IntegratedEA '09

Enterprise Architecture Conference

February 24th-26th

Savoy Place, London

www.integrated-ea.com/iea09

Conference Programme

Welcome to Integrated-EA '09

First of all, let me welcome you and thank you for supporting this event. It's hard to justify attending conferences in times of recession and many of you have had to build a very strong business case for attending. Hopefully our excellent programme of presentations has helped with this. We're in our second year of running Integrated-EA and I've got to say the quality of presentations never ceases to impress me. I know a lot of people attending this week submitted abstracts and weren't successful, but please don't let that put you off trying again next year.

This year's event is more defence-focused than last year, but I think that's a fair reflection of where some very interesting enterprise architecture work is going on. We have presentations on CIPHER, FLIS and the KSA – three major UK MOD initiatives with strong EA themes. We also have a presentation on the forthcoming DoDAF 2.0 specification, and a seminar covering the latest version of MODAF (v1.2). There have been some interesting developments in the standards arena too, with IDEAS and UPDM both due for release in 2009.

I'd like to thank our exhibitors and sponsors – we've had a great take up of exhibition stands this year. We also have two sponsored sessions in the conference itself (IBM & Salamander), and I've been asked to remind you that Artisan Software Tools are holding a raffle (they won't tell me what the prize is, you'll have to visit their stand for that). This year's drinks reception is sponsored by one of the consortia that was down-selected for the CIPHER options phase – BT-Fujitsu-Thales. The sponsor profiles are provided at the back of this programme.

I hope you enjoy the conference, and if there's anything you think we can do to improve it, let us know via the feedback forms.

Finally, I'd like to thank Penny Creed for helping me organise the event. I think you'll agree she's done a great job.

Ian Bailey

ian@modelfutures.com

Day 1 – February 24th, 2009

09:00-09:30	**Welcome and Registration**
09:30-09:40	**Conference Introduction** **Ian Bailey**, Model Futures
09:40-10:20	**Opening Keynote** **Katie De Bourcier**, Director Information Exploitation, UK MOD CIO Office
10:20-10:50	**An Update on the KSA Activity in MOD** **Al Murray**, Key Systems Advisor, UK MoD
10:50-11:20	**Coffee Break**
11:20-11:50	**Managing the Trading Environment in Practice** **Bob Barton**, Capability Development Director, BAE Systems – Strategic Capability Solutions
11:50-12:20	**An Executive-Level Enterprise Architecture Perspective** **- The Operations, Services, Performance and Functionality (OSPF) View** **Bruce J. Brown**, Director, Architectures, Northrop Grumman
12:20-13:20	**Lunch**
13:20-13:50	**NATO's Approach to Enterprise Architecture** **Frits Broekema,** Principal Scientist, NATO C3 Agency
13:50-14:20	**The Role of Enterprise Architecture in ISO 8000** **Prof Matthew West**, Keyworth Institute, Leeds University
14:20-14:50	**Coffee Break**
14:50-15:10	**Session Intro: Enterprise Architecture, an international picture** **Dave Chesebrough**, President, Association for Enterprise Information
15:10-15:50	**International Keynote – Achieving an Information Advantage – a DoD Perspective** **Brian Wilczynski**, Director, Enterprise Architecture & Standards, Office of the US Department of Defense Chief Information Officer
15:50-16:20	**The MODAF Learning Portal** **WgCdr Mikael Hagenbo**, CIO Architect, Swedish Armed Forces Headquarters and **Fariba Hozhabrafkan**, Cisco and **Lars-Olof Kihlström**, Senior Consultant, Generic Systems AB
16:20-16:50	**IBM Sponsored Afternoon Tea**
16:50-17:50	**IBM sponsored panel session: 3 Hard Problems** – Interoperability – Federated Architectures – Common Architectures **Ian Bailey,** Model Futures; **Steve Hitchens,** NITEWorks; **Gus Smith,** DE&S System Engineering and Integration Group; **Steve Winter,** NATS
17:50-20:00	**Drinks Reception**

Day 2 – February 25th, 2009

09:00-09:30	**Welcome and Registration**
09:30-10:10	**Keynote** **Steve Winter**, Chief Technologist, NATS
10:10-10:40	**Use of Enterprise Architecture in the Critical National Infrastructure.** **Laurence Marzell & Charles Le Gallais CBE -** CNI Scan Programme & Gold Standard
10:40-11:10	**An Enterprise Approach to Information Assurance in MOD** **Lt Col Grant Morley**, UK MOD CBM-J6 Policy
11:10-11:40	**Coffee Break**
11:40-12:10	**An Overview of UPDM – A Unified Profile for DoDAF/MODAF** **Matthew Hause,** Chief Consultant, Artisan Software Tools
12:10-12:40	**The Open Group Architecture Framework (TOGAF™): A Comprehensive Overview** **Andrew Josey**, Director, Standards, The Open Group
12:40-12:55	**Pre-lunch thoughts from Salamander – Making EA work for MoD** **John McNaughton**, Principal Consultant, Salamander
12:55–13:55	**Salamander Sponsored Lunch**
13:55-14:25	**Combining Top-down and Bottom-up Techniques for Developing More Effective EA** **Dave Dyke,** Agilit Ltd., **Anthony Alston,** Head, Centre for Applied Systems Studies, Cranfield University
14:25-14:55	**An Enterprise Architecture Approach to Options Analysis in Large Acquisition Programmes** **Mike Duffy,** CIPHER Assessment Phase – Team Member and **Fintan Hanbury,** Thales CIPHER Team
14:55-15:15	**Coffee Break**
15:15-15:55	**Keynote** **Brig Alan Clacher**, Director, FLIS Programme, UK MOD
15:55 on	**Panel Session**

