Mobile Computing and Customer Satisfaction
Case studies and thoughts on information acquirement

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Transforming information into knowledge

It should be clear for anyone that doing business involves other activities than just providing a product for a given market. Knowing the customer needs - maybe even before the customer himself - is a prime factor in successful business and with tools such as CRM [1](Customer Relation Management) and data mining this search for knowledge has been intensified.

The computer's need for accurate "hardcore" information before it can create valuable knowledge is a problem though. Because of its lack of common sense, we rely solely on its abilities to interpret the pieces of information that we provide it with. But where does this information come from, and how can we assure its accuracy?

Accurate Information at Lower Cost

Today information about customers is collected though several channels, for example:

- Internet: Digital forms submitted by customers over the Internet are directly channeled into the ERP system
- Phone: The customer calls the sales rep who enters the order on the Intranet or GroupWare
- Fax and mail: Hand written order forms from customers
- Sales meeting: Hand written order forms from the sales rep after a customer meeting

These four points show us that the farther we get from the organization's core, the less formalized the information channels get. In other words the closer you can bring the organization's information systems to the source of the information, the better and more useful your input of information will be. This is why there is a very strong urge to bring the organization's information systems to the last nerve in the digital nervous system.

When Los Angeles City Fire Department implemented a mobile computing solution to speed up data collection they learned how much time were normally wasted on paperwork. The system that helps inspectors conducting a brush clearance program has removed the need for clipboards, error-prone hand written forms and data entry clerks. Information is written directly on a hand-held device and later transferred to the central information system. From a financially point of view, the Fire Department now saves $123,000 annually and the mobile system delivered an 11-month payback and a 109% ROI.

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[1] Customer Relation Management

Another reason why handheld devices are often used is that, as opposed to laptops that often weigh 4 kg and spend their batteries within a few hours, the handheld devices of today offer many of the same services, but are much easier to carry around and are much more battery efficient. A recent study from GartnerGroup [2] shows that hand-held devices yearly TCO[3] is about $3,000 where as a laptop TCO to be $12,000 -- four times as much.

Increased customer satisfaction

While working with a major Danish food whole-seller we learned that using a traditional browser based solution was not always practical. The customers using it weren't always near a PC when they needed to input data. Our response was to extend their existing system[4] to run on a hand-held device with a built in bar code scanner for the customer. After initial data entry the customer is then able to manipulate the order before submitting it while using a web-based profit calculator and then into the customers own ERP system

Implementing such a system completely changes the job of the sales people who, without the need to take down orders continuously, are able to focus more on customer care and increased sales. When implemented correctly such a system thus frees resources, which can be reapplied to increase revenue, service, and customer satisfaction.

While everyone else talks the talk, British Safeway Stores, a $14B retail grocery chain, walks the walk. Last year they launched Easi-Order, an online shopping system based on a hand-held, palm-sized device that contains a product portfolio that is tailored specifically to each customer's needs using intelligent data mining software. Analysis' show that an average consumer can save up to 90 minutes weekly using Easi-Order.

Another example is the Spanish brewery Compañia Cervera de Canarias, which operates a fleet of "driving stocks". Every morning information about today's schedule, pricing information, and stock details are downloaded into the sales person's hand-held device. During the day, while new orders are received it helps him reschedule the day and when arriving to the customer an invoice is printed. The benefits have been a great reduction in invoice errors, reduction of clerical costs, and improved cash flow.

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[2] GartnerGroup: www.gartnergroup.com
[3] Total Cost of Ownership
[4] Solution is scheduled to be launched in 2nd quarter 2000

Easy Solutions?

While these examples all show why mobile computing and the extension of a company nervous system into the outmost layers of business, can free resources and improve customer satisfaction, this is of course not the whole story. Like in any activity involving business processes and computer technology, a proprietary knowledge of a business, the technology, or the people involved is never enough alone.

To properly enact a mobile solution, you need a fundamental knowledge of all three, and the vision and experience to implement them correctly. Only then do you have the tools to effectively improve the business using mobile computing. If these things are in place however, or a partner has been found to assist you in this process, mobile solutions will:

- **Improve customer service**
  Save time using mobile computing, access to information of demand, and provide added services

- **Improve reliability of CRM tools**
  More accurate information about customers leads to better CRM results

- **Lower operational costs**
  Sales people can focus on customer care and increased selling instead of administrative duties

- **Manifest the organization as a market leader**
  Better quality of service, gaining unique selling points

The arrival of hand-held devices can change why and how we access information, and improve company infrastructure in ways that are unparalleled by any other development in IT. They are present to the individual and can receive or transmit information in situations, where computers have not been present before. They can process that information, and pass it on through internal company channels giving the visions of technology assisted business of yesterday, a whole new meaning today. And they can improve not only the business, but the way we work in it and live with it.

How this technology is designed, implemented, and used however, is very much a factor in reaching these goals. It is therefore not up to the technology itself but to the creative minds of IT departments, managers, and leaders to have a vision, to think creatively, and explore ways to make a difference.