

THE POSSIBILITIES ARE INFINITE



FAST Corporate Profile

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1. FUJITSU AUSTRALIA SOFTWARE TECHNOLOGY OVERVIEW

At FAST, we have the vision, capability, and technical pedigree needed to create information technology solutions that deliver real business benefits for our customers.

Fujitsu Australia Software Technology (FAST) was established in April 1989 by Fujitsu Limited, a world leader in Information Technology, and was the first Fujitsu software development company to be formed outside Japan. It is a wholly owned subsidiary of Fujitsu Limited, Japan.

Our mission is to build solutions using advanced software technologies to achieve the leadership in cutting edge information technology for which FAST is renowned today. Our consulting services leverage our expertise in Service-Oriented Architecture (SOA), Microsoft® .NET technologies, Data Warehousing, Electronic Commerce, and Knowledge Retrieval and Management. Our core competencies include developing solutions using the most common languages (Java™, C#, C++, etc.), developing high performance web-based applications using standard application development environments (Eclipse and .NET framework) and popular software infrastructure including database management systems such as Oracle® and SQL Server®.

It is also our mission to employ a mix of proven and innovative technologies such as open systems, multimedia, and convergence to provide solutions, to enhance our customers' productivity, service levels, and profit while minimizing risk.

We have about 60 permanent, very experienced software professionals. We encourage a hands-on approach, even in our Senior Developers and Architects, which results in the development of reliable and high performance solutions in the most cost effective manner.

We have about 20 corporate customers in both the Government and Commercial sectors. Our most important customers include:

- *McDonald's® (Australia and APMEA)*
- *Fujitsu Limited, Japan*
- *NSW Department of Commerce*
- *Australian Research Council (ARC), Canberra*
- *RP Data® Limited*
- *NSW Office of State Revenue (OSR)*
- *NSW Roads and Traffic Authority (RTA)*
- *Westfield*
- *News Limited*
- *Ergon® Energy*
- *Perth Radiological Laboratory*

2. CORE COMPETENCIES

2.1 Summary

Our core competency is in the design and development of cutting edge software solutions. Our consulting services include the following:

- *Service-Oriented Architecture and Enterprise Middleware*
- *Microsoft .NET Technologies*
- *Enterprise Application Integration*
- *Enterprise Mobility*
- *Digital Management and Distribution*
- *Open Source Technologies*

Through these services, we provide demonstrated experience and expertise in the design and development of web-based workflow solutions, development of advanced search capabilities, management, distribution and playout of digital content, integration of enterprise assets (databases and applications) with e-commerce and Customer Relationship Management systems that provide enterprise wide connectivity solutions, and naturally... extensive project management expertise.

2.2 Service-Oriented Architecture and Enterprise Middleware

SOA provides a new methodology for building composite applications. The software system is viewed as a collection of reusable and relocatable services (which can reside anywhere on an IP network). FAST has already developed a number of software solutions using service-orientated architecture (refer to case studies for actual customer projects). In addition, FAST has been providing strategic advice and guidance on SOA infrastructure software and is playing a key role in developing Fujitsu's infrastructure offerings in SOA.

One of our significant strengths is in the area of Enterprise Middleware. Some of the highlights of our experience are:

- *FAST have in-depth expertise in Business Process Management, Enterprise and information integration and web technologies, including portals.*
- *FAST are playing a key role in working with various Java Communities to evolve Java standards.*
- *FAST are active participants in the Sun® GlassFish community (GlassFish is Sun's application Server). Our Engineers work as part of the international community in developing the GlassFish Application Server.*
- *FAST has undertaken a large amount of Architectural assignments for a number of Fujitsu's corporate clients – Sydney Water, NSW Police, News Limited and Ergon Energy.*

2.3 Microsoft .NET Technologies

FAST .NET Capabilities

Since its inception, FAST has built up a considerable body of knowledge and experience in developing sophisticated applications based on a complete end-to-end development cycle ranging from inception through design, development, test, documentation, training to installation and ongoing product support.