Day 3 (Seminars) – February 26th, 2009

09:00-09:30	**Welcome and Registration**
09:30-11:00	**MODAF Seminar** **Ian Bailey, Model Futures Ltd.**
11:00-11:20	**Coffee Break**
11:20-12:30	**MODAF Seminar (cont.)** **Ian Bailey, Model Futures Ltd.**
12:30-13:00	**Light Lunch**

Abstracts

Managing the Trading Environment in Practice

Bob Barton, Capability Development Director, BAE Systems – Strategic Capability Solutions

We live in an information rich environment but ironically the data available to senior military and industrial leaders is often poor, out of context. This means that it is becoming increasingly difficult to make well informed strategic and coherent decisions. Historically the decisions have been heavily equipment focussed, but under the growing financial pressures the key demand is to be able to compare and "trade" possible options confidently, across a complex decision space. In order to perform such trades with reasonable confidence the evidence and supporting information must be reliably sourced and coherently used. In this way decision makers can identify, evaluate and assess potential options, confident that the "pictures" they draw represent an accurate view of the truth. Options now must take full account of the changing threat, the stringent financial conditions and the relative effectiveness across the military capability domains. Critically, the decision process must fully consider the balancing of solutions across the Defence Lines of Development.

Add to this heady mix the need to consider risk, Industrial capacity and technology availability (to name but a few further variables) and you have a decision environment which stretches decision makers skills to the limit. In BAE Systems we have developed an EA-driven environment that addresses precisely this challenge; an inclusive environment that draws together the evidence and generates highly compelling views, thus helping to characterise the decision space and enabling the user to more confidently compare the options and examine the implications. We are working across the MOD capability spectrum to develop and tune the approach, and will share some of our experiences and achievements.

An Executive-Level Enterprise Architecture Perspective - The Operations, Services, Performance and Functionality (OSPF) View

Bruce J. Brown, Director, Architectures, Northrop Grumman

Enterprise Architecture frameworks such as DoDAF and MODAF require the use of multiple artifacts to fully describe the enterprise. These many views, typically fragmented among many screens or sheets, make it challenging for the executive to fully grasp the "what-who-how" of the whole enterprise. For a major U.S. Army program supporting two-million users, we wanted to capture knowledge of its capabilities, use-cases, performance, and supporting services in one holistic view. The concept was to show a service core diagram inclusive of functional capabilities and performance attributes. Thus the Operations, Services, Performance and Functionality (OSPF) View was created. A key element was the use of traceability symbols for mapping performance and capability features to specific supporting services and applications. For planners and executives, it became easier to understand how specific investments in upgrades and changes could impact functionality and performance especially in the migration from "as-is" to the "to-be." While the concept is not amenable in all cases, it applies best in an enterprise exhibiting an extensive array of user functions and supporting services. Success of the OSPF view is evidenced by the key Army decision-makers who frequently reference the architecture pinned on the walls next to their desks. The OSPF also serves as an excellent tutorial instrument for new staff, and helps communicate a common understanding among the development team and key stakeholders.

The Role of Enterprise Architecture in ISO 8000

Prof Matthew West, Keyworth Institute, Leeds University

ISO 8000 is the emerging standard from the International Organization for Standardization for data and information quality. One of the things that is becoming clear is the importance of enterprise architecture to data and information quality. A Quality Management System for Information requires an infrastructure of models, standards, governance, policy etc to operate, and much or all of this will look familiar to those who know about Enterprise Architecture.

This talk will look into the generic Quality Management System for information and draw the links between the various processes in that system and the elements of enterprise architecture that are required to support them.

The MODAF Learning Portal

WgCdr Mikael Hagenbo, CIO Architect, Swedish Armed Forces Headquarters and
Fariba Hozhabrafkan, Cisco and **Lars-Olof Kihlström**, Senior Consultant, Generic Systems AB

The MODAF Learning Portal was developed as a collaborative project by the Ministry of Defence and Swedish Armed Forces as a mutually beneficial activity agreed under the auspices of the Anglo-Swedish Implementing Arrangement Matrix NEC NBD annex to the Memorandum Of Understanding (MOU) between United Kingdom and Sweden.

Two project kick-off meetings were held in London and Stockholm in early 2007, at which stage the scope was limited to MODAF version 1.1. The plan was to develop a worked example and scenario based on the use of MODAF in the context of a generic enterprise architecture process (GEAP). The delivered GEAP would be version 0.5, to highlight its alignment to MODAF 1.1, and recognising the MODAF 1.2 was in production.

