



Technology Brief...

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J.Gold Associates LLC, 6 Valentine Road, Northborough, MA 01532
www.jgoldassociates.com 508-393-5294
Research, Analysis, Strategic Consulting

Blackberry Ascendant: The Next Wave - Pushing Voice

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Many enterprises have realized that pushing email to workers on-the-go is highly compelling, and most users who have a mobile email device view it as an absolute necessity. As more workers become untethered from fixed work sites (we expect 75% of enterprise workers to be mobile at least 25% of the time), the need to extend the corporate communications umbrella to these workers grows. While email is deemed mission critical by most companies and users, it is not the only communications medium that is needed. Despite the popularity and growth of email generally, voice is still the dominant form of workplace communications, especially for mobile workers (e.g., there are approximately 10M-12M enterprise mobile users of push email, but 250M-350M mobile workers with a cell phone for voice communications).

Like push email which keeps mobile users in touch by providing data, the need exists for pushing additional forms of corporate communications to mobile users wherever they are located. Voice is a mission critical function in nearly all organizations, which makes the features and functions of the ubiquitous telephone PBX compelling (e.g., call monitoring, speed dialing, leased lines, call flows, negotiated rates to remote offices, conferencing). These are features companies have deployed in the office for years, but to date, have not been able to easily configure and adopt for mobile users. This is about to change. Within 3-4 years, we expect more than 25% of highly mobile enterprise users to employ a mobile phone as their only telecom device. This trend will be accelerated by "push voice" integration with corporate systems and will compliment other forms of communications (e.g., email, IM).

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The ability to incorporate PBX functionality into the existing BlackBerry user base is why RIM purchased Ascendant Systems, a provider of enterprise PBX integration for mobile devices. We believe that "Push Voice" will become as important as push email to the enterprise. The capability that RIM now provides to extend the ubiquitous BES for email and enhance it with voice/PBX functionality will be a logical and compelling path for most large organizations to follow. Functions such as receiving direct dial calls, using company designated extensions, utilizing leased lines and negotiated rates (especially for international and roaming), full tracking and regulatory compliance records, ability to limit call origination, duration, etc., will offer both payback to the organization and attractive user features and functions. Ascendant is closely aligned with the BlackBerry device (although it can work with others), but we

expect nearly all of the major smart phone players (e.g., Nokia, Motorola, Palm) to obtain such capability, either through partnership or acquisition, as a necessary feature set for enterprise sales.

Beyond “push voice”, the emergence of IM and presence for mobile devices is changing the typical smart phone into a “communications central” device. The new mission critical nature of the device, together with more forms of collaboration (e.g., email, voice, IM, apps, presence, web access) will create a new model, making the enterprise mobile smart phone device even more mission critical and compelling than it is today. RIM, Nokia, Motorola, Palm and others who build smart phone devices must transition from the notion of a telephone that includes push email, to a fully featured communications hub, with push email, PBX connectivity, VoIP, IM and presence clients. Together with seamless roaming across networks (e.g., 3G, Wifi, and soon WiMax) and more security and management features, the enterprise smart phone device will transition from what it is today - a telephone with data features loaded on it, particularly push email - into a device that will be a core component of the mobile enterprise, connecting to virtually all corporate systems used to communicate with employees, as well as provide them data to better do their jobs.

Bottom Line: Enterprises should start now to deploy “push voice” features, particularly if they can be easily incorporated into existing infrastructure (e.g., BES), but it will take several years before all of the latest features are fully available and integrated. Companies that ultimately fail to deploy these capabilities will lose not only productivity enhancements enabled by such systems, but will also lose a competitive edge that can provide greater efficiency and lower cost (e.g., doing more with fewer employees).

Home Networks and Servers: Missing a Key Point!

Many vendors (e.g., HP, Dell, Apple) are moving to supply home servers and networks by concentrating on the entertainment aspects of these systems (e.g., video servers, multimedia storage, high speed networks). While current media servers are fine for the technology elite who will be early adopters, they are still relatively expensive and difficult to deploy. This will get fixed over time, but it may take several years to achieve the true ease-of-use and low cost that most consumers require. There are however, many more home users that go beyond a purely consumer focus, to include a business focus as well. We believe that much of the new “Networked Home” technology will be purchased over the next 2-3 years by home office workers, rather than purely entertainment oriented consumers (similar to the phenomenon that propelled early sales of broadband and wireless technologies into the home).

