

# Mobility and the Internet

The inherent latency of web access from your mobile device will not suffice for business grade applications. Extending business applications into the realm of mobile applications requires more than simply 'browsing' to a web server over slow and unsecure transmission services.

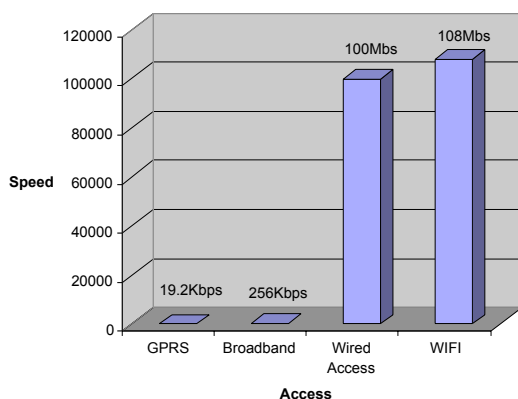
## Business grade mobility

Business grade applications and services place a very distant second to consumer based services in the market today. The focus of most telecommunications providers centre around consumer based entertainment and information, and arguably aligns itself more with mobile phones and voice communications.

So what about business applications? Corporates are looking to extend their solutions to mobile platforms such as PDA's, MDT's (Mobile Data Terminals) and Smartphones. What are they looking for as part of their service? Reliability, robustness, security and ultimately – adequate performance for the task at hand. The problem is that using standard 'web' access provides none of these.

## Bandwidth, bandwidth....

Most users of the internet are becoming accustomed to broadband speeds of 256Kbps and above. Contrast that to the bandwidth available to a truly mobile device – 19.2Kbps over the most commonly available GPRS service. That's about 90% slower than low speed broadband.



## Getting a connection

The GPRS network is delivered over GSM (the mobile phone network), therefore, this is the most commonly available network but ultimately the slowest. Fast WiFi networks are becoming increasingly available, but essentially are extensions of a 'local' network and require you to be only a short distance away (around 100 metres). The answer is to automatically obtain access to a connection to the preferred available network based on speed, reliability and security.

## The answer is in the middle

'Mobile Middleware' is the key to providing secure, reliable connectivity. Marrying Mobile Middleware with an application designed to run on low speed networks delivers an environment for business applications. Mobile Middleware provides the essential requirements for deploying business applications; security, automatic network selection, cost efficient communications and guaranteed data delivery – even when connections are lost and re-established.

Without Middleware, applications attempt to use standard web access (similar to a PC's web browser) or technologies such as 'web services'. There are a number of issues associated with this. First and foremost, performance can only be controlled by limiting the amount of information sent from the server. Secondly, there is no guarantee that the data will actually arrive. Coupled with this, the underlying technologies used to deliver the data are very inefficient – resulting in far higher communications costs.

Faster networks are beginning to emerge (such as the 3G network) but their effectiveness for business applications are affected by limited coverage, relatively high costs and lack of inbuilt

support from the hardware providers. These networks and the devices will mature over the next 12 – 18 months and will provide a greater choice for business users. An effective Mobile Middleware platform will simplify this transition and will not require a costly and time consuming upgrade process.

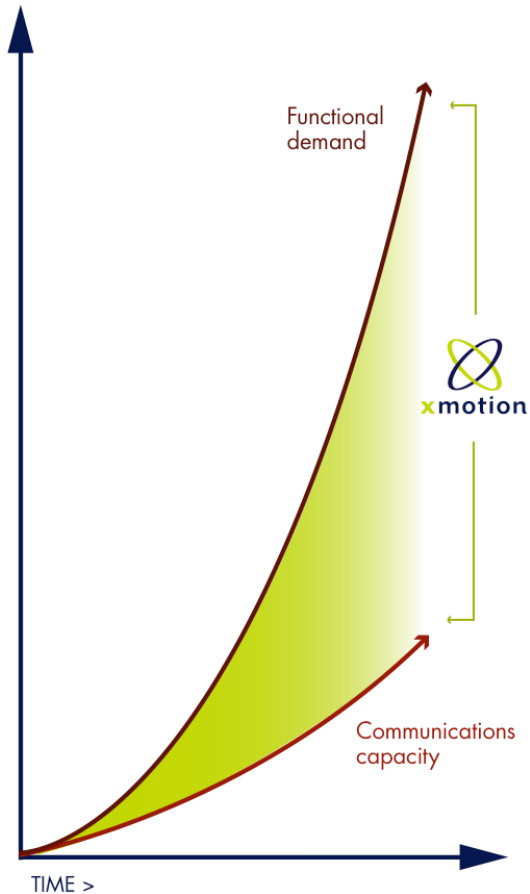


Figure 1 - Demand for functionality V's available Communications capacity

Automatic Network Selection is a key component of an effective Middleware platform. Given that users may swap between services, such as GPRS and a local WiFi network, the Middleware platform should transparently switch between these based on preset decisions such as cost, speed and security.

In a mobile world, efficiency and costs are directly linked. Using web access for a mobile solution is very inefficient and therefore costly.

Telecommunications providers charge by the quantity of data sent. It therefore makes sense to ensure:

- The data is delivered first time every time
- The technology utilised gets the data delivered in the smallest size possible

## Security, mobility and the Internet

Mobile solutions require a level of security equal to that of the business system it is servicing. Many solutions that are currently deployed that utilise web access have important security ramifications. Data sent across 'the air' in a business application is generally as valuable as data sent across 'the wire' to the business system. For that reason, an effective Mobile Middleware platform will need to provide encryption of the data and ideally will be flexible enough to incorporate an existing security product or strategy employed by the business systems.

## Connecting the people

Mobility solutions by definition mean that users are mobile and away from the office. This means they are also away from their traditional 'support' structures and peers. This raises issues for the business managers and IT managers if the mobile solution is not engineered to be robust and simple to use. Effective Mobile Middleware platforms provide the basis for reliability and satisfy the business owner and users demand for simplicity and reliability.

Mobility is about connecting people and services. Competitive advantages can be gained, costs saved and efficiencies substantially increased. The right solution for business applications will ensure these goals are achieved and users are not left frustrated and disillusioned.

## Moving forward

Faster networks will become more available, devices will become smarter, communications network coverage will progressively get better and more reliable, but the inherent issues discussed in this Opinion will remain.

The adoption of Mobile Middleware provides business users with a platform that will enable growth into future networks with lower costs and higher success rates.

To discuss this Opinion Paper or InterDev's Xmotion Mobile Middleware, contact InterDev.

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