It was agreed that MOD and the Swedish Armed Forces would each contribute 50% of the contractual resources required to undertake the work. MOD (DG Info) acted in the Project Management role, with Serco's Fariba Hozhabrafkan being given the responsibility to manage and co-ordinate contractual effort. The project ran in to a few difficulties regarding funding and contractor availability, but was ready by April 2008 at which time MOD identified the opportunity to add some enhancements: two additional modules and a professional voice-over.

Version 0.5 was delivered to MOD in August 2008.

Swedish Armed Forces and MOD will be investigating the options to fund a version 1.0 of The MODAF Learning Portal, updated to reflect the changes made in MODAF version 1.2, e.g. the inclusion of the service views.

In the same way as the MODAF Learning portal, This presentation has been prepared in collaboration between the Swedish Armed Forces, Ministry of Defence, Generic and Serco Consulting. The presentation will give you a short background, but will mainly focus on the result of the bi-lateral effort and will give you a quick glimpse of what you can expect from MODAF Learning Portal in terms of understand the make use of MODAF in your daily work in defence.

Use of Enterprise Architecture in the Critical National Infrastructure.

Laurence Marzell & Charles Le Gallais CBE - CNI Scan Programme & Gold Standard

The independent review into the 2007 flooding by Sir Michael Pitt for the Cabinet Office highlighted the need for a Systemic approach to understanding the Critical National Infrastructure and its risks and threats whether from terrorist or natural events.

The review recognised "There are already some positive industry-led cross-sector coordination activities, such as the CNI Shared Capability Advisory Network (CNI Scan)". This recognition was based upon the approach the Programme has adopted, across both the public and private sectors, to develop a repeatable methodology to address 'system level vulnerabilities' through a collaborative approach to building on best practice security, risk and resilience planning in the CNI.

The Programme adopts an all hazards approach as challenges and threats, whether natural or man-made, are shared and common across the entire system, its organisational structure and the communities it transcends.

An interoperable toolkit incorporating Human Factors and Systems Engineering, captured in an Enterprise Architecture Framework (MODAF), supports the development of policy and doctrinal change to meet current and future capability gaps identified in a synthetic environment.

Knowledge Transfer is a key Programme objective and feeds the development of a repeatable methodology that spans the complex web of people, processes, systems, technology and governance that is today's CNI.

Inter-agency-co-operation for the development of strategic planning for major events, or contingency plans for major disasters, benefit through an iterative loop between strategic decision makers and those implementing the decisions.

Project Gold Standard, part of the Cabinet Office Programme that strategically supports UK National Security and Resilience, is exploring with CNI Scan how to support this through the scenarios and exercises it generates.

An Overview of UPDM – A Unified Profile for DoDAF/MODAF

Matthew Hause, Chief Consultant, Artisan Software Tools

A veritable Tower of Babel of military architectural frameworks, such as DoDAF, MODAF, NAF, DNDAF, and ADOAF, is emerging. Each one adds to, redefines and/or clarifies the concepts, views, viewpoints and concerns contained within Military Architectural Frameworks, with the intention of improving procurement, planning, and implementation of military systems. However, supporting multiple and sometimes divergent frameworks leads to problems for industry, military organizations and tools vendors alike. Incompatible frameworks cause interoperability problems between governments because models cannot be exchanged. Finally, having to support several constantly changing framework formats means that modelling tool vendors have a support nightmare. UPDM uses the Unified Modelling Language (UML) and the Systems Modelling Language (SysML) as an underlying mechanism making it feasible to work towards a standardized UML/SysML profile for these Military Architectural Frameworks.

In March 2008, the UPDM group was re-formed by members of INCOSE and the OMG to create the Unified Profile for DoDAF and MODAF (UPDM) using UML/SysML. It is important to stress that UPDM is not a new architecture framework. Instead, it provides a consistent, standardized means to describe DoDAF and MODAF architectures in UML-based tools as well as a standard for interchange. The presentation will provide a brief overview of the development of UPDM, views unfamiliar to DoDAF modellers, and our future goals.

The Open Group Architecture Framework (TOGAF™): A Comprehensive Overview

Andrew Josey, Director, Standards, The Open Group

The Open Group Architecture Framework (TOGAFTM) is a comprehensive architecture framework and methodology which enables the design, evaluation and implementation of the right architecture for an enterprise. The framework is vendor- and technology-neutral and can be adopted by any organization as an architecture method. TOGAF currently is being used by 80 percent of the Forbes Global Top 50 companies and has certified practitioners in 67 countries.

One of the design principles of TOGAF is not to be prescriptive in terms of the set of architecture deliverables, but rather to give guidance to the practitioner in aligning the deliverables with the appropriate industry frameworks such as Zachman, DODAF and FEAF.

This TOGAF workshop will provide an in-depth overview of the Architecture Development Method (ADM) and Enterprise Continuum that are the core elements of TOGAF. The workshop leader will then facilitate an interactive session to develop architecture deliverables aligned to the ADM using a practical case study.

The objectives of this workshop are:
- to provide an in-depth overview of TOGAF as a framework and method
- to provide an introduction to the latest version of TOGAF, version 9, which will be available in February 2009
- to illustrate how TOGAF should be used with other industry frameworks
- to provide a practical view on the outcomes of applying TOGAF

SUMMARY:
This workshop will provide an in-depth overview of The Open Group Architecture Framework (TOGAF), which is a vendor-neutral, comprehensive enterprise architecture framework and methodology.

