

The New Face Of Tablet Computing

With the influence of consumer tablet PCs, the world of rugged tablets is taking on a whole new look and feel.

Thanks to the popularity of devices like the Apple iPad, HP TouchPad, and others, tablet computers are a hot topic in the enterprise. While these tablets have caught the fancy of consumers in recent years, companies in the field service space have been using ruggedized tablets for years; now a wider variety of companies are evaluating the tablet form factor for their line-of-business applications.

Enterprise users now have a mix of consumer-grade, semirugged, and highly ruggedized tablets to choose from, and devices like the iPad are influencing the design of the traditional workhorse devices used in field service applications. For true line-of-business apps, though, companies still require advanced functionality like GPS, remote management and asset tracking, flexible input options (to accommodate bar code and RFID readers), voice recognition, and even built-in keypads.

“The combination of portability, screen real estate, a full Windows OS, and real ruggedization in a single device is a must for many customers,” says Matt Miller, president of MobileDemand. “Companies look for tablets that are easy to carry, offer a big enough screen for optimum viewing of graphic and data-intensive applications, allow the full desktop version of their software to run, and are rugged enough to maximize uptime.”

Requirements for these devices continue to evolve, and mobile point of sale functionality, which may include magstripe or even RFID/near-field communication (NFC) capabilities, is also high in demand. “Whether it’s shortening the payment cycle with mobile payment in field service, delivery, and installation services or taking the check-out directly to the customer in a retail and hospitality setting, the trend toward providing mobile payment functionality is definitely on the rise,” says Bryan Wesolek, president of DLI.

Consumer Devices For Enterprise Applications?

Although there have been a number of attempts to launch consumer tablets, it was not until the iPad emerged that the market really took off. Many enterprises are now evaluating these types of off-the-shelf devices for field sales and other applications, primarily because of their lower acquisition costs.

Up-front costs are only part of the equation, which is why companies have to conduct a thorough total cost of ownership (TCO) evaluation before deploying. “Consumer tablets may be fine for certain office environments, but for warehouse, field service, and other types of work environments, users will experience high rates of failure with a consumer tablet,” says Khalid Kidari, director of product management and marketing at DAP Technologies. “Consumer tablets just aren’t made to withstand the dust, vibration, water, etc. that rugged tablets can handle.”

High replacement costs or downtime due to broken devices can eat up any savings realized by deploying lower-cost hardware. That downtime is especially costly, given that it also includes time for reloading applications, custom settings, and customer data.

“Another issue of deploying nonrugged tablets for business applications is life cycle support,” Miller says. “Many businesses deploying mobile technologies expect a three-to-five-year or more lifespan and expect replacement parts and support to be available. The expectation for consumer-grade devices is shorter, which would make it much more difficult for companies deploying non-rugged tablets to protect their investment.”

There are applications where less-rugged devices can work: White-collar sales, where reps are primarily working inside offices, is one example. “The success of tablets in the enterprise will depend on choosing the right product for the job,” says Doug Petteway, vice



Matt Miller
president,
MobileDemand



Bryan Wesolek
president,
DLI

Khalid Kidari
director of product
management and
marketing,
DAP Technologies



Doug Petteway
VP of
strategic marketing,
General Dynamics Itronix

president of strategic marketing at General Dynamics Itronix. “Consumer-grade tablets are appropriate for certain business uses that are environmentally kind — hospitality, retail, and general business use in the office.”

Even among rugged devices, it’s important to gauge just how rugged the device needs to be, Petteway adds. “Some rugged tablets have targeted ruggedization and could be called semirugged. Semirugged tablets deliver many rugged features needed by a mobile workforce, but also keep the rugged tablet lighter and smaller. Fully rugged tablets deliver additional rugged features that may be required for more extreme work environments.”

However, consumer-grade devices may not provide the features and functions required. “The lack of integrated features like scanners/imagers, multiple and concurrent wireless radios, biometrics, and mobile POS (point of sale) severely hampers a consumer-grade device’s ability to drive productivity out in the field,” Wesolek says.

Rugged Tablets Get A Makeover

That said, consumer tablets have definitely had an impact on the rugged device market. Even the acceptance of the tablet form factor in general is a direct result of the success of devices like the iPad. Customers also expect the same type of styling on rugged devices as they now find in consumer-grade tablets.

“The consumer has impacted rugged tablets in many ways,” Petteway says. “Following the consumer tablet, rugged tablets are becoming smaller and lighter. Technology advances for consumer-grade tablets have benefited rugged tablets with increases in screen resolution, disk space, and on-board memory.”

Rugged device manufacturers now match many features commonly found on consumer tablets. “People expect to use the same type of interface they use on their mobile devices on their computers at work,” Kidari says. “So, we are incorporating features such as an accelerometer which changes screen orientation from landscape to portrait to give users a familiar experience, with the added bonus of better power management the accelerometer technology provides.”

New smartphone platforms are also having an effect on

how enterprises approach their tablet-based applications. “The biggest impact consumer-targeted tablets will have on the rugged tablet market is likely to be less about features and more about OS,” Wesolek says. “While most end users still require a full desktop Windows operating system or even Linux to run their applications of choice, familiarity with the ‘app’ market and the entrenchment of Android will certainly drive demand for a choice of OS throughout the enterprise.”

That influence will likely continue, as tablet manufacturers incorporate additional features like embedded voice, mobile POS, telematics, or wireless communications platforms. “The drive for businesses to increase worker productivity, cut costs, improve customer service, and be more profitable will continue to fuel innovation in the technologies that help them achieve these goals,” Miller says. “The increased demand for RFID and voice/speech recognition will reap improved solution offerings. GPS is becoming a must. There will be further improvements in screen technologies. Cloud computing and ‘service-centric’ architectures will further develop. The market will also continue to make strides in security and device management.”



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