

Communications & High Tech

Driving service innovation in communications, high tech and media: The impact of Google's Android platform

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How can companies throughout the digital services ecosystem—communications, high-tech and media enterprises—advance toward high performance by accelerating the pace at which they create new services and bring them to market? One important way is to improve the ability of multiple players—service providers, device manufacturers, software companies and media companies—to collaborate more effectively in devising innovative services.

Although such collaboration has often been hampered by the absence of tools and technical standards—as well as the high cost of development and distribution—its importance has grown in the Web 2.0 era. Today, the mindset of an innovator must be more oriented to open development—exposing application programming interfaces in a way that supports mashups (web applications that combine data from more than one source into a single, integrated product) and other collaborative efforts.

In general, digital services companies are moving toward standards-based models of service development, with service-delivery platforms as important enablers of rapid service creation and open development as a key source of innovation.

It's in this context that one must understand the significance of "Android," the comprehensive open-source software platform for wireless services announced by Google and a host of alliance partners in late 2007. Although Google faces several challenges in gaining significant take-up for Android, the company's entrance into the mobile operating systems market is a significant development in the battle for the mobile screen. Accenture's research and experience lead us to

believe that it is in the wireless Internet arena where the fiercest battle for high performance will be fought.

What is Android and why is it important?

The Android platform has been developed through a consortium known as the Open Handset Alliance—a group that includes more than 30 of the biggest names in the communications and high-tech industries, including operators, original equipment manufacturers, Internet service providers and other core hardware and software vendors. The Linux-based Android platform combines open-source components and includes an operating system, middleware stack, customizable user interface and applications.

Android has important implications for service providers as well as developers.

- From a service provider's perspective, Google's entrance into the mobile operating systems market may accelerate service innovation precisely because it supports an open, rather than a proprietary, approach to new-service development. Android can also drive growth in the mobile advertising market. And that promises to have a big impact on competition for a share of mobile services for consumers.
- From the developers' perspective, Android gives them greater freedom to configure the applications they create by allowing access to more of a mobile device's native features and processing power. Android helps developers overcome a significant barrier that has existed to this point: the absence of clear technology standards. The Android platform has been made available

through a developer-friendly, open-source (and free) license, giving mobile operators and device manufacturers more flexibility to design products. The Alliance has also made available a software development kit to provide developers with the tools to create innovative and compelling applications for the platform. In essence, Android brings an Internet developer model to the mobile services marketplace.

Challenges

Any attempt to energize the mobile data services market is to be welcomed. However, if it is to have long-term impact, Android must overcome at least two key challenges.

- Willingness of alliances to work together and invest. The communications industry has a long history of creating alliances and joint initiatives that become difficult to manage in the long term. Getting all the parties aligned and then committed to a course of action, given the competing motivations of vendors and operators, will be difficult. And while it's relatively inexpensive to form alliances, marketing those alliances—as well as conducting significant research and development—can be costly. When Android is supported by significant R&D and marketing budgets, that will be one sign of how serious the industry is about open development.
- Market constraints on growth. The market for mobile operating systems is already highly penetrated. Android will be suitable for only around 10 percent of all devices—mostly the smartphone market. Within that 10 percent, Android competes against several major players, including Symbian (which dominates with about 70 percent of revenues) and with Windows Mobile (which represents about 10 percent). Succeeding in this context will require Android to present some sort of distinctive advantage: to be demonstrably cheaper, for example, or easier to use or richer in capabilities. Creating long-term competitive advantage is no easy task, however, given the technology "arms race" driven by leading players.

Industry implications

Current operating systems carry too much momentum to be greatly affected in the short term by Android. But there is a wild card. If Google's flourishing application developer community leads it to dominate the consumers' PC screen, the company may be able to build on this success to become a significant competitor for the mobile screen, as well.

Android may accelerate the trend whereby mobile phones eventually become consumers' primary Internet access devices. More frequent mobile access on the part of consumers also may increase mobile advertising revenues.

The future performance numbers for the new Android operating system are unknown, and interoperability between open-source devices is not yet a given. But Google has an excellent track record in making things work for developers, as evidenced by how quickly Google Maps became the world's leading mashup. In short, Android gives Google the opportunity to place a small bet with a potentially big payoff.

Perspectives of key players

Mobile providers recognize the need to increase the speed at which they develop and deliver new services. But some also are wary of the impact of an open-source platform, given the longstanding belief of service providers that they should protect their revenues by controlling all customer interactions.

For such providers, Android alone would not solve their innovation challenges. Investments in and execution of a new breed of service delivery platforms (what Accenture calls "SDP 2.0") are needed to simplify development and to speed time to market. While broadly neutral on Android, many providers are willing to give it a try. Android may increase the threat of commoditizing a service provider's network, but it may compensate for this by simultaneously driving increased traffic.

When it comes to handset manufacturers, attitudes toward Android vary. Some vendors are interested in the success of Android, which could bring more equilibrium to an industry dominated by a relatively few number of large device manufacturers. Android's success depends on the ability to flood the market with mobile handsets and services using Android, something planned within the next year or so.

The fact that existing operating systems are licensed limits the development of third-party applications on those systems and increases the cost of equipment. Android will disrupt that status quo. Since licensed software is a considerable part of handset manufacturing costs, an open-source development platform may siphon away market share. This may drive further commoditization of the device hardware and refocus competition among device manufacturers on form factor and usability.

Content providers and third-party developers are eager for open development. Although these companies believe they are best positioned to sell content and services on mobile devices, to this point they have hit barriers from defensive operators (limiting the applications they allow on the handsets and networks they control) and from high development costs and the absence of standards. Embracing an open platform may prove to be strategic to a content provider's future.

Driving high performance through wireless service innovation

Google understands that the success of Android depends on the commitment of service providers and original equipment manufacturers, as well as the ability to promote application development based on the Android platform. Google will be advancing those goals by budgeting \$10 million to support developers that create Android-based applications. But this is just a starting point. Much more has to be done.

Even if Android proves to meet all the high expectations it has engendered, its impact will be felt fairly slowly. Realistically, the initial set of devices using this new platform will be a small portion of the market. According to the research firm Strategy Analytics, only 2 percent of all smartphones shipped worldwide in 2008 will be based on the Android operating system. Even so, Android has the potential for a big impact on wireless service innovation.

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