INCOSE UK
Newsletter

Going Full Circle

Things are hotting up for the Spring Symposium in Daventry. The registration forms are rolling in and we will shortly be confirming which tutorials have attracted enough interest to run. Meanwhile we have to start thinking about the Autumn Assembly if we are to hit the target of two major events per year in 2001.

After a slow start last year from the renewal date, membership of the UK Chapter has reached 367. This is pretty similar to the peak that we reached on the back of the 1999 International Symposium. Of course there is a connection between holding major events and membership levels – more than anything else that INCOSE offers, events attract members. This is true not only for individual Chapters but also for INCOSE as a whole.

That is why over the last 18 months I have made it my main priority to ensure that the major UK Chapter events are put on a firm footing. The Autumn Assembly last year generated enough funds to give us the confidence to go ahead with the Spring Symposium this year. In anticipation of a successful Spring Symposium we are already beginning to plan the Autumn Assembly 2001. The funds from each event underwrite the next, members gain benefits from attending the events and so continue to belong to INCOSE.

I hope that this virtuous circle will continue when Paul Davies takes over the Chapter Presidency from the end of this year. But even with secure funding we still need volunteers to plan and organise events and other activities. If we continue to generate surplus funds from the major events, then there is the possibility of funding other activities – such as the Scottish Event – and organising these will demand rather more effort than the current faithful few can provide.

So to complete the circle we need some people who will stand for the Chapter positions that have already, or will shortly fall vacant – President Elect, Secretary to name but two. If this represents too much commitment then there are many other ways that you can help to ensure that the UK Chapter goes from strength to strength.

Pete Lister
President of the UK Chapter of INCOSE.

Last Orders for the Spring Symposium 2001

You still have time to register for the Spring Symposium 2001. If you don't have a registration form then go to the UK Chapter website (www.incose.org.uk) and download one. If that doesn't work then contact John Mead. Whatever you do, don't miss the first UK Chapter Symposium for three years.

We have been getting enquiries since the first information appeared on the website, and all the indications are that we will have a sell-out event on our hands. There is still some exhibition space left, so if you want to get your products in front of 150 plus Systems Engineers then get in touch with Bob Briggs right away.

Many thanks to BAE Systems and Thales for sponsoring the event. BAE Systems have done a grand job on the brochure, and Thales are sponsoring the delegate handbook which will contain all the latest programme information. There are still opportunities for sponsorship so contact John Mead if you are interested.

I have just heard that John Clouet, the INCOSE President, will be travelling to the UK to attend the Symposium and take in a tutorial. So what are you waiting for? Fill in that registration form now!

Please send any contributions to this Newsletter to The Editor, INCOSE UK Newsletter, c/o Peter Lister, Siemens Transportation Systems Ltd, 4 Highlands Court, Cranmore, Avenue, Shirley, Solihull, B90 4LE. Tel: 0121 7134311 Fax: 0121 7134360 e-mail: listerp@plcsun.siemens.co.uk

This newsletter is published by Structured Software Systems Limited (3SL) by kind permission of the Managing Director

Cradle-4

From concept to creation...

