row: "airplane white.png" exists in the assets folder
.0 com.thun... 22 BT screen menuList: icon for this row: "outlet white.png" exists in the assets folder
.0 com.thun... 22 BT screen rssReader: onCreate
.0 com.thun... 22 BT viewUtilities:updateBackgroundColorsForScreen with nickname: "Feed Test"
.0 com.thun... 22 BT viewUtilities:updateBackgroundColorsForScreen: setting background color to: "#FFFFFF"
.0 com.thun... 22 BT viewUtilities:getNavBarForScreen building nav. bar for screen with nickname: "Feed Test"
.0 com.thun... 22 BT screen rssReader:backgroundWorkerThread this screen does not use a background image
.0 com.thun... 22 BT screen rssReader: start GPS is set to NO in the applications configuration data, not starting GPS
) system p... AR... generated scanline 00000077:03515104 00000000 00000000 [ 33 ipp] (47 ins) at [0x293cc8:0x293d84] i...
) system p... Ac... Displayed activity com.thunderdroid/.BT screen rssReader: 615 ms (total 615 ms)

```

As I indicated, there is tons and tons of seriously useful information here, and it can all be copied and pasted to the forum for review by others. I don't think I would copy everything...that would be way too much! The best approach here is to do something in the AVD that isn't working, and copy the information that gets logged as a result of that action. Then you can easily correlate your actions with

particular failures. It's absolutely worth your time to play around with LogCat and see how amazing it is...you'll probably learn a lot about your app that you never knew!

The final section I want to mention is the **Problems** view. This view gives you an indication of any Warnings or Problems that might prevent your app from compiling or running correctly. It looks pretty much like this:



In this particular example, all we see here are Warnings, and not all Warnings are things you need to be concerned about, and they generally won't prevent your app from compiling. However, if you see some Problems listed here, they **will** prevent your app from being compiled, and they need to be resolved before you can move on. If you experience weird app behavior, it's probably worth a few minutes to look through this view.

That pretty much sums up the basics for Eclipse! Between those three views, you should have plenty of great debug information to help you solve your problem, or to post to the forum so others can help.

And that bring us to the end of this document on Problem Reporting and Basic Debug. You should have learned how to configure your development environment to provide you with the basic debug information you need when developing apps. You should also have a better understanding of what makes a good problem report, and how you can increase your chances of having somebody provide the help you're looking for, by taking the time to provide a comprehensive and complete problem description. Taking a few minutes to craft a good post will reap huge benefits in the long run!

Good luck with your app development, and may your problems be far and few in between!

Comments? Post them in the forum or email me at [MrkFleming@gmail.com](mailto:MrkFleming@gmail.com).

Revision Log

v1.0	12/09/11	Initial release of document.	GoNorthWest
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