

*State-of-the-art computing
in the hands of mobile workforce*



This white paper introduces readers to Mobile Computing concept and describes how businesses can use this state of the art technology to maximize productivity and effectiveness of the field staff.



The Mobile Computing Technology

Computing has revolutionized the way to do business. In today's fiercely competitive business environment the organizations are under constant pressure to improve customer service while cutting costs and increasing productivity. In order to streamline their operations and to remain competitive in the market, companies Organizations invest huge amounts in the a lot in enterprise software systems like ERP and CRMto streamline. costs and to be more responsive to market in today's competitive business environment.

The Field operation intensive businesses like distribution, logistics, healthcare, and insurance have started realizing that in spite of implementing costly back end systems their goals of enhanced customer satisfaction, increased productivity are not being achieved. The main reason being the pertinent information is not available in the hands of mobile work force when they are in front of the customers performing the business operations. Adopting mobile computing is an answer to these challenges.

Mobilize your field force with Mobile computing

Mobile computing enables extending key information locked in the enterprise systems to the handheld devices used by the people in the field. Using smart handheld devices equipped with tailored business applications, the field staff can access the key information required to complete the job and collect the data on handheld devices. At the end of the day's work data collected on the handheld can then be fed back directly to the back end systems.

Mobile computing combines the convenience and portability of handheld devices such as Palm , Pocket PC and Smartphone. with the customized enterprise applications tailored to specific needs of businesses. The handheld devices can be seamlessly integrated with the backend enterprise systems using various communication technologies to facilitate the speedy, secure and accurate flow of business information . With the increased accuracy and speed of data updating from the field, the better equipped are companies to plan their strategies and to promptly respond to the customer needs and market demands.

The mobile workers from almost all businesses including Logistics, Retailing, Facility management companies, Healthcare and Industrial equipment manufacturers areas benefit from access to enterprise data in the field . Mobile sales reps using the handheld devices can need to determine price, check and availability of products, for quotes, book submit orders, process invoices, capture signatures and identify new add-on sales leads, schedule customer visits. and renewal opportunities. Handheld device and it's ability to interact with the back end systems allows the sales reps to access customers' histories, analysis of customers' needs helping them to make more informed decisions. They also need timely access to customer data, market information, product catalogs and literature. They can view inventories, submit orders, and provide order verification to the customer immediately. Mobile computing enables the Field service workers access service calls, equipment histories, spares availability, need access to dynamic dispatch, routing, schedules, schematics, customer installation details, and billing information. Using mobile applications, the field workers se employees can instantly update service call information and create invoices. Using mobile computing techniques, the mobile staff can not only have constant access to all of the necessary corporate data, but also can simultaneously eliminate paperwork by entering information directly into the device.

