



The Business Case for Device Management

SyncML Initiative Ltd. White Paper

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The SyncML Initiative, Ltd.

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Device Management – Why Is It Needed?

As a result of technological development, networked and mobile/wireless devices are becoming more and more complex. Consequently, connected devices are also becoming more and more difficult to manage, closely resembling the common modern dilemma of personal computer configuration and management. Hence, there is a strong need arising from consumers, Corporate Information Management (IM/IT) departments, and operators to have needed a tool for managing devices conveniently and effectively

Currently, several parties are working diligently towards building proprietary device management implementations for the mobile world. Having several proprietary implementations poses the end-users, mobile operators, device manufacturers, and Enterprise/IT to a serious risk of insufficient interoperability and associated cost implications.

A standard management protocol is therefore needed to ensure technology and market development beneficial to all parties. Device management standardization has previously been widely distributed among different standardization bodies (WAP, 3GPP, OSGi, Telemanagement Forum, etc.). However, real technology development has not been done in any of the forums. The SyncML Initiative has identified the complexity of this issue, and the importance of finding a universal solution for device management protocol.

The SyncML Initiative has initiated a new device management technology track that is concentrating its efforts in building a common device management protocol. The SyncML device management protocol will be an open, universal industry standard for remote device management of networked devices.

Device Management – What Is It?

Device management is the generic term used for technology that allows third parties to carry out the difficult procedures of configuring mobile devices on behalf of the end user (customer). Third parties would typically be wireless operators, service providers or corporate information management departments.

Through device management, an external party can remotely set parameters, conduct troubleshooting servicing of terminals, install or upgrade software. In broad terms, device management consists of three parts:

- Protocol and mechanism: The protocol used between a management server and a mobile device
- Data model: The data made available for remote manipulation, for example browser and mail settings
- Policy: The policy decides who can manipulate a particular parameter, or update a particular object in the device

In a wireless environment, the crucial element for device management protocol is the need to efficiently and effectively address the characteristics of mobile devices including low bandwidth and high latency. The SyncML Initiative, based on its experience and track-record within basic synchronization, is well-prepared to meet the market and technological challenges of device management.

Technology Overview of Device Management

The Device Management Protocol developed by the SyncML Initiative leverages existing and approved SyncML technology:

- Planned re-use of core DTD
- Management protocol similar to the one-way server-alerted sync
- Exploiting and extending transport and protocol layer security features in SyncML

Planned device management scope includes device configuration (i.e. modify or read operating parameters); software maintenance; inventory (i.e. read from a device its current operating parameters, read installed or running software list, hardware configurations); and diagnostics (i.e. listen for alerts sent from a device, invoke local diagnostics on a device).

Beneficiaries of Device Management

Management of mobile devices is one of the key features in the mobile infrastructure of wireless operators and service providers. Typically an operator or large service provider has millions of handsets in a network. The challenge to the operator and service provider comes because it is difficult and expensive to re-configure these devices and troubleshoot problems in an efficient and effective manner.

The technology behind device management benefits end users, corporate Enterprise/IT, device manufacturers, and wireless operators. Device management allows wireless operators, service providers and corporate information management departments the capability to remotely configure and manage complex mobile handsets. Hence, it reduces

the difficulty of having mobile handsets brought into service centers for re-programming. Remote device management provides operators, service providers and Enterprise/IT with an excellent tool to significantly increase cost savings and improve revenues.

Core Messages to Beneficiaries

Message to Consumers

Challenge: Devices are becoming more complex all the time as a result of new services, technological developments and new software capabilities.

Solution: SyncML Initiative Ltd. is committed to build a way to transfer the configuration task from consumers to service providers.

Message to Manufacturers

Challenge: Expectations and requirements of consumers, Enterprise/IT, operators and service providers continue to increase all the time. At the same time technological innovations and software developments increase the complexity of mobile devices.

Solution: Manufacturers need to work together to develop products that will be interoperable with each other and in this way ensure a lower threshold of complexity and increased future revenues. A novel way to move forward is to concentrate on building an open industry standard, based on the good effort already done by The SyncML Initiative. SyncML Initiative's track record, technological experience, and industry acceptance make the forum the best place to work together.

Message to Corporate Information Management (IM/IT) departments , Operators and Service Providers

Challenge: Devices and services will become more complex to set up and configure. Complexity translates into increased maintenance costs and ineffective information management.

Solution: Solution to the forthcoming device challenges (complexity, installation, upgrades, remote diagnostic, error correction etc.) must be easy to deliver, quick to install and be cost effective as well. Device Management allows service providers, operators and Enterprise/IT to manage their devices any time, and place. All of this is managed by the service provider, operator or corporate without troubling the end user (customer). Device management improves the service to consumers and eliminates major cost streams associated with customer support.

Challenge: Proprietary solution (of different forms) exists for Device Management purposes. This creates severe interoperability problems and it is cost in-effective (less competition means lesser flexibility in price)

Solution: Create an open, industry standard, and universal solution for Device Management purposes.

Use Cases of Device Management

There are numerous real-world use cases with Device Management, including:

- New device purchase
- New device purchase with pre-existing service
- Remote service management
- Help desk problem determination
- Back up and restoration
- High volume configuration
- Un-manned (e.g. embedded) devices
- Automatic status reporting
- Software download
- Change of service (e.g. adding a new service)
- Service discovery and provisioning.

Conclusions

Device Management is a technology that addresses the growing concern in the industry arising from the increasing complexity of networked devices. SyncML Initiative is well-positioned to address the specific requirements of devices in the mobile environment.

Based on SyncML Initiative's industry track record, technological competences, and industry support, it is possible to build a device management technology that will benefit all the associated parties, including end-users.

About The SyncML Initiative, Ltd.

The SyncML Initiative, Ltd. is the leading open industry specification for universal data synchronization of remote data and personal information across multiple networks, platforms and devices. The SyncML initiative is sponsored by Ericsson, IBM, Lotus, Matsushita Communication Industrial Co., Ltd., Motorola, Nokia, Openwave, Starfish Software and Symbian, and supported by more than 650 key wireless and leading companies across various industry sectors. Companies interested in deploying SyncML compliant products and services are encouraged to join the initiative.

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