Web Access and Extended UML

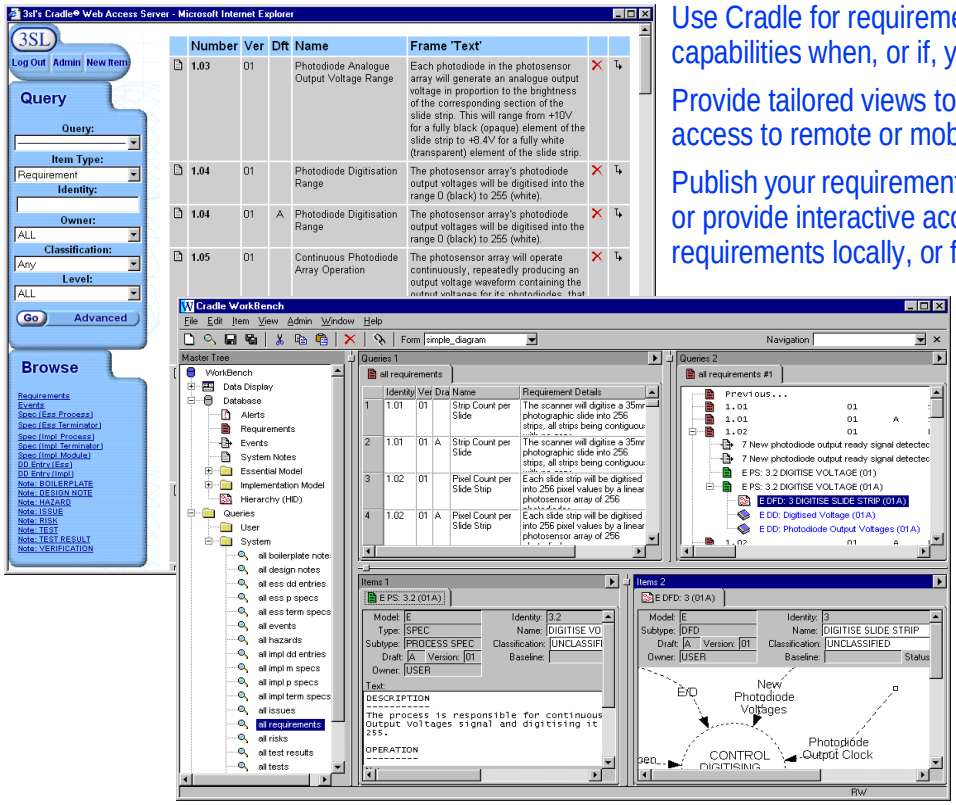
3SL

Visit our **NEW** website:
www.threesl.com

Cradle-4 is the scalable, integrated solution for your systems engineering projects. It supports small or large, distributed or local, simple or complex developments in a single framework that blends with your existing desktop and SE tools, and links to corporate PDM / EDM / documentation systems.

Cradle complements requirements, modelling, architecture, performance, simulation, metrics, interfaces, tests and acceptance tools with lifecycle traceability and extensive project and workflow management.

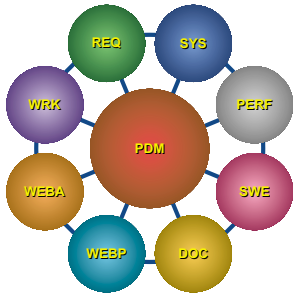
- **Runs natively on all Windows platforms including ME / 2000**
- **New Web Access capability - browse / update over the Internet!**
- Requirement management edit histories, item generations, pending delete
- Programmable requirements capture: by document, paragraph, sentence, line, or word
- User defined queries and views, group and sub-group and sort as required
- New metrics support for requirements and other data types
- Requirement, model & test variants and builds, in addition to versions & baselines
- Table editors and Explorer style hierarchies with drag & drop
- Word and Excel plug-ins
- Word, Excel and HTML export from lists, tables and web browser views
- Fully customisable WorkBench tool with views, filters, forms and sessions
- Annotations mechanism for centralised review and comments
- Alerts mechanism for project coordination and automated to-do lists
- Web Publishing module, hyperlinked HTML and SVG from your database
- Customisable graphical hierarchies in Hierarchy Diagrams
- Process and scenario modelling in Process Flow Diagrams (PFDs)
- Extended UML support and function modelling with IDEF0
- Automated constructors for BDs, eFFBDs, and PFDs
- SVG graphics in browsers, web access and toolset
- Integrations with Word, Excel, PowerPoint, Acrobat, IE, FileMaker, FrameMaker...
- Items link to external data as file, in environment, or at URL, acts as a portal for project data



Use Cradle for requirements management now. Add other capabilities when, or if, you need them.

Provide tailored views to the stakeholders. Give web access to remote or mobile users.