Combining Top-down and Bottom-up Techniques for Developing More Effective EA

Dave Dyke, Agilit Ltd.,
Anthony Alston, Head, Centre for Applied Systems Studies, Cranfield University

This paper will report on work carried out in the Intelligence and C4ISTAR domains.

The link between business need and the delivered capability is often, if not always, portrayed as a decomposition of some high level need statement. This approach has advantages:
- It partitions the problem into manageable chunks that are either independent of each other or where the dependencies are well understood.
- These chunks can be distributed for concurrent development, e.g. given to one team to build and another to integrate.
- The job of the integrator is made easier as the 'behaviour' of the complete system has been made determinant – through the specification of the behaviour of each component and the tight definitions of their dependencies.

However, for systems whose business need cannot be captured succinctly (ever changing need), or where there is a wish to utilise the true power of SOAs, this approach is unsatisfactory:

- It does not describe or explain emergent behaviour in a way that predictions can be made about system behaviour
- It tends to discourage re-use of components since the emphasis is on decomposition and reduction, rather than constrained composition
- It often results in a sub-optimal partitioning of the whole according to inappropriate criteria, e.g. organisational structure
- It responds poorly to future, unknown business needs that turn out not to fit the chosen decomposition

This paper reports on work that offers a complementary approach from the bottom-up and seeks to provide a set of atomic or primitive components, which can be composed together to form composite components in such a way as they don't restrict the emergent behaviour of the final system and so that the architectural style can be tailored to suit the business need.

An Enterprise Architecture Approach to Options Analysis in Large Acquisition Programmes

Mike Duffy, CIPHER Assessment Phase – Team Member and **Fintan Hanbury,** Thales CIPHER Team

The Thales CIPHER team (Thales, BT, Fujitsu) have been selected as one of the two consortium to conduct the Assessment Phase of the MOD CIPHER Programme. CIPHER is not just a technology project - the options under assessment include varying degrees of business change, outsourcing, service-orientation and potential paradigm shifts in the technology used for information assurance, security and resilience. Given the multi-disciplinary nature of the programme and project portfolio comparison of potential options is not a simple task.

This presentation outlines an approach to options assessment for complex and far-reaching acquisition programmes. The approach employs MODAF v1.2 to frame and document the various options, with the COEIA and QFD methods being used to compare the options. In addition, the soft systems methodology has been used to define a (logical) goal architecture which acts as a reference against which the various options can be assessed for efficiency and efficacy.

Speaker biographies

Anthony Alston

Since leaving university Anthony Alston's career has been focussed on the research, design and development of command and control systems; majoring on an understanding of the military processes that the systems support and the doctrine and concepts on which they are based. Following a tour at NATO (the then SHAPE Technical Centre) Anthony joined the Royal Signals and Radar Establishment (RSRE) in the UK, part of which is now QineitQ, researching into air command and control at both agencies. For the past ten years Anthony has been leading research into the definition and understanding of pan-UK Defence digitization initiatives; most notably Joint Battlespace Digitisation (JBD) and Network Enabled Capability (NEC). These have lead to the study of Complex Adaptive Systems as a way of extending the design and development of highly inter-connected and agile organisations and federations of organisations. Anthony is now head of the Centre for Applied Systems Studies at Cranfield University, located the the Defence Academy of the UK.

Bob Barton

Bob graduated from Loughborough University with a first in Electronic and Electrical engineering in 1975. He joined Plessey where he specialised in radar, real time signal processing, his last "real engineering job" being the development of the Rapier Field standard "C" Radar.

In 1990 he became head of Sensors Engineering in Plessey Radar, before their acquisition by Siemens took him into a new role as Change Director for the Siemens - Plessey Corporate Change Programme covering all 3000 employees. He subsequently became head of Command, Control and Information Systems (CCIS), before joining Integrated Systems in AMS, where he was Strategic Systems Director, and latterly Sales Director.

He rejoined BAE SYSTEMS in 2000 as Operations Director for the Manoeuvre/IS area of Future Systems and was appointed Managing Director of Future Systems in April 2002. Future Systems played a key role in pioneering "Capability Based Acquisition" methods through the Indirect Fire Precision Attack programme.

In 2003/4 Bob played a formative role in establishing "NITEworks". He was appointed Director, Capability Development in April 2005, a consultative group in BAE Systems set up specifically to address the challenges of capability acquisition.

He represents BAE Systems on a number of joint MoD-Industry bodies many with an acquisition focus. As co-chair of the previous Equipment Capability Group (ECG) he played a major role in establishing the successful "Pathfinder" programmes on SAVC and S2C2. He continues to play an influential role in improving the front end of the acquisition process through the development of TLCM, and as part of the new TLCM Strategy Group.

He is married to Anne and has two children (James 28 and Joanne 29) and lives in Chandlers Ford in Hampshire.

Frits Broekema

Mr. Frits Broekema is a principal scientist at the NATO C3Agency (NC3A) with more then 10 years experience as an enterprise architect. The last 4 years he has worked on several NATO enterprise architecture projects, including NATO's Overarching Architecture, the NNEC Services Framework, revision of the NATO Architecture Framework (NAF) and the development of the Architecture Engineering Methodology (AEM) used within NC3A.

