

# IEE / RESG Requirements Days

2-3 October 2006

The IEE, Savoy Place, London

I keep six honest serving-men  
(They taught me all I knew);  
Their names are **What** and **Why** and **When**  
And **How** and **Where** and **Who**.

*'The Elephant's Child' in Just So Stories by Rudyard Kipling*

Requirements work is not 'Engineering', but it is the essential precursor to every development or procurement – in software, in engineering, in systems, in projects of all kinds. It used to be thought of as something of a black art, or simply something that was so obvious that everybody could do it without any training.

Requirements work is sensitive as it touches every area of a business – management, finance, work, technology, people's lives. Requirements people therefore need a wide range of skills, from dealing with people to precise analysis.

Requirements research and reflection on practice in the last ten years have transformed the field. Both the overall process and the detailed techniques that go into it are far better understood, and are known to improve the chances of project success.

The six W-word questions capture the essence of requirements:

- Who are the stakeholders?
- What do they want?
- Where should it happen?
- Why do they want that?
- How will we show that?
- When do we need that?

And of course the questions can be asked in many other ways. In this seminar, each question is addressed by an expert in a requirements technique. They will show how to use simple practical tools and models to obtain robust and dependable answers.

The day is planned with generous breaks for you to discuss what you have heard, to meet other practitioners and researchers, and to look at the exhibition of requirements tools and books.

This seminar brings together leading researchers and practitioners in the field, as well as tool vendors and the latest books, to give you a rarely-available compact presentation of the essential concepts, practices and knowledge you need to do your requirements better.

# Programme

2 October: Introduction to Requirements

1-day Interactive course, taught by Ian Alexander

*Feedback for courses presented by Ian Alexander*

"Very helpful course. Lots to think about and apply in future projects."

*"Excellent course, enjoyable yet informative."*

"Probably the most important course I have attended, and very enjoyable."

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Requirements Engineering has changed radically in the past decade with major recent developments including custom tools such as DOORS, Cradle, Requisite Pro, Caliber all of which are dedicated to requirements. Academic research has transformed the field, with proper understanding of stakeholder viewpoints, conflict resolution, scenarios, goal modelling, traceability and formal methods of validation.

The need for requirements engineering has been proven by the high percentage of projects that fail. The Standish Report and a report of the EC agree that about half the problem is poor requirements handling.

### **Why you should attend**

Delegates will learn why Requirements Engineering matters, and how to apply it in a simple and effective way. You will take away a proven set of course notes, a clear understanding of the challenge and a set of techniques that are known to work on projects. A popular feature of the course is requirements using UML use cases (scenarios).

### **Who should attend**

People in industry, commerce and government, systems and software engineers working in any area involved in systems development projects, and who need to get a better handle on requirements. On previous courses, participants have included people from railways, air traffic control, police, defence, communications, electronics, software, etc.

No prior knowledge is assumed.

Registration & Coffee 0830

<b>The Context of Requirements: Systems Engineering</b>
Life-cycles and Iteration
Handling Risk
User and System Requirements
<b>Requirements Elicitation</b>
Identifying Business Objectives
Identifying Stakeholders and their Viewpoints
Eliciting from Operational and Non-Operational Roles
Checking and Validating the Requirements
<b>Analysis</b>
Specifying Desired Behaviour
Defining Non-Functional Requirements
Specifying Requirements Attributes
<b>Writing &amp; Reviewing</b>
Structure of a Requirement
Writing Functional and Non-Functional Requirements
Requirements Review & Prioritisation
<b>Requirements Management</b>
Controlling Change
Managing Requirements
Traceability

### 3 October: Answering the Six Questions About Requirements

0900	<i>Registration &amp; Coffee</i>		
0930	<b>WHAT IS the Requirements Process?</b>	Chairman's introduction	
1000	<b>WHO: Stakeholder Analysis</b>	Ian Alexander Scenario Plus ian@scenarioplus.org.uk	
1045	<i>Refreshment Break (30 minutes for networking)</i>		
1115	<b>WHAT: Goal Modelling</b>	Nadia Amin University of Westminster aminn@wmin.ac.uk	
1200	<b>WHERE: Scenario Modelling</b>	Neil Maiden City University <a href="mailto:cc559@soi.city.ac.uk">cc559@soi.city.ac.uk</a>	Alistair Mavin Rolls-Royce Alistair.Mavin@Rolls-Royce.com
1245	<i>Lunch (45 minutes)</i>		
1330	<b>WHY: Rationale Analysis</b>	Simon Buckingham Shum The Open University sbs@acm.org	
1415	<b>HOW: Making Requirements Verifiable</b>	Suzanne Robertson Atlantic Systems Guild suzanne@systemsguild.com	
1500	<b>WHEN: Triage &amp; Prioritisation</b>	Andrew Farncombe JBA andrew@jba.net	
1545	<i>Break (30 minutes for networking)</i>		
1615	<b>WITH WHAT: Requirements Tools:</b> the essential features, and a comparison of tools on the market	Kathleen Maitland University of Central England Kathleen.Maitland@uce.ac.uk	
1700	<b>QUESTION TIME: Ask the Experts</b>	Panel of All the Speakers	
1730	<i>Close</i>		