Publish your requirements to a static website or document, or provide interactive access to them. Link to the requirements locally, or from the web.



3SL
Craven House
Michaelson Road
Barrow-in-Furness
Cumbria LA14 2RJ, UK
Tel.: +44 (0) 1229 838867
Fax: +44 (0) 1229 870096
e-mail: sales@threesl.com
Website: http://www.threesl.com

SS2001 Contact Details

Mike Prince – Technical Chair:
michael.prince@baesystems.com

Stuart Cornes – Tutorial Selection:
stuart.cornes@libertysurf.co.uk

Bob Briggs – Exhibition Organisation:
bob-briggs@green-leas.freeserve.co.uk

John Mead – Sponsorship, Marketing and Admin Management:
John.Mead9@hemscott.net

Pete Lister – General Chair:
listerp@plcsun.siemens.co.uk

The Autumn Assembly 2001

November 12&13, 2001

The eagle eyed will have noticed that the Autumn Assembly has moved to the right by one week from its usual slot. This is to take account of the availability of our selected venue, at Abingdon. We are working on the basis of 100 attendees, because this seems to be just the right sort of number for an event such as the AA. The only thing that remains to be fixed is the programme.

Last year a small committee mulled over some suggestions, worked down to a short list of four. We then persuaded four people to work as session chairs to detail one session each. This involved thinking through the format, identifying suitable speakers, collecting together background material, and generally organising the whole session. This proved a great way to share out the work, and ensured that each session developed its own flavour.

Nearly all comments about last year's event were favourable, but there were one or two voices who felt that there should have been more at the cutting edge of SE principles. Well, this year we are giving you the opportunity to put together the session of your choice. The only catch is that if we take you up on your proposal then you get to be the session chair.

First of all, what are we looking for? The AA is organised as four sessions over two days. Each session should address an issue of the moment that is relevant to Systems Engineering. There are a number of ways that a session can be organised, as a panel, as a set of themed presentations, as an audience participation exercise, or something else. The key features of an AA sessions are as follows:

- The session should contain useful, thought-provoking, novel and interesting information
- Ideally, different (if not opposing) views should be presented – whether different individuals' viewpoints or different industry sectors
- There should be significant opportunity for audience participation
- All presentations must be made available for publication on the UK Chapter website, along with a resume of any discussion that arose from the session

So you have an idea for the session, what happens next? Write down a brief outline of your proposed session, identifying the subject matter and indicating some or all of the session contributors. Ideally you should have identified and checked with all the contributors, but do not worry if this is not possible. Send your proposal to Mike Prince by 18 May, and it will be reviewed by a small group of INCOSE greybeards. If we like your proposal then you will be invited to go ahead and prepare for the Autumn Assembly. We may offer suggestions to improve the session or identify some other contributors who might be suitable.

Whilst we expect you to be pro-active and get on with organising the session, the organising committee will be there to help and make sure that everything goes smoothly.

Apart from the kudos and a lot of hard work, what is in this for the presenters? So far in the UK Chapter we have managed to operate with presenters (or their companies) paying their own way. We think that it is time to try some incentives to encourage more of you to participate. For the AA we will be offering a 50% reduction in registration fees for the session chair and a reduction of 20% for up to 4 other presenters.

A final point about sponsorship for the AA. Sponsorship is important because it helps to minimise the financial risk of setting up a large event. One of the most important sponsorship items is the event programme. It costs between £2,000 and £3,000 to prepare 3,000 'glossy' brochures, but we have found that a quality brochure is vital for attracting the attention of potential registrants and new members. Because the brochure is widely distributed it is an excellent vehicle for publicising your company's involvement with INCOSE and Systems Engineering. This year we are also planning to offer each of the sessions for sponsorship at £500 each. If we know soon enough then this can also be advertised within the brochure. If your company is interested in these or other sponsorship opportunities then please contact John Mead.

Pete Lister

A Scottish Initiative for INCOSE

The UK membership of INCOSE would fit comfortably into a wide-bodied jet. The entire Scottish membership could travel to the airport in one MPV.

