

Understanding Handheld Mobility for the Enterprise

It is so very difficult today for us to imagine a world without the PC, the web and the cell phone. In the US, there are more than 100 million broadband users, 190 million mobile phone subscribers, and WiFi networks blanket the urban landscape. Computing has become linked to the communications network. At work, at home, in a hotel, at school or in a coffee shop, the networked computer has become our 'virtual office' where we file our information and interact with others. The broad accessibility and rapid pace of innovation in computers, handheld PDAs and Computer Phones, networks, software and services has catalyzed the Mobile Enterprise.

Imagine ...

Salespeople using their PDA to check inventory status across multiple warehouses and process orders while in their customer's office without calling someone at "headquarters" or completing any paperwork.

Field service personnel using a handheld device to move quickly and smoothly from call to call. As they enter service call detail on their handheld device, parts that were used are automatically removed from inventory, time is automatically allocated to the appropriate customer/equipment and the serviceman is automatically routed to the closest pending service request.



FingertipWare specializes in helping businesses extend their existing systems beyond their corporate perimeter. FingertipWare's extensive capabilities ensure the selection of the most appropriate form factor computer and application type to meet the most demanding online, real-time, offline, or batch computing requirements.



Situation

Today's office is not defined by walls or doors or even desks, but by access. Today's work force is demanding mobility, flexibility and real-time access to critical business information. Despite these obvious market trends towards mobility and mobile work force automation, the majority of the mobile workforce continues to use "pen and paper" as their preferred tool at their point of action – when engaged in face-to-face customer selling or servicing. For many companies, paper and voice continue to be the standard means of processing orders, checking inventory levels, product information and price schedules for the mobile worker. For sales

and service effectiveness it is these areas which demand immediate access to current (real-time) data that have been the least automated.

The need to be closer to the customer (or supplier) to improve service quality has facilitated the development of the mobility market. As counterintuitive as it is, the improvements in communication afforded by technology have increased, not decreased, our appetites for human interaction. Across a wide range of industries, suppliers must provide a physical presence with the customer to ensure improved quality of service and to create higher barriers for competition. Mobilizing the Enterprise enables customers, suppliers, employees, and a mobile (sales/service) workforce to collaborate in new ways.

Mobility

FingertipWare develops mobile workforce automation solutions that enable seamless mobilization of existing back office systems that automate business processes, deliver relevant information to your points of action and eliminate the paper-based burden on staff, customers and the business.

To deliver this mobility vision, FingertipWare has invested much of its energy creating a development framework. This in-house developed, proven, production quality framework enables FingertipWare to deliver mobile workforce automation using reusable components, techniques and methodologies. Additionally, FingertipWare specializes in custom software development of both thin and thick client solutions.

FingertipWare offers thin client (browser) application development services for customer solutions. Often these solutions have a high dependency for immediate and real-time data exchange and capture. Thin client solutions offer shorter development timelines and can therefore satisfy both tighter budgets and shorter delivery requirements. Wireless carrier networks have improved their latency, bandwidth and reliability, such that thin client handheld solutions are a viable option for specific mobile requirements.

We have seen over the years shifts from thin (browser) client to thick client applications and back again, the rationale for the shifts is typically the same. Clients become thicker with increasing bandwidth and processor power. They become thinner as new transmission media decreases bandwidth and portability of devices decreases processing power.

The thick client application applies to the mobile workforce that requires information resilience no matter the connectivity. FingertipWare develops (thick client) solutions where connectivity is not a necessary pre-condition for continued transaction management and automation. These solutions provide “offline, always available data and applications in an occasionally connected network” environment.

Think mobile—not necessarily wireless.

It’s important not to confuse mobile with wireless, the two are not interchangeable. Simply stated, a mobile solution extends enterprise information to places where you wouldn’t normally be able to access data, while wireless technology is merely one of the many methods of data transmission.

Careful examination of the business and mobile automation requirements are necessary to ensure the correct architecture choice between the always connected and occasionally connected experience.

Mobile Development Framework

The increasing strategic importance of mobile field worker automation solutions can raise pressing deployment and execution questions. The FingertipWare Mobile Development Framework can mobilize, synchronize, deliver offline and real-time capabilities, and integrate corporate policies and business rules needed to support the most complex business requirements. Enabling paperless automation and computerized field mobility is certain to make a business more competitive, more productive and more profitable.

For most businesses, competitive market pressures require unique, Service Level Agreements (SLA), business rules, corporate policies, workflow, methodologies and business processes. Disrupting or changing these should not be a focus when implementing a mobile field solution. Hence, field automation typically requires the mobilizing of existing systems, which often requires unique software development for the majority of large enterprises.

Integration ensures enterprise-wide data Integrity

For a mobile solution to be effective, it must extend the value of existing business systems and enable field personnel to operate within their working environment, which exists primarily outside the four walls of the enterprise. To extend the enterprise, mobile applications must be integrated with a company's existing back

office systems such as CRM, ERP, and SMS systems. Integration ensures enterprise-wide data integrity, data currency and enables access to disparate data types.

