

Cotelligent Mobility

Mobility: What's the Dilemma? White Paper

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Today's working professionals are more mobile than ever. In fact, according to the Strategies Group, 15% of the U.S. workforce is now classified as "mobile workers," which means they're out of the office 20% of the time. The success of enterprise wireless/mobility applications that service the mobile worker will be determined by fundamental application requirements that transcend any enterprise software application. Success factors include usability, functionality and availability.

Usability and functionality are inherent to the design and architecture of mobility applications today, although standards are still evolving. The current problem with mobility is availability - making enterprise applications accessible when and where mobile workers need them.

We are somewhat spoiled by today's Internet data access rates. Because we live in the "always on" Internet world, our expectations are high regarding the wireless space. As carrier (packet centric) 2.5 generation networks become available, such as Enhanced Data Rates for Global Evolution (EDGE), we will begin to see data rates rise to somewhere between 115 kbps and 384 kbps. Then comes the promise of 3 generation providers, which will produce data rates up to 2 Mbps. Mobile workers are starting to demand applications that are bandwidth intensive. The response to the bandwidth issue is that mobile data services choices will remain relatively limited for awhile.

There is also the issue of coverage. While carriers continuously expand coverage infrastructure, can you wait until you have a signal before entering information into an application? Probably not.

Fortunately, there *are* mobility techniques and tools available today that take into account the restrictions of bandwidth and coverage while still providing robust applications. A good example would be an online-offline application. A field service worker could have a wireless capable Personal Digital Assistant (PDA) loaded with his/her field-force application of choice and

accompanying data. The worker could input data and then, in near real-time, wirelessly update the enterprise system with any data that has changed. This example provides the efficiencies that the home-office desires by removing paper- and faxed-based systems while also offering potential for heightened customer service and satisfaction levels.

The example we've cited can be found in mobility middleware solutions available today. Here are more examples of additional features found in mobile middleware solutions:

- Data synchronization capabilities to mobilize enterprise applications
- Device and data management capabilities, including asset management and software distribution
- Personalized content distribution and file distribution based on user profiles
- File backup from mobile/wireless devices to remote servers.

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Why Mobile Middleware? For developers writing the applications for deployment on mobile networks, middleware expedites the re-engineering of existing applications or the development of new applications. Mobile middleware gives mobility users more flexibility in getting access to data via application interfaces. These interfaces can eliminate issues associated with using wireline protocols over mobile links.

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Other reasons to include mobility middleware in your solution:

- Mobile links are bandwidth constrained, so transmission of data using conventional wireline protocols is subject to failure. Mobile middleware uses robust methods to recover from dropped connections or transmission errors.
- By slowing transmission because of excessive overhead or multiple handshakes, conventional protocols prolong the duration of mobile transactions, generating excessive usage charges. Mobile middleware minimizes the traffic load and reduces handshakes, optimizing traffic flow.
- If a user is disconnected from the network, mobile middleware queues messages and automatically dispatches them when a connection becomes available.

The ability to provide robust enterprise applications to devices in an "always on" wireless environment will take time. So, when assessing your enterprise mobility application needs, remember to consider:

- Application data requirements (timeliness, elements of data synchronization, etc.)
- Data management
- Data security
- Device management and
- Management of applications on the device.

Including these elements in your mobility strategy will ease your wireless data dilemma.