Tangible Business Benefits

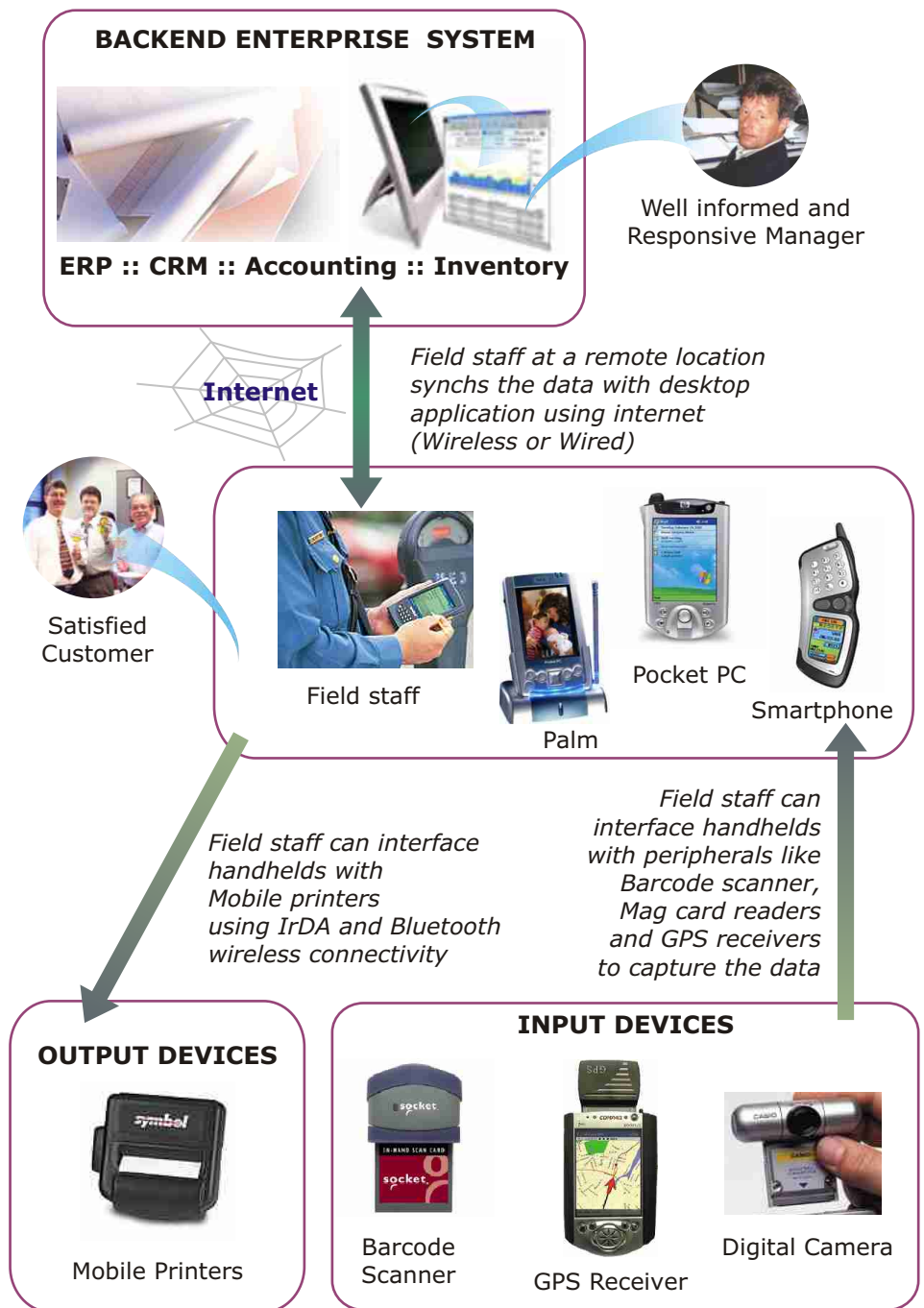
Enhanced productivity: Smart handhelds, tailored software solutions and peripherals interfacing with the handhelds help field workers completing their operation with greater speed, accuracy. Pre-designed forms, standardized menus, built in validations on handhelds significantly increase the speed of data acquisition allowing the field staff to complete more number of sales, service or pick up calls in a day. Availability of important information on the handhelds eliminates time spent in preparing for customer calls. Use of handhelds considerably reduces the time spent by field staff on unproductive administrative work like writing expense reports, filling time sheets etc.

Enhanced customer service levels: In this era of knowledge driven economy, Customers are becoming more and more demanding. They need to know what's available, what it costs, and when it can be delivered. They expect the field staff visiting them to be up-to-date about their enterprise, their needs and their past dealings with your company. Successful mobile deployment meets these customer expectations and results into quicker and accurate responses to customer requests.

Responsive organization: In today's competitive business scenario, quick acquisition and processing of information about the state of the market, stock movement trends, customers and competition can highly influence the sales revenues of a company. Mobile computing allows the field staff to instantly synchronize all such important data collected on handheld devices with the corporate systems. With the increased accuracy and speed of data updating from the field, better equipped are the companies to plan the strategies and to respond to the customer needs and market demands.

Reduced operational cost: The mobile computing helps the organizations in streamlining the field data acquisition and management by avoiding duplication of data entry. The ability to validate the data during entry on handheld reduces the data cleaning efforts to great extent. Automation of the field data collection processes saves large amounts of paper and paper work. The net result of elimination of costly data entry operators, increased accuracy of data, reduction in paper and paperwork and accuracy of the data is significantly reduced operational cost and improved ROI on mobile computing investments.

Elements of Mobile Computing



Specific areas of use of Mobile Computing

Distribution: Direct Store Delivery

- ◆ Distribution management – Order fulfillment
 - View distribution routes and schedules
 - Load vehicles as per pick lists
 - Check stocks at shelf and replenish the shortages
 - Confirm delivery at destination
 - Print invoices and receipts using portable printers
 - Handle customer returns
- ◆ Order booking on handheld device
- ◆ View Product and Price lists
- ◆ Channel Partner Management
 - View Channel Partner performance
 - View information on promotional schemes
 - View payment outstanding lists
 - Record stock positions
- ◆ Record competitor activity, incidences of non conformance to company policies, storage of spurious material
- ◆ Conduct customer satisfaction surveys
- ◆ Fill in sales call reports

