Rose Business Technologies

Clarity - Simplicity - Productivity

Mobile Technology

Rose Mobile Technology professionals can help mobilize the enterprise by extending core data, business processes, applications and services with proven enterprise mobility solutions. Rose ensures optimization and cost-effective technology implementations, leading to greater efficiencies, improved business continuity, and long-term system value.

Mobile technology is the constantly expanding sector of equipment and related services that enable people to work away from their desks. The exploding mobile technology sector includes telecommuting, working from partner or client locations, from a plane or train or simply moving more fluidly around the company's own premise through the use of a wireless local-area network. The key to mobile technology is balancing the benefits from mobilizing vital data against the security challenges that will be introduced.

Enterprise information is now on the move, as mobile workers use smartphones and other mobile devices to stay connected – and productive – in and out of the office.

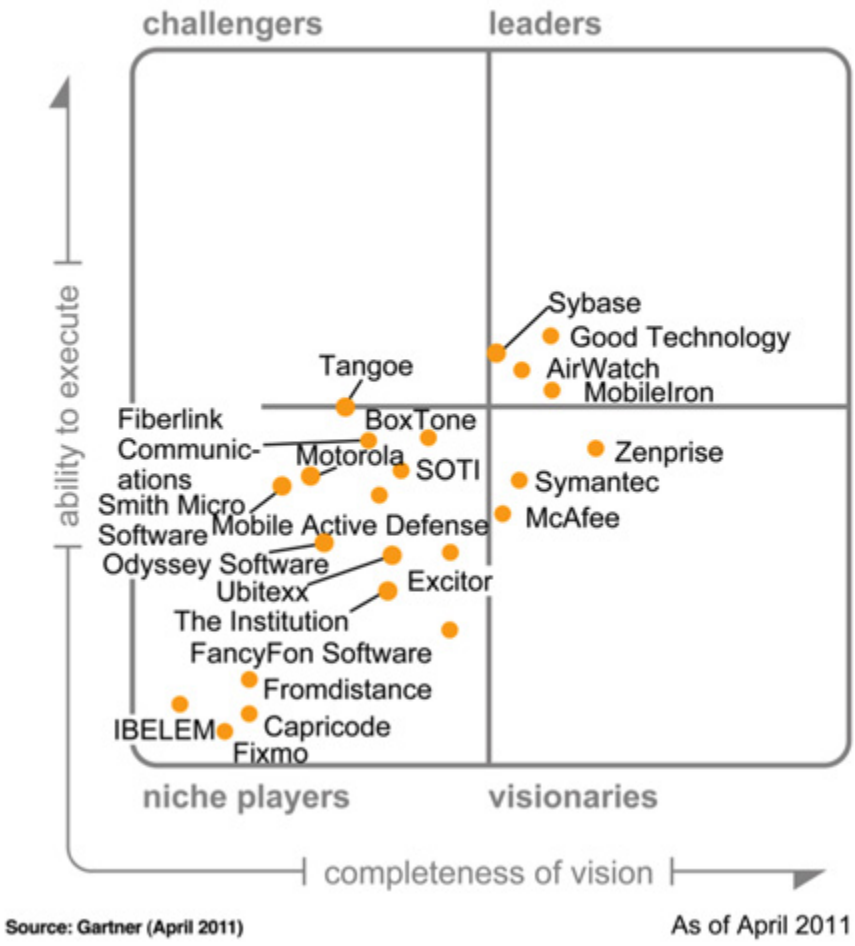
Mobile technology involves several components, including a mobile computing infrastructure, database, business intelligence (BI), operating systems, networking, security, storage, hardware, software and user devices.

Mobile device management (MDM) software is a key component. MDM software secures, monitors, manages and supports mobile devices deployed across mobile operators, service providers and enterprises. MDM functionality typically includes over-the-air distribution of applications, data and configuration settings for all types of mobile devices, including mobile phones, smartphones, tablet computers, ruggedized mobile computers, mobile printers, mobile POS devices, etc. The intent of MDM is to optimize the functionality and security of a mobile communications network while minimizing cost and downtime. This applies to both company-owned and employee-owned devices across the enterprise or mobile devices owned by consumers.

A key component for the future is mobile business intelligence.