Some very exciting things are happening in Scotland this year: a rash of opto-electronics start-ups, growth in the

Advertise in INCOSE UK Newsletter

Do you want to contact over 300 Systems Engineers in the UK and Europe?

Place an advertisement in the INCOSE UK Newsletter. At £100 for a full page, £50 for a half page (using your copy) it costs less than the postage for your own mail shot.

We can also stuff your flyers with our Newsletter (charges dependent on impact on postage costs). We can negotiate reduced rates for educational or non-profit making bodies.

Remember that we will publish a listing of your forthcoming event absolutely free.

Contact the Editor (Pete Lister) or INCOSE UK Administrator (John Mead) with your requirements.

telecoms sector, the Scottish Executive moving out of its honeymoon period, and major initiatives by Scottish Enterprise in system level integration and embedded software. With strong support from the UK Chapter committee, a goodly fraction (three, to be exact) of the Scottish membership is embarking on an ambitious (or foolhardy?) initiative to raise INCOSE's profile in Scotland.

The current aim is to hold "the first Scottish Systems Engineering Convention" in November 2001, with further meetings featuring "Telecoms and Scandinavia", and "Tools", envisaged over the following few months. There is a self-appointed local committee (myself, John Maclean from BAE Systems, and Ron McLeod of Nickleby). We have defined a straw man programme, and will be making contact with potential speakers over the next month or so. The main themes for the first meeting are planned to be:

- Risk and complexity in Government and Industry:
- Exploiting new technology - "From microsystems to macrosystems"
- System and product development in the 21st Century
- What's going on in Scotland?

Given the lack of local membership, we have to attract a wider local community. The IoP (Institute of Physics) is on board, and we are establishing links with other professional institutions. The main themes we want to emphasise are holistic cross-discipline engineering, designing high integrity systems, and the relevance of Systems Engineering beyond the defence and aerospace sectors.

More details will be published as plans develop. Anyone keen to help, participate, co-ordinate, or offer sponsorship, please get in touch.

(Mr) Hillary Sillitto
Chief Engineer, Thales Optronics
e-mail contacts:

Stock Clearance Sale!

UK Symposium Proceedings:

1996 Getting to Grips With Complexity

1997 Systems Engineering in Practice

1998 Systems Engineering - A Matter of Choice

Any of the above at £5.00 inc. post and packing

Send your orders to John Mead - Address at the back of the Newsletter

Hillary Sillitto <Hillary.Sillitto@uk.thalesgroup.com>
hillary.sillitto@cableinet.co.uk

Questionnaire Survey on Human Factors in Systems Engineering

The final session at last years Autumn Assembly was concerned with integrating Human Factors into the Systems Engineering process (for a report, see the Feb 2001 Newsletter). The session was organised by Nickleby HFE Ltd chaired by Colonel David Wright, and held under the auspices of the Human Factors National Advisory Committee (HF NAC). Of the 60 or so delegates who took part in the session, 32 completed short questionnaires. This article briefly summarises some of the key results.

Not surprisingly, the defence and aerospace industries accounted for over 40% of the respondents (15 people), although there was a broad spectrum, including rail (5 people) oil and gas (2 people) telecommunications (3 people), automotive (3 people) and banking and insurance (2 people). A wide range of job titles was given, though the terms "engineer" and "manager" (in some form) were prominent. None described themselves as HF engineers, consultants or Ergonomists. (And we were not aware of any HF specialists at the session, other than speakers. Speakers did not complete the questionnaires).

Respondents were highly experienced in engineering industries, with only one person having less than 10 years experience, and the majority having more than 20 years experience. 74% reported having "A lot" of experience in Systems Engineering. Only 7% claimed "A lot" of experience in Human Factors or related subjects, although 86% said they had "Some" experience.

When asked how important human issues were to the success of systems built or used by their organisations, 46% said they were always important, and 42% said they were usually important. Nobody said they were never important.