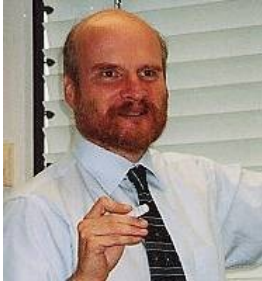
There will be an exhibition of Requirements tools and books in the foyer during the breaks.

A buffet lunch with soft drinks will be served in the foyer.

Information and Reservations at <http://conferences.theiet.org/itr/index.htm>  
Members' discount to RESG and IET members.

## The Speakers

Ian Alexander  
Scenario Plus



Ian Alexander is an independent consultant specialising in Requirements Engineering. He is an experienced instructor and has written many training courses. His books include *Writing Better Requirements* (Addison-Wesley, 2002) and *Scenarios, Stories, Use Cases* (John Wiley, 2004). He helps to run the BCS Requirements Engineering Specialist Group and heads the Requirements section of the IEE Professional Network for Systems Engineering. He is a Chartered Engineer.

Nadia Amin  
University of Westminster



Dr Nadia Amin is a Senior Lecturer in Information Management at the University of Westminster's Harrow Business School. Nadia worked in academia in a number of EPSRC and EU-funded research projects in information systems engineering. Her main research interests lie in business process modelling, requirements engineering, and business and IT alignment strategies. Nadia teaches systems analysis and design, e-business and e-government strategy. She is a course leader for MA in Global Business. She also manages an international management education program as part of the International Business School Alliance (IBSA) [<http://www.ibsa-master.com/>].

Simon Buckingham Shum  
The Open University



Simon Buckingham Shum is Senior Lecturer at the UK Open University's Knowledge Media Institute. His background is in Psychology, Ergonomics and graphical design argumentation. He edits the *Journal of Interactive Media in Education*, is on the editorial board of the *International Journal of Human-Computer Studies*, and has convened international workshops on hypermedia. He leads projects on user-centred application of hypermedia discourse. He teaches human-centred knowledge management technologies for MBA managers. He recently co-edited the book *Visualizing Argumentation*.

Andrew Farncombe  
John Boardman Associates



Andrew Farncombe has a first class honours degree and spent his early career in the software industry. He subsequently moved into the defence and aerospace sector where he held a number of senior technical and management positions including that of Technical Director, and led the codification of Systems Engineering knowledge and experience for one of the groups as a whole. At John Boardman Associates he has applied Systems Engineering to the aerospace and transportation industries. Andrew is Visiting Professor of Systems Engineering at Cranfield University. He is Technical Director of the UK Chapter of INCOSE.

Neil Maiden  
City University



Neil Maiden is Professor of Systems Engineering and Head of the Centre for Human-Computer Interface Design, an independent research department in City University's School of Informatics. He has been directing interdisciplinary research in requirements engineering for 15 years and has worked on numerous EPSRC- and EU-funded research projects. He has over 80 journal and conference publications. His details are available at <http://www.hcid soi.city.ac.uk/pNeilmaiden.html>.

Kathleen Maitland  
University of Central England



Dr. Kathy Maitland is currently a lecturer at the University of Central England in Birmingham where she is the MSc Computing for Professional Pathway Director. Kathy was a senior software engineer and a consultant systems analyst before returning to academia. Kathy teaches in systems development, including requirements engineering and databases at both undergraduate and post-graduate levels. Her main research interests are in modelling and analysing change requirements in both blue chip organisations and SMEs. Kathy has been the Vice-chair of the BCS Requirements Engineering Specialist Group for the last two years.

Alistair Mavin  
Rolls-Royce



Alistair Mavin is a requirements engineer with Rolls-Royce. He has previously undertaken requirements engineering projects in a range of industries including defence, aerospace, rail, automotive and local government. He has been involved in a number of capability enhancement projects, which have the aim of improving engineering capability within the client organisation. He previously worked in the Centre for HCI Design at City University in London, where he was involved in research and consultancy in requirements engineering.

Suzanne Robertson  
Atlantic Systems Guild



Suzanne Robertson is a principal and founder of the Atlantic Systems Guild. Suzanne is co-author of *Mastering the Requirements Process* (Addison-Wesley 1999). Current work includes research and consulting on stakeholders and all aspects of requirements. The product of this research is Volere, a complete requirements process and template for assessing requirements quality, and for specifying requirements. She was the first editor of the Requirements column in IEEE Software magazine.