



Centre for
Securities
Industry
Strategy

Michael Aikins

DIRECTOR

Nationality: Australian

Educational Qualifications B.Sc Applied Physics

Affiliations:

- Member of the Institute of Electrical and Electronics Engineers (IEEE)
- Member of the Australian Computer Society (MACS)
- Member of the Internet Society

Overview: Michael has 15 years experience in the architecture and deployment of distributed systems. Prior to joining the Centre for Securities Industry Strategy (CSIS), Michael was employed in senior technology management and design roles within both the vendor and private industry environments. These positions included some 7 years within Digital Equipment Corporation and senior technology planning and management roles within the Australian Stock Exchange.

A strong technical foundation underpins Michael's skill in mapping the capabilities of distributed systems to the key business objectives of the client. This capability has been demonstrated in such projects as the analysis and evaluation of exchange systems for trading, clearing and settlement processes;

the design and implementation of a network design quality audit program within a major systems integrator; the concept, design and deployment of a technical certification program within a leading computer vendor; the technical architecture for a major Australian and New Zealand Library network and the design and implementation of service level agreements in the finance industry. The definition and detailed design of the ASX Strategic Blueprint and the



development of a strategy and technical architecture for a coherent electronic commerce strategy in the securities industry are further examples of the manner in which Michael approaches the use of technology as a key strategic tool.

Michael is a respected industry expert of both national and regional reputation, in the areas of strategic information planning, distributed systems design and management, electronic commerce, messaging systems, and open systems implementations.

Key Skills:

- Electronic Exchange Systems and Network Architecture
- Strategic Information Policy Planning
- Corporate Distributed Systems design and deployment
- Systems and Network management strategies
- Internet and Intranet Electronic commerce architectures
- Electronic Messaging Systems
- Multi-vendor Interoperability and Performance Benchmarking

Recent Relevant Experience:

Consulting Architect Commencing in 1999 and continuing through till today, Michael and Geoff Reynolds have undertaken a number of assignments for the Singapore Exchange (SGX), formed from the merger of the Stock Exchange of Singapore (SES) and the Singapore International Monetary Exchange (SIMEX).

The Singapore Exchange (SGX)

The major assignment was the development of a detailed strategy and plan for the introduction of FIX-compliant open interfaces to SGX's trading systems. Michael was the architect of this strategy.

In July 2000, CSIS was appointed by SGX and Hewlett Packard (Singapore) to manage the Program Office for the introduction of open interfaces for SGX's trading systems. Michael is acting as a Consulting Architect for all open interface projects. (Refer Integrated Data Feed Project below)



Technical Advisor Inter-touch is a provider of global e-business and network infrastructure services to the hospitality industry. Michael has been employed by the Chief Technology Officer to develop a new global technology roadmap to complement a suite of new e-business offerings being developed by inter-touch.

inter-touch Pty. Ltd

In this role Michael is assisting inter-touch in the design of the overall enterprise architecture, the selection of key technology partners for inter-touch and the development of a comprehensive technology program management process within inter-touch.

Strategic Advisor Global On Line Limited (GOLD) is developing a new retail Foreign Exchange (FX) electronic market. CSIS has been engaged by GOLD to provide strategic and technology advice.

Global On Line
Dealing Limited

Michael is providing technical review and guidance to GOLD on their proposed market mechanisms and functional design. In addition, Michael has been asked by GOLD to advise on the “Buy versus Build” decision based upon the defined GOLD Functional Specification and their need for rapid market deployment.

Advisory Technical Architect Michael is currently acting as Advisory Technical Architect for a new order routing service provider – Tigerex Limited. In this role, Michael has designed a comprehensive FIX and SWIFT based messaging routing infrastructure as the basis of the global TIGEREX service offering.

Tigerex Limited

Michael and Geoff Reynolds have also provided strategic consulting services to Tigerex management in the scoping and design of their proposed product offerings. CSIS has also assisted Tigerex in the development of targeted market entry strategies and targeted client research.

Integrated Data Feed CSIS was asked by the Singapore Exchange (SGX) to assist in the design and vendor selection process for an Integrated Market Data Feed (IDF). Using the CSIS proprietary exchange technology evaluation framework – *EVALex*, Michael developed a detailed analysis of the possible mechanisms to deliver the IDF.

The Singapore
Exchange

Michael also performed extensive technical evaluations of commercial product offerings and delivered the results in a comprehensive management briefing to SGX. As part of this process Michael and Geoff Reynolds (CSIS Director) developed an alternative strategy to enable SGX to deploy a comprehensive market data mechanism utilising existing deployed technologies (SGXaccess). This has been adopted by SGX.



