

# Google Android

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## Executive Summary

All of the recent hype in the mobile industry has been around the iPhone. But with the unveiling of the open-source, license-free mobile operating system Google Android, that is destined to change. And why is that so?

### Android is appealing to developers

- Android apps can be developed on any platform (Windows XP and Vista, Linux, and Mac OS X) where iPhone apps can only be developed on a fairly new Mac.
- iPhone apps require developers to learn Objective-C (which is used almost nowhere outside Apple). But Android is Java which all mobile app developers are familiar with.
- Anyone can develop and launch an Android app whereas Apple has strict control of their App Store.
- Getting your iPhone app available in the App Store requires you to jump through the hoops of an approval process which can take 2-3 months (and could be rejected for "competing" with a native application!) But Android apps can be available in the Android Market instantly.

### Android is feature rich

- Android can support the same hardware as the iPhone: touchscreen, accelerometer, GPS, WiFi, SMS & still camera; plus features that the iPhone doesn't support: MMS, video camera & bluetooth
- Android has some fresh ideas like Google Maps "street view" and customisable home page
- Unlike the iPhone, apps on an Android handset can run in parallel (eg an app running in the background can send an alert)
- The Android platform is open source and extensible by the developer community where as the iPhone is controlled by Apple

### Android is appealing to manufacturers

- Android is a free OS so an Android-enabled smartphone should be cheaper than a normal smartphone. All the major manufacturers are looking at using it.
- In the US, AT&T has exclusive rights to sell the iPhone 3G (for the next 5 years), but Android is license and operator independent

### Android is appealing to Advertisers

- Unlike iPhone apps, which sell on the app store within iTunes, there is no structured marketplace for Android apps
- This is good news as the users will get free apps, and an advertising model will emerge more quickly than for iPhone apps where an (initially) successful subscription model will decrease the urgency to find a work-able advertising solution

## Conclusion

Logically, these factors should spell out a success story for Android, but not necessarily so. Since Android is just an OS, it requires hardware to run on. And this is where Apple has the advantage. Apple knows how to produce sleek and sexy products. Even more importantly, Apple has mastered the dark art of mesmerising consumers to obtain their product. To create a frenzied desire to buy the latest Apple product. So perhaps the success of Android lies in the hands of the handset manufacturers who adopt it. Is it simply a matter of marketing?

## What is Android?

Android is a software platform and operating system for mobile devices, based on the Linux operating system, developed by Google and later the Open Handset Alliance. It allows developers to write managed code in a Java-like language that utilizes Google-developed Java libraries, but does not support programs developed in native code.

Android has been criticized for not being all open-source software despite what was announced by Google. Parts of the SDK are proprietary and closed source and some believe this is so that Google can control the platform. Google will continue to make money from online advertising, but now seeks to extend this onto mobile devices.

## Why is Google Launching Android?

Almost everyone recognises that mobile is the next big advertising medium. Google is behind some of its rivals in mobile (for instance in mobile search where Yahoo and mobile specialist like Medio Systems and JumpTap lead the way), so this is its way of "catching up".

They want a piece of the mobile advertising market. Google CEO Eric Schmidt was quoted as saying that "he's less than impressed with the advertising possibilities for properties like YouTube, and Web 2.0 in general. But mobile, well, that's a different thing."

Rather than building the hardware (like Apple), Google have stuck to what they are good at and built the software. In the long run they will look into where and how they can insert ads into Android.

The key advantage that an operating system (OS) like Android has (over the iPhone OS) is that its open systems and standards will allow 3<sup>rd</sup> parties to develop apps with no interference or limits. Clearly Google believe that the success of Android will be made by the quality of the apps that it has available.

At the press conference to announce the release of the T-mobile G-1, Cole Brodman, Chief Technology and Innovation officer for T-Mobile said: "The open market place is really going to drive innovation on this platform"

Advocates of Apple's approach say that customers are protected from bad user experiences by Apple controlling which apps to approve and which to deny. The same argument was used by the mobile carriers about their 'walled garden' approach, and has not proven successful. People don't want to be told what they can and can't do, not just when it comes to watching porn (which the iPhone apps don't allow) but about everything.

## Potential Penetration of Android

With Android being part of the Open Handset Alliance, the other members of the alliance will follow T-Mobile's lead and unveil their products for Android. For instance Qualcomm have announced that it is working on more than five Android based handsets to be released during Q1 2009.

Android being free also means that smaller handset manufacturers don't have to worry about the (very large) headache of writing and maintaining an operating system.