Gartner reported on the mobile device management software landscape. The Magic Quadrant for Mobile Device Management Software is below:

Figure 1. Magic Quadrant for Mobile Device Management Software



Source: Gartner (April 2011)

As of April 2011

Gartner also published a study looking at 13 vendors' mobile device management features. The results show that Zenprise, Mobile Active Defense and MobileIron scored highest overall in various use cases, and Good Technology was still the best single email-centric solution for secure enterprise mobile email.

Gartner looked initially at more than 60 vendors in this space, and examined different client-side and server-based solutions for both on-premises and cloud delivery models. The authors stated, "While most mature products (such as those from Good Technology, Sybase and MobileIron) are on-premises, a growing range of cloud services offerings (such as those from AirWatch, Fiberlink and Tangoe) are starting to appeal to users because they are more economical."

The report was written by Monica Basso and Phillip Redman and has three major recommendations:

1. Choose vendors that support a lightweight management approach, with mobile agents and server-side platforms, when your security and management requirements are limited and deep control is not accepted by employees using personal devices. Examples include Zenprise, MobileIron, BoxTone, Fiberlink and AirWatch.

2. Choose vendors that support a heavyweight approach to deliver secure and manageable corporate email to consumer and personal devices when strict security and compliance requirements apply. Containers can enforce stronger separation among personal and corporate content. Examples include Good Technology, Excitor and Sybase.

3. Users of iOS need to reset their devices for encryption -- the data protection mechanism in iOS 4 implements total device encryption, and can be triggered by setting a password to connect to Exchange Active Sync for email, calendar and contacts -- and then resynch the data.

Designing a mobile platform provides tools to:

- Integrate with your many systems, services and databases
- Develop and configure high-performance, intelligent applications that run on a wide range of devices
- Control every part of your mobile solution, including connectivity, security and scalability
- Manage your users, devices and applications

Examples of mobile IT devices include:

- laptop and netbook computers
- palmtop computers or personal digital assistants
- mobile phones and 'smart phones'
- global positioning system (GPS) devices
- wireless debit/credit card payment terminals

Mobile devices can be enabled to use a variety of communications technologies such as:

- wireless fidelity (Wi-Fi) - a type of wireless local area network technology
- Bluetooth - connects mobile devices wirelessly
- 'third generation' (3G), global system for mobile communications (GSM) and general packet radio service (GPRS) data services - data networking services for mobile phones
- dial-up services - data networking services using modems and telephone lines
- virtual private networks - secure access to a private network

Mobile Applications

Mobile applications are the programs that people run on their portable and mobile devices. Developers have taken advantage of increasingly powerful devices and bandwidth-rich networks to provide more highly functional mobile applications. In short, it is possible to perform a great percentage of the tasks in the field that formerly were constrained to the desktop PC. With this new freedom comes considerable security concerns. Sophisticated mobile applications are a competitive must, though.

Mobile Devices

Mobile devices are aimed at workers and consumers not working from a wired outlet. The mobile device category is expanding by leaps and bounds, and includes everything from cell phones, feature phones and smartphones to laptops, mobile Internet devices (MIDs), tablet computers and ultra-mobile PCs (UMPCs). Mobile devices are benefiting from the growth of 3G networks and will become even more ubiquitous as 4G grows. There is more diversity in the types of devices and operating systems than in the desktop world.

Smartphones

Smartphones are cell phones with greatly expanded functionality. Smartphone operating systems include Symbian, Linux, BlackBerry and Windows Mobile. The iPhone has stimulated an outpouring of creativity, including individual phones and the birth of the LiMo Foundation and Android, consortia creating plans for vendors to produce open source smartphones and other mobile devices. Security and power issues pose significant threats going forward.

Mobile Operating Systems

A mobile operating system is the software and code that rests upon the hardware and on which mobile applications interact in order to carry out functions. Mobile operating systems have evolved to create a new category, the smartphone. Smartphone operating systems include Symbian, Linux, BlackBerry and Windows Mobile operating systems. Mobile operating systems must work in the most power-efficient manner. The existence of many mobile operating systems is credited with keeping mobile devices relatively safe from hackers.

Wireless Handheld Devices

Wireless handheld devices are pieces of equipment light enough to be carried and traffic data over the air. This is a broad area, including various types of cell phones, tablet computers, mobile Internet devices, PDAs and other devices. The increased sophistication of mobile operating systems enables designers to create different devices for different uses. For instance, a medical professional may opt for a tablet while doing rounds, though other options might be able to do much the same things.