Strategic Advisor Michael acted as a Strategic Advisor and consulting Technical Architect for a start-up automated derivatives exchange (ADX). This exchange traded both debt
The Australian Derivatives Exchange futures and Index-based futures. Michael was involved in product design, clearing strategies, strategic alliance negotiations and systems and network architectures.

Michael also provided ADX with consulting advice regarding the organisational structure of the new exchange as well as assistance in the targeting and selection of key staff.

Electronic Selling Project CSIS was engaged by the Australian Wool Exchange (AWEX) to provide an independent business and technology audit of a proposed new Electronic Wool
The Australian Wool Exchange Market System. A detailed technical report was delivered to the AWEX board reviewing the proposed Electronic Selling (ES) system with recognised best practice in automated exchange environments.

As a direct follow-on to this review and audit assignment, CSIS was asked to develop an industry integration strategy with a strategic goal to rationalise existing industry networks and IT systems into coherent, cost effective and integrated electronic marketplace.

Enterprise Technical Architecture Michael performed an assignment for The Stock Exchange of Singapore (SES).
The Stock Exchange of Singapore The project was to define the business and technical requirements for a new merged equities and derivatives exchange and then to use this information as the basis for the development of an Enterprise Architecture for SES.
The major projects required to migrate SES towards this target architecture where identified, resources and costs apportioned and an implementation plan developed for SES. This project required Michael to work closely with the SES executive management group as well as major vendor and industry concerns.



Strategic Technology Advisor Michael was engaged as acting in the role of Strategic Technology Advisor to a new Electronic Options Exchange – the International Securities Exchange (ISE). ISE now operates the first fully automated stock options exchange in the US. It commenced operations in early 2000.

International Securities Exchange (New York) Michael’s role was to act in a review and audit function for senior exchange management as the technology solution for the ISE was put in place. This role required Michael to review both the business and technology aspects of network and systems required for the operation of a national electronic exchange.

Industry Investment Strategy Michael was engaged by a major international Telecommunications corporation to develop a strategic framework for expansion and investment into the financial services industry.

Major Telecommunications Carrier In this piece of work, Michael developed a comprehensive investment and product development strategy for the client. This project was expanded to identify and perform the initial evaluation of major investment opportunities within the financial sector.

Enterprise Technical Architecture and Retail Management Strategy Michael worked with the Dairy Farm Group in the development of a comprehensive Enterprise Technical Architecture. Under the direction of the Group Technical Architect, Michael was involved in the development of the first group wide strategy on technology usage.

Dairy Farm Group Under the auspices of the Open Group, Michael operated as the lead technical architect in a team of some ten world experts. The Technical Architecture Program Committee (TAPG) was formed as the “think tank” for the development of technology strategy within the Dairy Farm Group.

Michael was also the lead technical architect in another major strategic initiative within the Dairy Farm Group. The Retail Management Architecture (RMA) was an initiative to develop and deploy an enterprise-wide management infrastructure. This infrastructure would provide for business processes rather than technologies to be directly deployed, managed and measured across the Dairy Farm Group and its’ business units.



Study into the current state of the Australian Electricity Marketplace KPMG Europe commissioned Michael to gather a team of market experts to analyse the current state of the Electricity market within Australia. Michael, along with two other business analysts performed a comprehensive interview and research process across the Australian, European and New Zealand Electricity marketplaces.

KPMG Europe

Through Michael's contacts within the world of stock markets, the team was able to interview Managing Directors, past Chairman and major, industry participants. The information and research contributed to a strategy briefing report that was delivered to KPMG Europe by way of both a printed report and a formal executive level presentation.

Strategic Business and IT Plan Michael was involved in a major strategic review of the new Wiener Bourse AG. This organisation was formed by the Austrian Government as a merger between the OTOB Derivatives and VSX Equities Exchanges. KPMG Europe and CSIS

Vienna Stock Exchange

teamed to develop a strategic plan for the new merged entity that incorporated both the emerging strategic alliances in exchange environments and the technology and cost issues surrounding modern cash and derivative market delivery.

CSIS provided world eminent advice on exchange systems, architectures and technology strategies and developed a coherent strategic IT blueprint for the merged systems of the VSX and OTOB. From this high level blueprint, Michael also delivered a comprehensive systems architecture for the delivery of trading, clearing, settlement and market information services to participants (both local and international) of the Austrian financial markets.

Strategic IT Review Michael performed a targeted IT Strategic Review of the IT Systems and Infrastructure for the CEO of the Hong Kong Futures Exchange (HKFE). This confidential report looked at the linkages between the proposed corporate strategic directions and the capabilities and systems available within the technology groups of the HKFE. Specific tactical focus areas were identified along with the identification of core strategic IT initiatives.