Industrial Marketing

- ◆ View product and price lists
- ◆ View product brochures
- ◆ Tools on handheld devices
 - Product selection guides
 - Power point presentations
- ◆ View customer information
 - Contact details
 - History
 - Complaints
 - Outstanding
- ◆ Customer meeting management
 - Meeting schedules
 - View meeting goals and record fulfillment
 - Record points of discussion
 - Note request for information

Finance / Insurance

- ◆ Tools and calculators
 - Product selection guide
- ◆ Selection of right insurance policy
 - Loan eligibility calculation
 - Loan EMI, insurance premium calculators
 - Financial planners
- ◆ Channel partner management
 - View channel partner performance
 - View promotional schemes
 - View product information

..... **Specific areas of use of Mobile Computing**

Specific Areas of Use

Healthcare

- ◆ Patient's data entry and record keeping
 - Tests
 - Diagnoses o Allergies
 - Treatments
 - Treatment results
 - Drug administration
 - History
 - Administrative and commercial records
 - Drug database for reference
- ◆ Patient Transportation(Ambulance)
 - Record and transmit Patient's condition during transportation
- ◆ Clinical Trials
 - Capture patient data
 - Update site activity report

Pharmaceutical: Sales reps

- ◆ View drug information
- ◆ Record objections on a drug from doctors and patients
- ◆ Record stock positions at pharmacies / distributors
- ◆ Record request from doctor regarding additional information
- ◆ Record stock positions at pharmacies / distributors
- ◆ Call scheduling
- ◆ Fill in visit reports, expense reports

Field Service staff: Industrial / Consumer durables products

- ◆ Service call management
 - Scheduling
 - Job cards on handheld device
 - Record complaints
- ◆ View parts and price lists
- ◆ View inventory position at warehouses
- ◆ View equipment information and service instructions

Warehouse management

- Record Receipts and dispatches
- Stock checking
- Record condition of the goods
- Report missing or extra terms
- Generate pick list - loading/unloading
- Handling customer returns

Trade Show Management

- ◆ Trade show Guide
 - Exhibitor list
 - Exhibitor profiles with exhibitor's information including name, contact details, contact person, web site address.
 - Product list
 - CAD drawings of different halls
 - Maps of the trade show ground and city with zoom in/out and panning facility
 - Important landmarks in city, restaurants, hotels, etc.
 - Information about seminars, speakers, events etc.
- ◆ Sales lead capture for exhibitors
 - Record response from the visitors.
 - Record prospect details
 - Customer response questionnaire

Hardware and Technologies

A successful rollout of a mobile enterprise solution requires choosing right handheld devices (PDAs), peripherals and appropriate technologies to interface handhelds with the back end corporate systems.

Currently the widely used PDAs are Palm and Pocket PC. Palm works on Palm operating system and Pocket PC works on Windows CE operating system from Microsoft. Smartphones working on Win CE, Symbian and Palm operating systems are also fast becoming popular. The choice of handheld depends on the memory requirements of the application, GUI requirements connectivity needs, availability of infrastructure, working conditions and the budgets allocated. The memory of the PDAs ranges from 2 MB to 64 MB while the display can be monochrome or colored with the back lit option. The PDAs are also available in ruggedized form to meet harsh working conditions.

PDAs can interface with multitude of peripheral devices like bar code scanners, printers, magnetic card readers, modems, mobile phones, GPS receivers and digital camera. Using these peripherals significantly increases the speed, accuracy and convenience of data capture.

PDAs can interact with the backend enterprise system via wired or wireless connectivity. Wired connections use serial and USB cables to connect to PC while technologies like IrDA, Bluetooth and Wi-Fi are popular for wireless connectivity. The wireless networks are growing in popularity with advent of 802.11b. The networks are characterized by competing standards and security implemented protocols ensuring security in the critical business information flow. PDA's need interfacing with modems and cell phones to establish connectivity. On the other hand, Smartphone is a combination of PDA and mobile phone which eliminates the need to carry two separate devices on the field.

Mobile computing solution providers can guide the organizations in selecting hardware, peripherals, architecture and technology.

About VarIT

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VarIT Inc. is a provider of enterprise products and services with a focus on mobile computing.

VarIT specializes in developing, maintaining and supporting your mobile computing products and solutions. VarIT has a proven track record of developing range of mobile computing and web based solutions for our clients in varied businesses like healthcare, trade show, logistics, and industrial products. VarIT has experience in working with different handheld platforms, interfacing them with several peripherals and communication with back end systems using wireless technologies.

At VarIT, we recognize the need for simple, common sense technology solutions. We listen to our customers and create solutions that minimize their downside risk while maximizing the usefulness of the solution.



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