

Fujitsu Edgeware

Harnessing data into real-time business intelligence

Achieving a single, trusted, view of your available assets is a huge challenge, given the complexities involved in military support chains. Delivering comprehensive and effective end-to-end visibility depends on the timeliness and quality of data. It also relies upon how this data is appropriately shared between stakeholders, with unambiguous performance measurement and diagnostics. Fujitsu can deliver this capability using its proven Edgeware technology.



Delivering real-time intelligence to enable better support chain management

Developed by GlobeRanger, a wholly-owned subsidiary of Fujitsu in the United States, Edgeware provides the ability to harness data that is typically generated outside, or on the edge, of traditional ICT environments. Edgeware delivers the capability to:

- Collect information from a growing number of devices and sensors
- Apply military context to generate meaningful information
- Integrate with existing systems to determine appropriate action.

Seamless integration with existing and new technology

Edgeware provides the critical infrastructure layer for managing devices, networks, data and processes at the edge of the existing infrastructure. But crucially, the raw data that is captured is done so in real-time, and is error-free. Capturing and sharing error-free data and translating it in to insightful information with military context, delivers real-time intelligence that enables trusted and highly informed decision-making.

There is no need for any changes to existing support chain management systems, or back-end infrastructure. The software platform seamlessly integrates existing and new technologies, preserving past investments while enabling new edge applications. This level of connectivity has the potential to enable the Internet of Things, as more and more devices are connected to the Internet.

Edgware automates data capture from a wide range of Automated Identification Technology (AIT) readers and sensors, like barcodes, RFID tags or Internet of Things (IoT) devices that are associated with each individual asset. These tags can be encrypted to protect sensitive data from compromise as the asset moves through the military support chain. Here are just four potential applications:

■ **Enabling effective environmental monitoring of munitions**

By monitoring the environment of munitions in storage and in transportation it is possible to move from a relatively crude maintenance regime to a more advanced on-condition or even pre-emptive maintenance scheme based on received environment data. Making use of Fujitsu Edgware technology enables an asset's environmental history to be compared with predefined exposure limits, allowing the asset to be continually monitored over time. Checks can be made and alerts raised at times of transition, or as part of normal inspection routines. A robust combined sensor, data storage and RFID package can be mounted inside the shipping and storage container for a particular asset. This will be subject to the same environment that the asset experiences. The environmental history is automatically read at any time of scanning the container and the user notified of any alerts generated if certain parameters are breached.

■ **Combatting counterfeit parts in the military support chain**

Counterfeit components can degrade the performance of equipment and become a hazard to safety, a cyber threat, and ultimately a risk to life. The threat of litigation and new legislation mean that the detection of counterfeit parts is a critical priority for Defence and National Security contractors, and OEMs alike. To combat this threat, Fujitsu is working closely in partnership with Defence and National Security OEMs to manage counterfeiting practice. Edgware is at the heart of the solution providing a low-cost pathway to sharing error-free data that is critical to such collaborative working as combatting counterfeiting parts. In so doing, it gives operators and supervisors at the workplace real-time information on the end-to-end status of the support chain, protecting safety, performance, revenue and reputation

■ **Personnel tracking and weapons association**

Military personnel can also be tracked using Edgware technology. Deployed troops can be associated with specific weaponry, and the two items tracked simultaneously. If the associated items become separated by a certain distance, an alert can be sent to command and control for them to take corrective action. Likewise, contractors working on secure sites can also be tracked to ensure they do not stray from their permitted work area.

■ **Pharmaceuticals**

Edgware technology can also be deployed to monitor the temperature of sensitive drugs and other clinical items like blood products. Accurately monitoring susceptible products in this way makes it possible to detect problems early and carry out appropriate corrective action before the drugs arrive at their destination in a potentially unfit state or unusable condition.

Harnessing data in real-time to enable trusted decision-making

The Edgware suite has been designed to truly enable an organisation's business processes and decision-making. By integrating data from machine-to-machine, human-to-machine, RFID and other sensor technologies Edgware solutions enable large organisations to harness data in real-time, from a wide variety of sources.

