

Choosing a Smartphone for Your Enterprise Application

By James Marrs, Software Development Manager

The most important criteria for developing and maintaining an evolving and dynamic enterprise application is support for the software developer. This article evaluates the four major Smartphone platforms for use in enterprise application development, including a look at Microsoft **Windows Mobile 6**, **Android**, **iPhone** and **Blackberry**. All provide some degree of developer support, but due to the strong support for consumer (non-enterprise) applications by the first three and the consequent broad software development communities that have grown up around them – as well as the distinct lack of the same support for Blackberry – Blackberry is currently the least attractive platform for an enterprise developer. Additionally, Blackberry continues to lose market share to Android and iPhone, likely due in part to innovations from those two that increase an individual consumer's productivity, such as superior mobile web browsers and multi-touch functionality. While Blackberry is addressing these gaps, we will focus on Windows Mobile 6, Android, and iPhone as enterprise application platforms.

Windows Mobile 6 has an enormous legacy of developer support and continues in this trend, with its .NET Compact Framework and vast base of active developers. Beyond this single strength, Windows Mobile 6 compares poorly in terms of usability and productivity for the end user.

Android, while young, is developed by Google which has a deep understanding of software design and development, and also has made it a goal to attain a large developer base by offering tons of support for developers. Most notably, Android complies with open standards for Smartphone platforms, which allows the developer full access to the entire Android code-base and any underlying hardware functionality of the Smartphone running it. Android is ahead of all other platforms in terms of early adoption of features geared towards increased productivity for the technical end-user, such as mobile hotspot and true voice dialing.

iPhone revolutionized the Smartphone platform, and has set the bar against which all other Smartphone platforms are measured. The consensus in the tech community is that in terms of usability, iPhone remains ahead of all other Smartphones. However, while Apple's support for software developers is impressive, it is geared largely toward development of apps for consumers—not enterprises. Apple does provide the means of building and maintaining enterprise apps, but it seems like more of an afterthought than a primary focus of Apple's. Compounding this neglect is the closed nature of both the iPhone code-base and underlying hardware—especially when contrasted with Android's total openness. Another contrast with Adroid is Apple's later adoption of productivity features. That being said, when Apple does introduce a new feature, the design quality and ease-of-use are usually superior to that of its competitors.

Another useful evaluation of these three platforms is to consider how Microsoft, Google, and Apple handle the internal development of each. All three release updates periodically, but it is apparent that Apple and Google are a step ahead of Microsoft, in terms of frequency of updates and disruption to the end-user upon applying the updates. Microsoft tends to release new versions of Windows Mobile infrequently, and adopting each release is akin to buying a new Smartphone and setting it up from scratch, rather than improving or extending an existing one. Apple and Google on the other hand, release regular (Apple more so than Google) iterative upgrades to their platform. In Apple's case, the upgrades are designed to be non-disruptive to the end-user and to incrementally add functionality in a useful and seamless manner. Google appears to have the same goals as Apple here, but is a step or two behind Apple in terms of execution. Both, however, are an order of magnitude better than Microsoft in this respect.

Current Developments (as of August 2010):

RIM's recent announcement of the next version of its OS on the Blackberry Torch 9800 is a step toward closing the gap for Blackberry. Blackberry OS 6 introduces Blackberry's "App World" – a means for 3rd party developers to distribute consumer apps akin to Apple's App Store and Google's Android Marketplace. Microsoft is developing a new Smartphone platform, **Windows Phone 7**, scheduled for release in Q4 2010. It is rumored to break backward-compatibility with apps written for Windows Mobile 6 and earlier, a sign that the company is making major changes to their platform.

Conclusion:

While iPhone may be the best platform in terms of engineering quality and consumer productivity, Apple has made support for enterprise app development a secondary concern. Android is currently a more attractive Smartphone platform from an enterprise application developer's point of view. The next generation of ruggedized devices will likely include some running Android. Motorola, the maker of the Symbol line of devices in particular, has embraced Android (you've probably seen the Droid ads). Windows Mobile 6 remains relevant due to its legacy of enterprise application developer support, but the platform as a whole is far behind Android and iPhone.