This experience has been strengthened through working with a varied range of platform environments, such as large mainframe environments through UNIX® and Windows server systems to low level desktop systems. As well as broad platform knowledge FAST has also developed applications, and the corresponding tools, using a wide range of development languages such as C/C++, Java, VB, .NET, etc.

This proven history of successful development across such diverse environments allows FAST to bring a maturity of experience and vision into the development of .NET applications. By combining this maturity of experience and vision with Microsoft's recommended best practices, from their 'Patterns and Practices' documents, FAST can bring a real advantage to development of .NET applications.

Details

FAST has developed .NET applications using the following technologies and components and has gained considerable experience and knowledge in getting the best from them.

Microsoft Best Practices

FAST uses Microsoft's recommended best practices from their 'Patterns and Practices' documents as a guide when designing and building .NET applications. We have utilized and extended the Microsoft Enterprise Library V2.0 for building enterprise applications. From the Enterprise Library we have extensive experience in using a number of their Application Blocks as foundations for our development. These include the following:

- *Data Access Application Block*
This reduces the amount of custom code required to create, test, and maintain when building data access layers in .NET applications.
- *Exception Handling Application Block*
This makes it easier to implement consistent exception handling policies at logical tiers in an application. Exception policies can be configured to perform tasks such as logging exceptions and wrapping or replacing exception types.
- *Logging and Instrumentation Application Block*
This allows developers to instrument applications with logging and tracing calls. Log and trace messages can be routed to a choice of data sinks, including the Event Log, text files or WMI.
- *Configuration Application Block*
This makes it easier to build applications that read and write configuration information from a variety of data sources. The block also includes a graphical tool which assists in editing and viewing application configuration data.
- *FAST has extensive experience in the design and deployment of distributed applications.*
This experience has been utilized in extending some of these Application Blocks to behave more robustly in a distributed enterprise environment.

.NET Framework & ASP.NET

FAST started using the .NET framework when it was still in its early beta stage and we have gained a great deal of experience during its development and subsequent release. In fact, FAST was the first to report a significant bug in the SQL Server Data Provider to Microsoft which required the development of a workaround until it was fixed in the final release.

Our web applications are built using ASP.NET and we have implemented AJAX style support on the client UI to provide enhanced functionality for the user. This predated the Atlas development from Microsoft which provides AJAX framework within ASP.NET applications.

FAST uses Visual Studio 2005 Team Edition as the preferred design, development and test environment for .NET applications. Although this environment is rich and productive, FAST has developed some custom tools and functions to enhance the development environment. Specifically, we have developed automated build processes incorporating the open source WiX tool to produce the installation files for the application.

Development Case Study

The most recent .NET development undertaken by FAST was the migration of a Java based thick client application which utilized an Object Oriented Database at its backend. The project involved developing a web based application that provided the same functionality as the existing application's rich UI but within the limitations of a Web browser environment.

The new application architecture had to be flexible such that the application layers could be hosted on a single machine or distributed across multiple machines in order to fit the customer's cost/performance criteria. The design of the application allows the choice of the deployment mode to be driven by configuration settings made at the time of installation. This allows the application to use the same code base no matter how the application is deployed.

Metrics

The original application was a Java thick client application coupled to an OODBMS back end. The new application was a 3 Tier distributed application with ASP.NET used for the UI, and SQL Server 2005 as the backend DB. The Business and Data Access layers are based on Application Blocks from the Microsoft Enterprise Library which have been extended to suit our requirements.

The application has been designed as a service based architecture to allow future Web Services to interface with the Business layer while maintaining integrity of the system.

The metrics of the application are as follows:

- .NET 2.0 code
 - 224 classes
 - 140,000 lines of code
- MS SQL Server 2005
 - 79 Tables
 - 84 Views
- ASP.NET
 - 160 Screens
 - Web browser (JavaScript only)
 - IE and Firefox supported

2.4 Enterprise Application Integration

In today's business environment, organisations need to be able to respond quickly to new opportunities and market demands. Organisations are therefore looking for better ways to utilise their existing hardware and software resources to meet the needs of their users so that they can increase productivity and provide better service to their customers. What makes this challenge more difficult is that today's business applications are distributed over heterogeneous systems, often with little or no inter-application integration.