Field service shares common practices across the majority of service organizations – as example; an asset brakes or needs preventative maintenance, a technician is dispatched, a technician arrives and performs the field service, time is tracked, parts inventory updated and the customer is invoiced. Yet, for competitive market reasons, Service Level Agreements (SLA), business rules and corporate policies are often unique to each service organization, even if they are in the same industry. This knowledge is typically captured, managed and controlled by the organization's back office systems.

Our integrated solutions connect directly to your back office systems, providing automated, unattended data management with your field workers. FingertipWare's Development Framework delivers a rapid time to market for a fully integrated mobile field service solution. Our approach to integration and mobility is based 100% on industry standards. We use NO middleware. We use NO proprietary code. We use only the most current development tools and proven industry standards.

Synchronization means a hassle free solution

All of our offline solutions share and communicate data using our synchronization web services and hosted Server infrastructure. Data exchanges between the field and back-office occur automatically during synchronization. Data transfer simply requires connectivity. During out-of-coverage situations, data is stored on the device and synchronized once connectivity is restored.

Technicians initiate data transfer through the mobile device with the tap of a single icon in the mobile application. This allows the mobile technician to control their wireless usage, and communication as they travel in and out of network coverage. Mobile applications can be developed to update at specified time intervals, or configured to receive a wake-up request to force synchronization. Synchronization can occur via all current network connectivity standards; WiFi, Bluetooth, IrDA, USB, serial, dial-up and all wireless carrier standards such as GPRS, EDGE, 1X, EVDO, etc. We support all network connection standards, ensuring your applications are completely network agnostic.

When making the decision on required connectivity, companies must decide how much “lag time” in data capture and transmission they can live with and still achieve operational performance and customer satisfaction targets. That is, do field technicians need always-on access to back-office data and communication capabilities, or will it suffice for them to update and store work records and communicate them en masse periodically throughout the day? In some cases, continuous connectivity might be overkill and periodic updates might be enough to satisfy the company’s needs for data currency.

The best news is, we make them all happen inside the same program. Our objective for each implementation is to balance each customer’s need for real-time data with the costs of mobile communication. Implementations can share open WiFi hotspots, share a desktop computer’s existing Internet connection, which both result in no additional communication costs. Or choose the many wide-area wireless data options from a wireless carrier, such as Rogers, Bell, Verizon, AT&T, Cingular, etc.

Synchronization means a hassle free solution which ensures that all mobile workers always have access to the same company data. With data residing on the mobile computer, the user can interact with this information on the device anytime, regardless of connection availability.

Hosted On-Demand Services

Total cost of ownership (TCO) of a mobile field service solution has a great deal to do with how the software is deployed. FingertipWare makes it fast, easy, and affordable to deploy the software solution by offering an on-demand hosted service. Our managed and hosted servers handle all the complexity of data synchronization, communication and database storage. These servers ensure 7 days a week, 24 hours a day access, while eliminating the need to deploy and maintain in-house web and database servers. This on-demand infrastructure enables enterprise class performance to businesses of any size, without incurring additional capital costs.

Companies of all sizes can easily map out their purchase, maintenance, upgrade, and service costs over a 24 month or extended horizon to fully understand their TCO picture.

The Field Experience

FingertipWare specializes in developing client (field worker) applications for the Microsoft Windows Mobile platform. The instant-on capability of these handheld devices makes them ideally suitable for use right in front of the customer – at your points of action. We have effectively developed an intuitive graphical user interface that can accommodate a broad range of requirements.

Our applications can:

- Support for all modes of wireless and non-wireless connectivity standards
- Optimized to lower the cost of data transmissions by improving the data throughput by as much as 145%
- Offline database storage, with synchronized integration to your office systems
- Print Engine, with support for 2", 3", 4", 8.5" receipts via IrDA, Bluetooth, WiFi, Serial connected printers
- eMail professional receipts to your customers with the tap of a button
- Our Fax service can deliver fax receipts anywhere in the world for as low as 7 cents/page
- Team Messaging, a secure internal collaboration module
- Signature Capture
- Support for barcode scanners and RFID readers/writers.
- Over-the-Air application installation and upgrade
- One-touch auto-dial integration with smart phone devices

The FingertipWare mobile framework can mobilize, synchronize and present most any functional requirement needed to support a business. Enabling paperless automation and computerized field mobility is certain to make any business more competitive, more productive and more profitable.

Extending the enterprise level performance you have today to where you want it to be tomorrow is all about building on what you have.

We are experts at helping organizations expand the boundaries of their enterprise services – to the field, to the desktop, or anywhere in between. FingertipWare's customization skills enrich the capabilities, reach and value of an organization's existing infrastructure by delivering increased functionality through more channels to more users in more places.

Whether looking for real-time, on demand access to applications for remote workers; Web-enabling warehousing, inventory management or sales order processing; or application/data hosting; FingertipWare's customized solutions deliver a whole new level of functionality for your enterprise service investment. And our solutions can be designed to work with any platform, any device and/or any communications requirements.

To find out how FingertipWare solutions can help you extend enterprise functionality for you, contact us today at 416-662-6870 or visit www.fingertipware.com.

