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iPad applications show some promise for manufacturers

Since hitting stores in April, the Apple iPad tablet has charmed gadget geeks with its instant-on Web access and a 9.7-inch touch-screen that makes iPad enterprise applications practical. It's not just attracting consumers: Apple claims that more than 65% of Fortune 100 companies have deployed or piloted the device.

With its ample remote-terminal options and constant web connection, the iPad can run existing [cloud and server applications](#) -- with a few kinks. At Marlen International, sales and service workers who once lugged around laptops to run ACT! will soon have iPads running Salesforce.com and ServiceMax.

Samsung Tab, iPad killer? User gives mixed review

Samsung claims its Galaxy Tab has several advantages over the iPad, (Apple declined an interview.)

Unlike the camera-less iPad, the Tab has two, enabling videoconferencing.

"That's a big component of what we would like to do," said Jarrod McCarroll, vice president of sales and marketing at Marlen International, a manufacturer.

The Tab's smaller, 7-inch screen fits the pockets of suit coats and manufacturing smocks, said Peter DeNagy, Samsung's senior director and general manager for U.S. [enterprise mobility](#) enablement. But McCarroll, who has tried both tablets, finds the iPad screen perfect for Salesforce.com presentations and wouldn't want it any smaller.

Cellular coverage differs sharply. The Tab is available from all major carriers while the iPad is only sold by AT&T, though Verizon Wireless sells the WiFi version, bundling it with a MiFi card for Internet access. McCarroll said it's a problem for Marlen, a Verizon shop that has experienced AT&T service disruptions at customer sites.

Unlike the iPad, the Tab supports Adobe Flash, which lets it run Flash videos from the web and show PDFs, DeNagy said. But McCarroll paints a different picture.

"The Flash embedded in the Galaxy Tab does not work with Salesforce.com's client," he said, adding he has pressed Apple to add Flash. "They say they support HTML 5 and have no plans to support Flash," while discouraging people from trying to install it themselves, he said.

--David Essex

"Having instant on, instant off is huge," said Jarrod McCarroll, vice president of sales and marketing for the Overland, Kan.-based manufacturer of food-processing equipment. "The time required to boot up a laptop and go through all the gyrations is really a pain."

Analysts debate whether iPads can replace PCs

Some early adopters and industry analysts think the iPad has the durability and computing power to replace some PCs on shop floors, in warehouses and on the road, while giving handheld operating systems like Windows Mobile a run for their money.

"It's pretty robust as is," said Ted Schadler, vice president and principal analyst at Forrester Research Inc. (Cambridge, Mass.), citing the iPad's tight seal, protective cases, 10-hour battery life, and lack of a moving disk drive. "To have a battery life that basically lets you go all day is a big deal."

Schadler said some companies have bought hundreds of iPads and aren't ready to reveal their plans, but shop-floor applications "are actually one of the cases we're hearing the most about." He named factory inspection schedules and equipment customer-service specs as possible uses. One hitch: Many industrial locations lack 3G cellular service and might need Wi-Fi infrastructure to support iPads.

Outfitted with cases and other protections, the iPad is suitable for use by shop-floor and field personnel, said Michael Fauscette, group vice president for software business solutions at IDC, a research firm based in Framingham, Mass.

"It could, for example, make a great vehicle for on-the-spot maintenance procedures, with video for utility-repair personnel or heavy-equipment service personnel," Fauscette said. "The on-screen keyboard is more than adequate for light data entry in this type of environment."

Despite having some PC-like qualities, the iPad differs in important ways, according to Susan Kevorkian, a research director at IDC. It lacks a physical keyboard, though Kevorkian said its virtual keyboard should improve, and unmodified Windows screens can resist fingertip control. Furthermore, the iOS operating system has no file-management scheme. "It's a very different experience using Windows-based content from a virtual desktop or a touch-based screen," she said. McCarroll added the iPad has no USB port, and the cable and adapter Apple offers are impractical. He also wants a Bluetooth mouse for navigating spreadsheets.

Kevorkian sees tablets like the iPad adding to, but probably not replacing, other devices. She advises companies to plan for the long haul, expect significant back-end work and use the platform to encourage knowledge sharing.

Three ways to run enterprise applications on the iPad

Enterprise applications can get onto the iPad in three ways, according to Schadler. They can be written natively, to take advantage of the iPad's features, or run unmodified -- as long as they're HTML 5 compatible--in the Safari browser. Windows and other server applications can run over a

remote connection, such as a virtual desktop. Fauscette calls one such option, Citrix Receiver, "a very viable approach to immediately deploying multi-device mobile support for all of an enterprise's existing systems."

But Schadler said Receiver is less usable because the iPad lacks a mouse. "We hear a lot of people doing this, but we haven't heard anyone who is happy with it," he said.

Visibility Corp. in Andover, Mass., needed no custom work for the iPad version of VISIBILITY.net, its web-based ERP geared to manufacturers, said Jack Saint, the company's president and chief operating officer. Instead, it used Remote Desktop (RDP) Lite terminal-emulation software from Mochasoft.

"It gives you full access to your desktop," Saint said. "We didn't have to do anything to the application."

Although VISIBILITY.net has a shop-floor module that is accessible by Windows terminal services, Saint doesn't think his customers will run it on iPads because they prefer bar codes for data entry.

"A lot of guys have greasy hands," he said. "It's not a clean environment." Visibility's customers are more interested in giving iPads to executives and salespeople.

An example is Alloy Engineering Co., a maker of high-temperature metal products in Berea, Ohio.

"I look at the iPad as my personal information portal," said IT systems engineer Jason Walters. "I have instant access to all data on my infrastructure and can remote-support any node. It's my go-to device whether I'm in or out of the office."

Walters said most Alloy managers use their iPads for communication, and he is unsure when they will try VISIBILITY.net.

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"I use it occasionally for admin purposes, but it requires me to remote into my Windows desktop first," he said. "I don't feel comfortable implementing to our users. Visibility promises to have Safari support next year. Whether this will work for iPad's mobile Safari is currently unknown."

Walters nonetheless has high hopes for iPad [enterprise applications](#). "If Apple continues in the direction they've been heading, the iPad could end up as a desktop replacement," he said. "The iPad is capable of doing anything a desktop can, and it's more portable than a laptop or netbook, making it easy to use on the plant floor. The problems lie with the developers. The interface is different, so developers need to rethink their applications."

The analysts say such native applications are coming. Fauscette said SAP is actively developing for the iPad, and Workday, a maker of Software as a Service (SaaS) financial and human-resources applications, will release an executive information system for the iPad next year.

Tablets go viral

The iPad spawned a new category that hardware makers are rushing to fill. IDC predicts worldwide sales of what it calls media tablets will grow from 15.5 million units this year to more than 80 million by 2014. Commercial deployments represent only 2.5% of today's total but should grow to 11.4% in four years, Kevorkian said.

To Schadler, the new generation is a big leap from earlier, Windows-based tablets. "The first go of these things didn't have that combination of instant on and 10-hour battery life," he said. "It was just a laptop, and it wasn't connected."

The iPad's first apparent rival, the Samsung Galaxy Tab, shipped last month (see the sidebar), and more tablets are on the way. Cisco announced the Cius, a high-definition Android tablet planned for release in early 2011. Others in the pipeline include the BlackBerry PlayBook, Hewlett-Packard Slate 500, Toshiba Folio 100, and three tablets from Acer.

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