Hong Kong Futures Exchange



Distributed Systems Architect**Australian Stock Exchange**

Michael was the chief technical architect on a \$26M project to design and deliver a distributed automated derivative trading system. This project deployed a high-speed national network serving some 200 participants as well as international market connections.

Michael was responsible for the overall system design, security and systems management models as well as the deployment strategy. In parallel with this work, Michael also provided systems integration consulting to the ASX in the development of an overall trading systems integration strategy.

IT Strategic Review**Auscript**

Under the direction of the CEO, Michael was asked to perform a strategic review of key business systems used by Auscript. This organisation is in the business of judicial systems, case management, court reporting and document discovery systems.

The review focused on the development of an internet/intranet architecture and deployment framework, selected from the currently available commercial environments.

IT Strategic Review**Media Monitors Australia Pty. Ltd.**

Under the auspices of the broader Organisational Review undertaken by the Board, Michael performed a strategic analysis and review of the IT infrastructure and capabilities.

This review was delivered to the Board along with a key set of indicators showing how the systems and technologies in use within Media Monitors measured up against industry best practice. Key competitive technologies and strategies were also highlighted.

Australian Public Key Authentication Framework

Representing the interests of the finance and securities, Michael worked within a small cross-industry taskforce to develop the cornerstone framework document for Electronic Commerce in Australia.

The work of the PKAF Taskforce has been recognised worldwide as a major contribution to the establishment of the global electronic marketplace.

Audit and Review**Austraclear National Network Infrastructure**

Austraclear is the central clearinghouse for the Australian bond and government securities marketplaces. Michael provided a technical audit and review role to the senior management group on the proposed new national network infrastructure project (ANNI).

In this role, Michael was responsible for the review of bids from prospective network integrators, the translation of a network architecture from concept to formal architecture and the definition of a coherent network security framework.



Systems Management Framework Under the auspices of the CIO for TAFE, Michael was involved in a number of business process and organisation re-engineering projects. In addition, Michael provided detailed advice and consultancy services to TAFE on the establishment of a dedicated Enterprise Architecture Office.

Department of Technical and Further Education As part of this project, Michael developed a comprehensive enterprise management framework. This framework covers both the business functions and technical services required to build an integrated and managed service delivery mechanism for technology based services within TAFE.

Chief Technology Officer Michael was first to hold this role within the Stock Exchange. In this role he was responsible for all strategic technology planning within the ASX. In addition he was chartered with the design and prototyping of major technology-based business solutions for both the ASX and key industry initiatives.

Australian Stock Exchange

Information Strategic Blueprint Under the mandate of the Managing Director, Michael was chartered with the design of a comprehensive Information Systems Architecture for the Securities Industry in general and the ASX in particular. This involved the interview of some 50 key industry leaders and the distillation of some major industry and ASX strategic initiatives.

Australian Stock Exchange

This work was independently reviewed by the ASX board and given complete and unequivocal endorsement by that body. As a direct follow-on from this work, an exhaustive board level strategic planning exercise was initiated and Michael directly participated in this.

National Telecommunications Manager This position was established by the ASX in recognition of the critical role that telecommunications plays in the delivery of a national computer based trading and settlement securities market. Michael was responsible for all voice, data and video services used by the ASX. This entailed the management of a \$2.8M annual communications budget and the establishment of a national support team of some 20 telecommunication professionals.

Australian Stock Exchange

Michael designed and implemented a national network management architecture for the ASX Corporate network which entailed 24x7 monitoring of both performance and availability across such diverse technology as ATM switches, Microwaves, SDH-based fibre trunks and multi-protocol bridge/routers.



Distributed Systems Architect Michael was the principal distributed systems architect on a number of major systems integration bids including Queensland Electricity Commission (\$50M), National Health Communication Network and the National Libraries Project. He was responsible for the design of the proposed systems solutions along with establishment and tuning of the required prototype systems. These projects made significant use of such products as OSF DCE, CORBA-based Object brokers, Messaging platforms, X.400 and X.500.

Regional Manager of Conformance and Interoperability Engineering Reporting into the world-wide manager, Michael was responsible for all Open systems interoperability, performance and formal conformance issues within the Asia-Pacific region.

Digital Equipment Corporation Michael's team performed conformance and performance testing for Digital Equipment communications products. As the official representative for Digital Equipment, Michael regularly worked on major industry and government forums and committees (GOSIP, AGGOS and Broadband Expert Services Group).