Before joining NATO C3Agency, Mr. Broekema worked as an enterprise architect for Capgemini. He was engaged in a number architecture projects across a range of different business sectors, such as financial organizations, local authorities, and several public ministries and agencies. Next to his role as an enterprise architect Mr. Broekema developed and conducted several architecture training courses and workshops.

Mr. Broekema has master degree in Information Management and a bachelor degree in Economics.

Bruce Brown

Serving as Director, Systems Architecture in the Advanced Technology Group at Northrop Grumman Corporation, Bruce J. Brown assists clients with improving systems performance, reducing costs, and enhancing network availability with focus on enterprise architectures, modelling and simulation, and business process improvement.

Bruce joined Litton PRC (acquired by Northrop Grumman in April 2001) in 1999 following a civilian career in the Department of the Navy, Defence Communications Agency, and Defence Information Systems Agency as a member of the Senior Executive Service (SES). Highlights of his government career include developing radio and secure voice systems, co-authoring the TADIL-A Military Standard, and designing Electronic Warfare Support Measures (ESM) receiver/processors. In the private sector, Mr. Brown developed network architecture models for a variety of customers including the U.S. Department of State and National Weather Service. He is currently providing technical direction to the Defence Knowledge Online (DKO) program in Ft. Belvoir, Virginia.

He has a Bachelor of Science in Electrical Engineering from Purdue University and a Master of Science in Electrical Engineering from the University of Maryland.

Bruce has ten (10) U.S. patents. His awards include the Navy Distinguished Service Medal which is the highest honorary award that the Secretary of the Navy can confer on a civilian, the Excellence in Enterprise Integration Award from the National Defence Industrial Association, and the Government Channel Leadership Award from Washington Technology Magazine.

Outside of work, Bruce's avocations include genealogy research, amateur radio, and collecting 3-rail toy trains.

Dave Chesebrough

Dave is the President of the Association for Enterprise Information (AFEI). AFEI provides industry and government a framework for collaboration on enterprise information issues such as architecture, security, information sharing, identity and net-centric operations. Dave has a background in engineering and electronic commerce. His prior experience includes business and IT consulting, systems integration, logistics, training and commercial nuclear power systems design. His military experience was as an astronautical engineer in the US Air Force. He has lectured on logistics, e-commerce and IT strategy in Europe, Asia and Africa.

Brigadier Alan D C Clacher OBE MSc FBCS

Brigadier Alan Clacher was commissioned from the Royal Military Academy Sandhurst into the Royal Engineers. Early appointments included Northern Ireland tours in the infantry role in Portadown and Newry and as an Engineer Troop Commander supporting an Armoured Battlegroup in Germany.

Transferring to the Royal Logistic Corps because of his interest in the exploitation of information technology, he has followed a twin track career, developing experience both as a professional logistician and as an information systems (IS) specialist – supporting operations around the world in both capacities.

He is currently Director of the Future Logistic Information Services Programme, which is responsible for delivering an operationally focussed Programme, underpinned by a commercial Delivery Partner, to provide agile and responsive information services in support of Defence logistics. This work ranges in scope from the logistic information required to support Tornado fast jets in the Air environment, Apache attack helicopters and heavy armour in the Land environment and warships in the maritime environment – each bringing their own unique problems.

Brigadier Clacher was educated at Dulwich College, the University of Surrey (BSc Hons (First Class)) and Cranfield University (MSc – Design of Information Systems) – where he graduated top of his year. He was awarded the MBE in 1998 and the OBE in 2003.

His interests revolve around sport and other outdoor activities, including tennis, squash, hill walking/climbing and downhill skiing. He is married to Margaret and they have two daughters aged 20 and 18.

Mike Duffy

Mike is currently a member of the Thales CIPHER Team (Thales, Fujitsu and BT), one of two Consortium Teams conducting the Assessment Phase of the MOD CIPHER Programme. His role is to provide a coherent set of multi-disciplinary methods and tools with which to assess all the potential Options that could satisfy the CIPHER Requirement. At the heart of this tool-set is the use of Enterprise Architecture products created using MODAF profiles.

Mike has a track record in Business and Systems Analysis as well as in IS/IT Programme Management. He is a strong proponent for the use of Enterprise Architecture and has been active in the development of MODAF and its application to complex business situations. Uniquely, he has combined these analytic and management skills to lead teams of consultants in providing a systematic approach to decision making at all stages of the investment life-cycle. Past assignments have focussed on defining and delivering IS/IT enabled organisational change programmes. These have spanned a wide range of government clients including: MOD, Dept of Health, Home Office, DEFRA, GCHQ, Cabinet Office and Police. Commercial clients have included those in: utilities, customer services, transport, and health services.

Mike had a successful career in the Royal Navy that included front-line appointments as well as staff appointments in: Defence Policy, Defence Procurement, Requirements Management, Training and Through-Life Management Support. One claim to fame is that he was instrumental in introducing Enterprise Architecture to the MOD in the form of DoDAF, the precursor to MODAF.