Blackberry

BlackBerry is a family of smartphones and the related operating system from Research in Motion. The BlackBerry is the most popular business handheld device. When paired with the Blackberry Enterprise Server, the Blackberry enables secure mobile e-mail, voice, Web and other data services. The device, which has earned the sobriquet "crackberry," is under attack from Nokia, Microsoft and others. There is an incipient threat from the iPhone, but so far Apple has sent mixed messages about its attitude toward the corporate market.

iPhone

The iPhone is Apple's foray into the smartphone category. The device was introduced to the AT&T network in June 2007. The latest iteration, the iPhone 3G, was introduced in July 2008 and initially encountered problems. The iPhone is revolutionary for its creative user interface and because it is not being subsidized by the network and vendor, thus driving the price to users higher. The iPhone, which has spawned many competitors, is not essentially aimed at business.

Android

Android is the product that will emerge from a Google-led consortium called The Open Handset Alliance. The goal is to use JAVA to create Linux-based smartphones and other devices. The software development kit includes the operating system, middleware and some applications. The alliance includes carriers, manufacturers, device makers and other organizations. It is likely that the first Android devices will be available during the autumn of 2008. Some developers are grumbling about the way the alliance is handling SDK distribution.

Windows Mobile

Windows Mobile is an operating system from Microsoft designed to provide services to a number of computer devices, including smartphones, Pocket PCs and automobiles. The operating system is vying for position as the mobile sector grows due to the expansion of broadband networks and the increasing capacity of handheld devices. Windows Mobile benefits from its ties to other Microsoft products and ability to seamlessly interconnect with Microsoft desktop applications.

Palm OS

The Palm OS is a mobile device operating system featuring a touch-screen based graphical user interface. The Palm OS is or had

been licensed to a number of other companies including Acer, Sony and Lenovo. The Palm OS initially was developed in 1996. It has changed hands several times since. In January 2007, current owner Access Co. renamed the operating system the Garnet OS.

Symbian

Symbian is a mobile operating system. In June 2008, majority owner Nokia said that it will buy the 52 percent of Symbian that it doesn't already own and donate it to The Symbian Foundation. At the same time, Nokia said that it will make Symbian open source. The Symbian Foundation has about 30 members, including heavy hitters such as Sony Ericsson, Motorola, AT&T and Texas Instruments. The move by Symbian is characteristic of the intense jockeying for position in the mobile smartphone sector.

Mobile Strategy

For the mobile application to become a truly strategic tool for the enterprise, it must be designed with the end user in mine.

Enterprises want to implement mobile solutions quickly to enhance user adoption and maximize ROI. However with that being said they must not lose sight of the end user and should spend time in the design of the user interface. The enterprise does not want to design a user interface where the mobile associate has to hunt and punch for the right screens. They instead want a dynamic workflow on the mobile device.

Here the enterprise must pay due diligence or they will find themselves caught up in a never ending rewriting application mode. If this does occur then the end-user will lose confidence in the mobile computing strategy and the enterprise will be changing every so many years to new mobile hardware to accommodate all the new rewritten applications.

Mobile computing must tie in more closely to a company's business processes, business rules and workflow to meet customer demands for faster response times and serviceability.

Businesses do understand to accomplish this they must take their business processes and business rules to the far reaches of the actual normal business process or customer interaction. The business paradigm shift requires mobile computing solutions to provide a complete servo system for two-way communications between the business home office and the customer via a mobile worker and the mobile device. Flexibility must be provided in the mobile computing application and the particular governances of that customer provided to the mobile worker to the customer.

Only then will enterprises be able to reap in the benefits of mobile computing strategy for providing better visibility, productivity and customer satisfaction.

Mobile computing applications or solutions should not require the enterprise to change their business processes or business rules to accommodate the new mobile computing strategy. Instead the mobile computing solution should be tailored to fit the company's unique business process. Business process can and do change over time, therefore the mobile strategy should provide for the capability to make the changes to the mobile solutions without incurring a significant reinvestment of time and resources.

In assembling and organization's strategy for developing and deploying mobile computing solutions for mobile workforce, enterprises should take a strategic approach to these mobile solutions and not be caught thinking this is just one-off point solution. Ideally, companies need to take a more comprehensive mobile solution approach that extends beyond simple data capture to a facilitating and enhancing the business processes, business rules and workflows. The mobile solution strategy should also encompass the end-user level involvement to help facilitate the ease-of-use factor and the strategy should be designed to make IT less burdensome from the perspective of IT resources and budgets.