Currently, US Department of Labor Statistics show that corporate employees spend more than 15% of their hours working from a home office. And self employed workers spend 55% of their hours working from a home office. We expect these percentages to grow substantially over the next few years, as more companies provide flexible working conditions, and the ranks of the self employed grow. Indeed, the web economy has allowed many small businesses

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to be started from the home, and reach a vast audience of potential customers without heavy investments in brick and mortar facilities. We expect this trend to accelerate with increased broadband connectivity, easier to use technology, and a desire for workers to balance their home and work life. A networked home with a business flavor can greatly aid this scenario.

Many home workers have learned to “share” their systems with the others in their households. While business use of systems such as black and white and color laser printers, scanners, mass storage devices, web servers, etc., is growing, the case can be made that once installed in a home office setting, such technology is also utilized by other family members, at least on an occasional basis. Further, because today’s businesses require technology to succeed, home workers must purchase such technology as a prerequisite for doing their jobs. While price is always an issue, particularly for small business and self employed individuals, the amount of technology spending for business purposes is significantly greater for this class of user than for the majority of strictly consumer users of technology, and it is less price sensitive (but more performance/functionality oriented). And part time, work at home users often get a stipend from their employers to pay for the technology they need to do their jobs, or may be directly furnished such technology from the corporate “pool” of technology.

We believe most of the “Smart Home” and “Networked Home” vendors are missing a key opportunity. While entertainment clearly sells systems (e.g., large screen displays, home theatre sound systems) it is also true that many higher end systems (e.g., network attached storage, web and content servers, high capacity printers) are both costly and technologically harder to deploy for many consumers, but can be attractive to business users. We therefore believe that many home networked systems will be deployed for business uses, particularly high end storage, faster networks for Web 2.0, collaboration and VoIP, and systems management functions. Vendors should therefore include, as part of their networked home marketing and technology components, pieces that are attractive to business users, who often have budget and are willing to spend it when consumers may not. And, business users are less likely to act as their own IT support given the opportunity, and may be far more interested in network/system management and related services than pure consumers. Further, it is unlikely that there will be two networks installed in a home environment, and a business user will want to share the network with others in the home. Therefore making the networked home “business friendly” will make the systems more attractive to far more potential purchasers, especially those with the budget (e.g., business users who have a need and may obtain favorable tax advantages).

Bottom Line: We expect to see much more emphasis from mainstream vendors (e.g., HP, Dell) on the business uses of their home networking systems and components, as well as targeted services for small business home users (SOHO). This would make logical sense in the marketplace, as so much of the technology is used in home businesses - a growing and important consumer of technology. Successful vendors will therefore add a business marketing and use model to their systems if they want to be successful, especially with some of the newer and more expensive technologies.

Solid State Drives (SSD) in Business Notebooks: Trends and Justification.

A new report released by J.Gold Associates analyzes the trends and costs of Solid State Drives (SSD) in enterprise-class notebooks. While SSD are not new, the recent capacity increases and price declines are making them a viable option for some limited classes of users. The report indicates that prices will continue to decline and capacities will increase significantly over the next few years, greatly expanding market acceptance and deployments in the enterprise. Some of the report highlights include:

- SSD will reach a cross over point in 2009, when they will be cost effective for many enterprise users
- Increased reliability of SSD lowers the total cost of ownership (TCO) per machine by \$50 in a typical enterprise
- Many additional suppliers of SSD will emerge in the next 1-2 years, making it a highly competitive market and fueling price declines

"By 2009/10, we believe the premium for SSD will be under \$200 per machine. Given a TCO savings of \$50 per machine, and the additional potential benefits (e.g., battery life increase, elimination of external battery, faster performance, lighter/smaller machine designs) we believe many companies will deploy SSD within this time frame. Therefore, we believe most enterprises should plan on deploying SSD to their mobile workforce, at least in higher end machines, in the 2009/10 timeframe."

The full report includes expected capacity growth and price decline charts, as well as expected percentage-of-market device deployment in enterprise notebooks, by year, from 2007-2011. Further, it analyzes, through use of a cost model, the contribution to reliability and subsequent TCO reduction of deploying SSD over standard HDD. Finally, it recommends actions to be taken by the enterprise and provides guidance on when enterprises should make a commitment to SSD.

The research report will be distributed to clients of J.Gold Associates, and is available for purchase by non-clients.



J.Gold Associates, LLC

6 Valentine Road
Northborough, MA 01532

Phone:
508-393-5294

Web:
www.jgoldassociates.com

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Strategic Consulting*