With Edgware's advanced suite of tools, all of your devices, objects and data can work in unison and be integrated into existing software systems, transforming your unprocessed data into valuable business intelligence. Data that was once hard to access and integrate outside of a traditional ICT infrastructure is now instantly available and usable via the Edgware suite of tools:

■ **iMotion™: making sense of the Internet of Things for the enterprise**

iMotion gathers and processes data from devices throughout the enterprise and incorporates this data in to existing management systems:

- Provides the crucial interface between your organisation's objects and devices, and your day-to-day business applications
- Enables a real-time, holistic view of your business without the problems of a slow and complex integration
- Rapidly develop, configure and deploy a solution, regardless of complexity
- Implemented, quickly and efficiently, whether you require a small-scale pilot or a globally deployed solution.

■ **GR-LIVE™: end-to-end logistics management**

GR-LIVE is an AIT-based logistics supply chain application suite that delivers the capability to provide accountability and end-to-end visibility, giving your logistics operations the 'V3' advantage – velocity, visibility and value:

- Providing an end-to-end view of both inbound and outbound transactions within your supply chain
- Easily integrate this information into your existing legacy systems and business operations providing actionable visibility
- Supports both stationary and mobile AIT infrastructure, as well as a wide range of other sensor technologies.

■ **GR-MAKE™: enabling Lean manufacturing**

GR-MAKE gives businesses the tools to track, manage and improve their manufacturing processes, enabling Lean manufacturing through more effective management of your organisation's inventory:

- Effectively manage and improve even within the most complex manufacturing environments and their associated supply chains
- Manage the flow of supplies to the manufacturing floor
- Track and manage your manufacturing tools and equipment, aiding effective inventory management and cash flow.

■ **GR-AWARE™: intelligent asset management**

GR-AWARE provides a single, scalable platform to enable you to easily track and manage your business assets:

- Assets may include employees, IT equipment, furniture or other items that have been tagged
- Easily incorporates asset management information into your existing legacy systems and business operations
- Easily create business processing rules, trigger notifications and alerts, manage exceptions and generate a wide range of real-time reports.

Tried and tested

Fujitsu's Edgware solution has over 100 successful implementations within the Defence and National Security sector, including the U.S. Department of Defense, DoE, Homeland Security, DLA and all branches of the U.S. Military. Applications of Edgware in the Defence and National Security sectors are numerous, and have so far included:

- Logistics and asset tracking
- Personnel tracking, including contractors
- Weapon associations with personnel
- Inventory management processes
- Shipping and receiving processes
- Manufacturing and assembly.

Delivering real-time intelligence to enable better support chain management

Fujitsu Edgware provides the ability to harness data that is typically generated outside, or on the edge, of traditional ICT environments. This raw data is automatically translated in to insightful information that delivers real-time intelligence, enabling highly informed decision-making:

- **Automated** data capture from a wide range of AIT readers and sensors, such as barcodes, RFID tags or contact memory buttons. Seamlessly **integrates** existing and new technologies, removing the need to change existing support chain management systems, or back-end infrastructure
- Tags can be encrypted to **protect** sensitive data from compromise as the asset moves through the support chain
- Effective environmental **monitoring of munitions** enables informed decisions regarding maintenance, and **prevents** unnecessary write-off of munitions
- Device and system agnostic so can be implemented without amending legacy enterprise applications, providing a **low-cost pathway** to sharing error-free data that is critical to complex military support chains
- Military personnel can be tracked and associated with weaponry, improving troop **safety** and **welfare** on the battlefield.

Why Fujitsu?

For over 50 years we have innovated with the MOD, Government Departments and intelligence communities, co-creating new technologies and capabilities. As a result, Fujitsu has around 4,000 security cleared staff and the experience to deliver and manage both generic industry offerings and those tailored to specialist needs at OFFICIAL, SECRET and ABOVE SECRET classifications.

Enabling Your Information Advantage

In today's complex, digital operational environment, never before has information been such a key asset in securing operational advantage. Fujitsu's vision is to provide customers with the means to translate complex data into useful information upon

which to base critical decisions and actions. Transforming this ever-increasing pool of data into meaningful, useful information through analytics, automation and genuine Artificial Intelligence is critical to achieving this goal.

Fujitsu is fully committed to working closely with our customers, and through the use of co-creation will seek to enhance capability both through the acceleration of existing processes, and also through the delivery of truly new capabilities and ways of working. Our approach is based upon maximising both existing investment and best-in-class innovation, delivering the full spectrum of capabilities needed to enable your information advantage.



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