David Dyke

David Dyke is an experienced consultant working largely in the Public Sector for Intelligence & Defence organisations. He has considerable experience in developing and implementing Enterprise Architectures and distributed information systems. Working across multiple government departments as well as for commercial suppliers, he has practical experience of both the challenges and benefits open to an integrated enterprise. He has a particular interest in Model Driven Architecture and its potential for integrating systems using open, industry standards like the UML and OWL.

Brigadier (Ret'd) Charles Le Gallais CBE

Charles is the Strategy Director for the National Security and Resilience Programme at Selex Systems Integration Limited, a Finmeccanica Company. His responsibilities include the delivery of the Gold Standard Resilience Programme on behalf of the UK Cabinet Office. This Programme centres on the development of doctrine and capability requirements through exercises at the strategic level. Although the programme is centred in the UK its activities are shared with friends and allies in the international arena. He retired from the British Army as a Brigadier in 2004 having been commissioned into the Royal Corps of Signals in 1972. He served in Great Britain, Northern Ireland, Germany and the Former Yugoslavia, where he was involved in conventional and unconventional operations.

Wing Commander Mikael Hagenbo

Wing Commander Mikael Hagenbo works for the Swedish Armed Forces (SwAF) Joint CIO as responsible for the development of SwAF Enterprise Architecture Framework and also as co-ordinator regarding international co-operation within the architecture area. In that role Mikael has the responsibility to prepare for senior decisions, strategic directions for the SwAF within the field of EA enablers. An example is the decision that was made by SwAF Joint CIO early 2008 on using MODAF as an architecture description framework for the whole of the SwAF.

Mikael is also heavily involved in the Swedish Armed Forces Headquarters initiative, Model Based Capability Development, a.k.a. Enterprise Architecture. He has a background as an Air Force C4ISR officer and has been working with Enterprise Architecture since January 2003 after graduating from the 2 ½ years course 'Advanced Technical Programme' at the Swedish National Defence College. Mikael represents Sweden in NATO C3 Board/SC-1/Policy Working Group - responsible body for e.g. NATO Architecture Framework, and has been involved during the whole development process of 2 ½ years of the NATO Architecture Framework (NAF) version 3 that was approved by NATO in November 22 2007.

Finally, Mikael acts as a Swedish representative in International Defence Enterprise Architecture Specification (IDEAS) management group and also co-ordinates the bilateral co-operation with MOD UK within the EA area.

Matthew Hause

Matthew Hause is Artisan's Chief Consulting Engineer, is a member of the OMG SysML specification team, and the co-chair of the UPDM group. He has been developing systems for over 30 years. He started out working in the Power Systems Industry, and has been involved in Process Control, Communications, SCADA, Distributed Control, military systems, rail systems and many other areas of large, complex systems. During his career he has lived and worked in 5 different countries, and speaks 4 languages with varying degrees of success. His roles have included software developer, software engineer, project manager, systems engineer and others. His role at Artisan includes mentoring, sales presentations, standards development, training courses, product strategy, and technical management of a group of consultants. He has written a series of white papers on project management, Systems Engineering, architectural modeling and systems development with UML, SysML and Architectural Frameworks. He has been a regular presenter at INCOSE, the IEEE, BCS, the IET and other conferences. Although based in the UK, he manages Artisan's technical staff in several countries, and travels widely presenting and teaching at conferences and consulting with customers. Matthew studied Electrical Engineering at the University of New Mexico and Computer Science at the University of Houston in Texas.

Andrew Josey

Andrew Josey is Director of Standards for The Open Group. He has led the development and operation of many of The Open Group's certification initiatives, including industry-wide certification programs for the UNIX system, the Linux Standard Base, Schools Interoperability Framework, The Open Group Architectural Framework (TOGAF), The Open Group Certified IT Architect program, IEEE POSIX, S/MIME Secure Messaging and Secure MIME Gateway.

Andrew has worked in the industry since 1987, working previously for AT&T UNIX Europe, UNIX System Laboratories and Novell prior to joining the Open Group in 1996. He has a degree in Combined Sciences from Brighton Polytechnic, and an MSc in Computer Science from University College, London University.

Lars-Olof Kihlström

Lars-Olof Kihlström works for Generic System AB as a senior consultant. His main work area has, since he joined to company in 2003, dealt with architecture framework handling, UML modelling, SOA and requirements management. He has worked extensively with DoDAF, NAF and MODAF. He acted as modelling support in the NAF revision syndicate. He has also actively participated in the IDEAS group and has worked extensively with the development of the MODAF Learning Portal as part of a bilateral co-operation agreement between Sweden and the UK. He has also spent a lot of time dealing with SOA and was involved to a large degree with the development of the MODAF views and NAF views for SOA. He actively contributes to the ongoing maintenance of MODAF and has commented UPDM and UPMS approaches extensively.

Lars-Olof has a Master of Science degree in Physics Engineering from the Royal Institute of Technology in Stockholm. He has worked as a development engineer, development manager and as a consultant at different companies prior to joining Generic AB, including Swedish Telecom (now Telia-Sonera), Cap Gemini, Enator (now Tieto-Enator), LHS and Telelogic AB. He has a long background in the use of formal specification techniques, object-oriented development (UML) as well as requirements

management. He has worked extensively with radio communications and has worked on standardisation, specification and development of different things starting from the embedded arena (communication protocols and automotive applications) up to business processes for larger organisations.