To create and capitalize on new opportunities, an organisation must have an Enterprise Architecture strategy in place. The architecture must provide for an information system that can support continuous changes in the business environment by allowing rapid restructuring of existing applications and streamlining of the business process. This is possible only if the information system is highly flexible.

To successfully define and implement Enterprise Architecture, several new technologies must be embraced:

- *Service-Oriented Architecture (SOA) for integrating distributed applications and data*
- *A component-oriented technology for enhancing application re-usability and performance*
- *A network computing technology for handling user transactions on the Internet and Intranets*

FAST can assist you in the study, development and implementation of an Enterprise Integration Architecture for your organisation. We have completed several projects involving architectures based on SOA, CORBA, Enterprise Java Beans (EJB) and Web Services.

By using FAST Enterprise Application Integration Services to integrate the heterogeneous data sources and applications, customers can realise many significant business benefits.

- *End-to-End supply chain integration*
- *Seamless integration of legacy assets with Customer Relationship Management and e-commerce solutions.*

2.5 Enterprise Mobility

FAST has experience in developing and maintaining mobile solutions. A recent project involved creating a field service engineers application that enables remote users to receive and prioritize their service calls, request spare parts and allocate time against tasks. All this is driven by a centralized call management system. This project utilized the Dexterra middleware components to provide an event-driven messaging system to manage the communication of data between remote mobile clients and the back office application. Dexterra was also used to provide integrated mobile device management and application provisioning services. This project enabled the client to achieve noticeable gains in the efficiency and responsiveness of their field service offerings.

2.6 Digital Management and Distribution

Since 1999 FAST has been developing, selling, implementing a suite of multimedia digital scheduling and distribution applications called TELentice™. The suite provides all of the functionality required to enable the management of large scale digital signage networks. Functionality includes network planning, pricing, client management, digital content management, targeted booking, scheduling, distribution and auditing. We have successfully installed systems in Australia, Europe, Asia and the Middle East. As part of these installations we have developed expertise in the Convera™ suite of digital asset management solutions. These solutions allow our clients to capture, convert, manage and re-purpose analogue content for use across digital signage networks managed by the TELentice suite of products.

2.7 Open Source Software

Fujitsu Australia Software Technology (FAST) has a long history of involvement in open source communities. Open source software that is used and contributed to by FAST include:

- *PostgreSQL Relational Database*
- *Liferay Web Portal*
- *OpenCms Web Content Management*
- *Apache Initiatives, including Apache Web Server and Tomcat App Server*
- *Red Hat and SUSE Linux*

FAST offer support and consulting services for PostgreSQL Relational databases to enterprise and SME customers, as well as local and Federal Government departments.

FAST have also developed an associated open source product known as HiAv Solution. This is a High Availability solution for PostgreSQL that utilises the open source Slony database replication software to make RDBMS replication more manageable for DBA's and developers alike.

2.8 Project Management Methodologies

Fujitsu follows a proven methodology in the implementation of our solutions. Our Project Management practices encompass Software Quality Management System and they form a significant part of our ISO 9000 compliant Development practices. Our Software development methodology specifically caters for the development of cutting edge solutions with a view to minimizing the risk for the sponsors. It involves a proof-of-concept phase where the risks are very clearly articulated and addressed and is followed by a development phase consisting of many iterations each with a short cycle.

3. RECOGNITIONS

FAST was one of only ten Australian software developers recognised at the 2001 Consensus Software Awards. A panel of 35 judges selected the FAST TELentice product as a winner out of 27 software development nominations, describing it as an 'innovative, performance-based product with further potential'.

In addition, FAST was a national winner in The Secrets of Australian IT innovation Award in 2002 for software development.

