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Enterprise Service Management Specialists

Enterprise Service Management (ESM) systems manage large numbers of remote intelligent devices via a variety of communication mechanisms.

Forge ESM systems maximise the high performance and reliability of services based on these devices and ensure the consistent availability of business and operational information. Benefits naturally accrue from the symbiosis between services and system infrastructure by utilising aggregated data from the underlying management system.

The Pervasive Computing Future

Pervasive technologies such as mobile phones and PDAs, home gateways, medical monitoring devices, utility meters and other such computer-enabled devices have already become part of the commercial and public infrastructure. Systems that once were centralised will increasingly have intelligent, remote, distributed hardware/software components.

People who once had to travel to distant places to monitor or configure equipment can now do such tasks wherever they may be via their computer. Similarly, people who previously had to travel to central locations (e.g. branch offices or hospitals) for physical interactions can now utilise many services remotely.

In this new business environment there are opportunities for the provision of exciting new services to remote users and service providers. Coupled with these prospects are the cost savings that may be gained from the capabilities of ESM operations support. The case study opposite shows how an ESM can radically enhance the way you provide services to your customers.

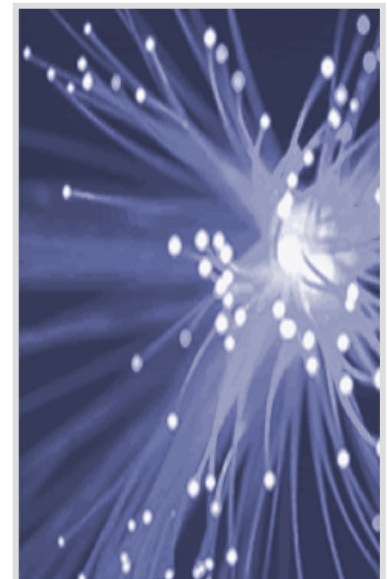
How this affects you

Intelligent remote devices have traditionally been the domain of banks, utilities and telecommunications companies - for example Automated Teller Machines and mobile phones. Opportunities for cost savings can often be realised but few organisations have successfully bridged the gap to the easy, dynamic and economic provision and management of new and changing customer services based on these assets.

Many companies and government agencies are now beginning to realise that pervasive computing solutions can bring cost savings and increased revenue while also very importantly increasing customer satisfaction. In many cases these are organisations who have no previous experience with remote devices but who can see how such environments introduce fresh perspectives on how their business functions can be improved.

Forge has successfully designed and implemented solutions for:

- Distributed Enterprise Information Systems
- Operational Support Systems
- Network Element Management Systems
- Distributed Systems Infrastructure
- Wide Area/Global Telemetry
- Subscription and Service Management
- Metadata Management



The Problem

While the rewards may be great, the introduction of this type of system can be risky and costly. The inclusion of remote devices adds a new dimension and therefore risk to service provision. Stress from end users on the one side and remote devices on the other, coupled with many points of failure and massive data throughput creates a whole new set of challenges to system builders.

Many hardware providers are not familiar with the challenges of a pervasive environment. The hardware and software often need to be developed in parallel. Device-specific proprietary protocols and lack of experience in accommodating these protocols can lead to situations where 'grey areas' lead to partial incompatibility between the devices and the ESM.

Many traditional IT companies have no experience in ESM environments. Many telco vendors have insufficient experience in traditional IT disciplines and environments. There are companies who have expertise in localised sensor networks. There are companies who have experience in traditional telco Operational Support Systems (OSS). There are companies who have experience in large-scale service delivery... but there are very few companies in the world with the level of experience necessary in all areas for the successful delivery of an ESM system.

The Solution

Forge has proven experience in all aspects of ESM delivery. Our team can assist customers with the initial project conception and then proceed on through to delivery and ongoing maintenance. We have worked with many hardware vendors in the design of functional interfaces to the remote devices.

We provide gateways for standard and proprietary device protocols over multiple network access mechanisms. We have extensive experience in OSS, Network Element Management (NEM) and the delivery of intra/internet services using our distributed systems infrastructure.

We have considerable experience implementing traditional IT (eg: EIS, ETL, data quality, OLAP, data warehouses) through our consulting and products divisions. Our development principles and processes are the foundation for building systems that not only satisfy current customer requirements but also ensure the realisation of long-term vision.

Forge systems are built to accommodate any pre-existing technical choices whilst enabling and future-proofing your strategic business process and systems engineering.

ESM system components:

- E-commerce frameworks for secure service delivery
- Service subscription management
- Automated service activation
- Quality of Service assurance
- Alarm management
- User and customer notifications
- Remote device management
- Communications gateways and network infrastructure solutions
- Integration with external business systems including billing, workflow management and inventory systems.
- Web Services

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About Forge Research

Forge has a history of working on large-scale research and development projects in association with such companies as IBM, Telstra and Ericsson as well as developing core intellectual property.

International acclaim and recognition of our work with such organisations as the National Institute for Science and Technology (USA) has positioned Forge as leaders in thinking on our field and experts in it. Members of our staff lecture at a number of Australian universities and have co-founded and held directorships at organisations such as Cryptix, the GNU Crypto Project and Software Engineering Australia (SEA). The research culture engendered by Forge ensures that members of our staff actively engage in various standards councils under the auspices of the Internet Engineering Task Force (IETF).

Forge's development team is well recognised in the commercial market place and in Australia's leading academic circles. The team has a proven history of evaluating technologies as they evolve and mature and is well positioned to identify risks involved in new systems. Forge can be relied on to make practical recommendations best suited to your current environment and your desired outcomes.