Laurence Marzell

Laurence instigated and leads CNI Scan www.cniscan.org, a collaborative Serco led Programme across both the public and private sectors. CNI Scan has set out to develop a repeatable methodology to address 'system level vulnerabilities' and interdependencies in the Critical National Infrastructure (CNI) through a collaborative approach to security, risk and resilience planning and best practice.

Together with programme partners who include the UK's National Physical Laboratory and BAE Systems and in strategic collaboration with the Gold Standard Programme for the Civil Contingencies Secretariat of the UK Cabinet Office, Laurence has prosecuted an all hazards approach to challenges and threats, whether natural or man-made, as these are shared and common across the entire CNI system, its organisational structure and the communities it transcends.

Laurence pioneered the Programme's interoperable toolkit: Human Factors and System Dynamics and use of MODAF, the MoD's Architecture Framework, to support an Enterprise approach to Concept of Operations development, policy development, doctrinal change and knowledge transfer 'in the CNI for the benefit of the CNI'.

Laurence leads the Programme's strategy, policy and stakeholder work streams; he works at senior levels with national and local agencies involved in security, resilience and policing and liaises across industry and the various policy groups and think tanks involved in National Security. Laurence sits on the Government / RISC CNI Industry Advisory Group led by CPNI (Centre for the Protection of National Infrastructure).

John McNaughton

John is a Principal Consultant for the Defence & Intelligence Practise of the Salamander Organization. He currently is engaged in a diverse range of architecture projects including a strategic approach to the delivery of personnel administration for the UK MoD, development of the exploitation of Enterprise and Service Oriented Architectures of delivery of UK MoD Logistic Capability. He is also engaged in solution development with Salamander. Before joining The Salamander Organisation, John was the first Royal Navy Warfare Officer to undergo the Advanced Information System Course at the UK Military College of Science and he also completed a Masters Degree in Knowledge Management Systems with Cranfield University. John.mcnaughton@tsorg.com

Lt Col Grant Morley

Grant is currently the Programme Manager for Information Assurance (IA) within the CIO's department in the Ministry of Defence (MOD). He is responsible for the governance, organisation and management of the MOD's strategic IA programme. He is also responsible for the development of strategies and policies for IA and is the project manager for development of an Enterprise Security Architecture for Defence. When he is not involved in these tasks, he is a member of MOD's departmental team responding to the Government's Data Handling Review in the wake of the recent losses of personal data.

Grant has previously been responsible for the development of strategy, policy and technology to support UK Information Operations; he has worked as an Information Requirements Manager within the Army's Information Directorate, and has also been a Project Manager in the US Defence Intelligence Agency in Washington DC.

Grant has Masters degrees in Business Studies and in the Design of Information Systems, is a PRINCE2 Practitioner and SABSA Enterprise Information Security Practitioner.

Alistair Murray

Alistair Murray has been MOD's Key Systems Advisor since August 2008, recruited to provide demonstrable, independent and highly capable expert advice to the NEC Senior Responsible Owner (SRO) in the execution of Defence Enterprise Planning. He brings 20 years experience in shaping, planning and delivering business, organisational and IT transformations in the Financial Services sector as a Senior Accenture Partner.

He has a track record in combining strategic thinking, strong communication and relationship skills, celebrated people development and leadership strengths, solid operational management direction and pragmatic implementation experience to deliver tangible results. His most recent experience was with Lloyds TSB where he was both Group Chief Technology Officer (CTO) and Director of IT Transformation. His brief was to lead a group wide theme of Simplification which involved driving significant business and technical integration throughout the group as well as improving the capability and efficiency of the 3000 strong central IT function.

Previous to that Alistair has executive leadership roles in major transformations including culture change at National Australia Group, Royal Bank of Scotland, Standard Chartered Bank, Barclays Bank and several European banks.

Alistair is married to Tuija and has two children. He is obsessive about triathlon and motor sport.

Matthew West

Matthew is a Visiting Professor in the Keyworth Institute at the University of Leeds where he chairs the steering committee for the Undergraduate Programme in International Corporate Leadership. He also chairs the industrial advisory board for the School of Computing.

Matthew worked for Shell from 1978 to 2008, and since 1987 on the computing/business interface with a particular interest in Information Management, Master and Reference Data and Data Modelling where he was responsible for Shell's Downstream Data Model. He is a key technical contributor to ISO 15926 – "Lifecycle integration of process plant data including oil and gas production facilities" and is participating in the development of ISO 8000 – Data and Information Quality. Matthew is a Director of Information Junction, which he joined in 2008.

Brian G. Wilczynski

Mr. Wilczynski has held a broad range of information technology positions within the Department of Defence (DoD) at the agency, Military Department, and Office of the Secretary of Defence levels in his 23 years of service. He currently serves as Director of Enterprise Architecture & Standards (EA&S) within the Office of the DoD Chief Information Officer. In this capacity, he reports directly to the Deputy Assistant Secretary of Defence for Information Management, Integration, & Technology/Deputy Chief Information Officer. The EA&S Directorate is responsible for enterprise architecture policy and guidance and for establishing the frameworks and standards with which all Department architectures must conform.