The founding members of the Open Handset Alliance are:

### Mobile operators

- China Mobile
- KDDI Corporation
- NTT DoCoMo
- Sprint Nextel
- T-Mobile
- Telecom Italia
- Telefonica

### Commercialisation

- Aplix
- Noser Engineering
- The Astounding Tribe
- Wind River Systems

### Handset Manufacturers

- HTC
- LG
- Motorola
- Samsung Electronics

### Software companies

- Ascender Corporation
- eBay
- Esmertec
- Google
- LivingImage
- NMS Communications
- Nuance Communications
- PacketVideo
- SkyPop
- SONIVOX

### Semiconductor companies

- Audience
- Broadcom Corporation
- Intel Corporation
- Marvell Technology Group
- Nvidia Corporation
- Qualcomm
- SiRF Technology Holdings
- Synaptics
- Texas Instruments

Big guns like Nokia and Microsoft not being part of this list will mean that Android won't become all powerful for now. A lot will depend on the stability of the platform. Microsoft's 'windows mobile' is not that stable, and its big selling point being integration with Microsoft Office will be chipped away by the emergence of Google Apps.

## Sample Applications

These are a few examples from private developers. But brands have also been active in the Android development field. Visa have announced that they are developing an Android app that will enable mobile notification of account activity, special offers using Location Based Services (LBS) and others will follow.

### Cab4me:

Cab4me takes your current location and feeds it into a database of nationwide cab companies, allowing you to order a cab pickup instantly from your current location.

Google Maps overlays also show areas of cities where you're likely to be successful when hailing a cab from the street.



### Ecorio

Using GPS, Ecorio runs in the background (an edge that Android has over the iPhone) and estimates the carbon output of your day's journeys.

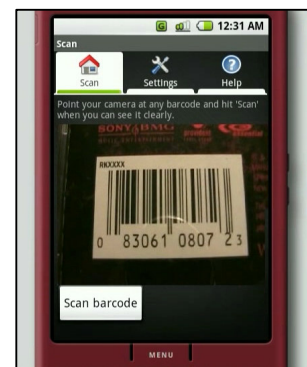
Once it learns your habits, it can then suggest public transport or carpooling alternatives.



### ShopSavvy

ShopSavvy captures photos of product UPC codes to then tie into online databases for comparison on pricing, product availability. It also includes a shopping list compilation.

This is great application for price comparisons as it can happen at the point of purchase



## Final Comments

- Android will be bigger in terms of pure numbers (reach) than the iPhone OS. Simply because of the fact that it will eventually be available on a whole host of phones as opposed to just the iPhone.
- Google do cool products but up to now (apart from there text ads) have not made money from their activities.
- The iPhone OS, while not originally targeted at businesses has developed into a rival to the Blackberry in that segment. It seems that Android is much more targeted at the mass market (as it lack's business features such as Microsoft Exchange compatibility and does not synchronise with your desktop but will be available on a wider range of handsets).
- Android is an ongoing development, the T-Mobile G-1 is the first of many mobile phones that will be using the Android OS. One needs to reserve judgement for a while as to the success or not of Android.

## Links of interest

Introduction to Android by Jason Chen who is developer advocate at Google

[http://www.youtube.com/watch?v=x1ZZ-R3p\\_w8](http://www.youtube.com/watch?v=x1ZZ-R3p_w8)

What Apple did for smartphones, Google may do for all the rest

[http://www.economist.com/displaystory.cfm?story\\_id=12304882&fsrc=nwl](http://www.economist.com/displaystory.cfm?story_id=12304882&fsrc=nwl)

Analyst: Apple has nothing to fear from T-mobile G1

<http://arstechnica.com/journals/apple.ars/2008/09/24/analyst-apple-has-nothing-to-fear-from-t-mobile-g1>

Google's Android: It's not just for phones

[http://news.cnet.com/8301-17938\\_105-10047551-1.html](http://news.cnet.com/8301-17938_105-10047551-1.html)

Listing of the winning applications in the first round of Google's "Android developer challenge"

[http://code.google.com/android/adc\\_gallery/](http://code.google.com/android/adc_gallery/)

## About TigerSpike

TigerSpike is a digital services company with a specialization in mobile and social media. With offices in Sydney, London and New York, our global experience combined with research and development from our Innovation lab keeps us and our clients ahead in New Media.

With a dedication to being "Creative" and "Cutting Edge" our work has resulted in a swag of awards; most notably 8th Fastest growing technology company in Australia (Deloitte's fast 50 - 2007), Digital services company of the year (B&T 2007), and Gold for best mobile platform (MIXX in New York 2007).

Our Service Delivery Platform, Phoenix™ supports international digital campaigns, underpinning partnerships with companies that need to manage their mobile and social media campaigns on a global scale.

Run by the founders, TigerSpike has grown organically since it was founded in 2003 and is 100% privately owned and independent.

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