Prior to his positions in the Office of the DoD CIO, he has held the position of Chief Technical Architect in the Transformation Support Office, Office of the Undersecretary of Defence for Acquisition, Technology & Logistics and served for seven years on the staff of the Department of the Navy Chief Information Officer (DON CIO). While on the DON CIO staff, he led architecture and data management projects and, along with the Navy and Marine Corps, led efforts to implement software application management across the Department. He was awarded the Department of the Navy Meritorious Civilian Service Award in November 2002.

Mr. Wilczynski began his civilian service with the Defence Mapping Agency (DMA) and its successor organization, the National Imagery and Mapping Agency. In addition to production mapping assignments, he served as a computer specialist supporting the development of architectures and standards for the geospatial community. He was selected for the DMA Outstanding Employee of the Year Award in 1993.

Mr. Wilczynski holds a Bachelor of Science from Michigan Technological University and a Master of Science in Information Systems from The George Washington University. He is a graduate of the Federal Executive Institute.

Steve Winter

Steve Winter is the Chief Technologist for NATS, the UK's Air Traffic Control Organisation. NATS is a Public-Private Partnership, with an annual turnover in excess of £700M and controlling 2.5M flights per year. In his capacity, Steve is responsible for developing and implementing the technology strategy for the business. In addition, he is accountable for the overall architecture of NATS' operational systems, including Air Traffic Management, Communications, Navigation and Surveillance capabilities.

Steve is a certified Enterprise Architect and leads the company team of Enterprise and System Architects, the Technology Strategy Group (TSG). Steve introduced Enterprise Architecture methods and Architecture Frameworks, such as MODAF (the Ministry Of Defence Architecture Framework) to NATS.

Before joining NATS in 2006, Steve was the Technology Director for Raytheon's Airspace Management and Homeland Security business area, based in Marlborough, MA, USA. From 2001, Steve focussed on advanced system architectures and enterprise architecture (EA). This included working with the U.S. Government's Joint Planning and Development Office (JPDO) to establish the architecture for the future U.S. air transportation system, NextGen. He joined Raytheon in 1986 as a Software Developer in Air Traffic systems. He was the principal architect of the highly successful AutoTrac ATMS product line, which has been installed in over 49 countries worldwide and is the basis for the Federal Aviation Administration's (FAA) Standard Terminal Automation Replacement System (STARS). He worked for numerous customers around the world involved in all aspects of system development, including extensive customer interaction and site work. Prior to joining Raytheon, Steve was a principal consultant for Scicon Ltd. in the UK, specializing in submarine warfare and weapon systems.

Steve has an MA(Cantab) in Mathematics from Pembroke College, Cambridge University. He is a member of the Air Traffic Control Association (ATCA).

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Salamander

Salamander is an independent, privately-owned UK Company that has been engaged actively with the MOD, National Security and Commercial Industry for twelve years, specialising in improving business effectiveness through Enterprise Business Architecture methodology. Through delivering successful outcomes we have grown into a respected player with close and continuing involvement in many key MOD domains, including Capability Management, Enterprise Architecture, MIS development, Business Process Coherence, Business Transformation and Performance Management.

Salamander is the inventor and developer of MooD, the leading Enterprise Business Architecture software in the Defence and National Security domains. Also of M4, the MODAF 1.2 Blueprint for MooD.

Serco Consulting

Serco Consulting is one of the UK's leading consultancy and professional services providers. We are part of Serco, the international service company which advises on, transforms, manages and operates a wide range of essential public sector services. Serco Consulting is at the forefront of the successful and on-going development of MODAF as the EA approach for the UK Ministry of Defence. The associated MODAF and its meta-model (M3) is recognised as a market leading Architectural Framework and this has informed thinking on DODAF2 and the NATO AF (NAF). Serco Consulting is deploying MODAF in projects to support Military, Governmental and Commercial businesses deliver improved effect and value for money; of note is the pioneering work being undertaken within the Critical National Infrastructure Programme, subject of a presentation at IEA2009. Further information can be obtained at the Serco Stand and from Bob Leeming who will in attendance through the Conference.

The Thales Team

Thales UK Ltd, with BT plc and Fujitsu Services Ltd offer the UK MoD and the Central Sponsor for Information Assurance an enduring Consortium with global reach and a deep understanding of the UK IA domain infrastructure, technologies and stakeholders. Effective IA is critical to the sustainability and credibility of any enterprise – for MoD, data compromise also carries the risk of severe operational penalties; and as threats evolve and public awareness of the implications of loss of sensitive information increases, IA is becoming increasingly important to Government Departments. Such a collective requirement creates a powerful argument for transformation.

The Thales Team is enabling such transformation by generating a clear view of the IA problem space through the use of formal methodologies including Soft Systems Methodology (SSM) & Enterprise Architectures; together SSM and MODAF ensure proposed changes meet all requirements of the IA target environment – the structured approach enabling modular design, flexible solutions and extend through life capability.

VEGA

VEGA is a professional services company that delivers technology-enabled change in complex environments, often where security and resilience are key. We offer independent expert advice and pragmatic solutions to help our clients meet their transformation challenges with confidence.

Based on over 30 years' experience of working with industry, government and the military, VEGA is trusted by its clients to enhance delivery of new capabilityand ensure continuity of operations and performance.

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