Delegates were asked how well they thought human issues were covered by current SE practice. One delegate thought there was too much emphasis on human issues, while, another 13% thought the treatment was about right. However, more than 60% felt there was "Not quite enough" coverage, and 19% felt there was "not nearly enough" coverage of human issues.

Six of the delegates offered to provide case studies where investment in human factors had been shown to produce significant returns (these are being followed up by the HF NAC).

Brass Bullet Ltd

UML training courses:
Brass Bullet offer a number of UML-related training courses, including:
"Introduction to the UML"
"Systems engineering using the UML"
"Introduction to the RUP"
Courses may be tailored for specific needs and are run regularly at Brass Bullet HQ in Swansea or can be given at a client's location.

Services:
Full consultancy, including:
- *Process modelling (EIA 632, EIA 731, ISO 15288, IEEE1220, ISO 15504, ISO 12207) and related quality assessment*
- *Requirements engineering*
- *Full lifecycle services, including reviews*

Brass Bullet also sponsor systems engineering research at the University of Wales Swansea

Call to discuss your requirements on: 01792 417 227

Email: enquiries@brass-bullet.co.uk
www.brass-bullet.co.uk

Delegates were asked what, in their opinion, needed to be done to achieve better consideration of human issues in system development. There was a wide range of responses, though the following list categories the principal suggestions.

- Improved training and awareness for engineers, managers and directors
- Case studies
- Better integration of human issues into SE methods, especially system models
- Earlier involvement of HF in programmes
- Better and earlier treatment of human requirements
- Better guidance/ checklists for engineers
- Demonstrate/ prove the economic benefits.
- Better incorporation of human issues in design and cost-benefit trade-offs
- Better quantification of human issues
- HF people/ methods need to be more oriented to a system, rather than human-centred view
- Enforce higher level of systems thinking to ensure humans are seen in system boundary

Respondents were asked how aware they were of the state of the art in HF processes and techniques, and how much confidence they had in them. Half of the respondents claimed "a little" or "some" awareness. A quarter said they had “a lot” of confidence in HF, while 63% said they had "some" confidence. 13% thought HF was "extremely cost-effective", and another 13% thought it was "reasonably" cost-effective. The remainder expressed no opinion.

Delegates were then asked about their awareness and confidence in SE techniques and processes. The majority (66%) said they had "a lot", or "a great deal" of awareness of SE. 30% claimed "some" awareness. The great majority (88%) had "a lot" of "a great deal" of confidence in SE. Nearly half (48%) thought SE was either "extremely" or "reasonably" cost-effective. (Interestingly, 16% were neutral, and 22% thought the cost-effectiveness of SE was "fairly poor").

The remaining questions concerned the conduct of the session. Nearly all (91%) found the session interesting and useful and all but 2 delegates found it relevant to their interests. The majority (82%) said they had learned something from the session. Following the session, 23% thought integrating HF into SE was more important than they had before, although the majority (73%) had not changed their view.

All delegates thought the session was well organised and efficiently run, and nearly all (88%) rated the speakers as being of good quality.

OBSERVATIONS

While I would hesitate to claim that that the respondents were statistically representative of systems engineers in the UK, they did have a great deal of experience and covered a range of industries. (If anyone else would like to complete the questionnaire, please e-mail me for a copy; hf@nickelby.com).

We were very surprised at the level of interest, enthusiasm and genuine concern about human issues expressed in the discussions. As it was the last session, held immediately after lunch on the last day of the assembly, we had anticipated that many delegates would take the opportunity to leave early. In fact everybody remained. Little effort was needed to get delegates to express a view; and there was no need whatsoever to argue that human issues can be important. (This might seem a naïve expectation, though it is borne out of 20 years experience as an HF practitioner).

Both the survey, and the nature of the discussions at the session, strongly suggest that the SE community at large are very aware of the need to improve consideration of human issues in the SE process. While there is a strong desire to get it right, there remains a lot to do; much of this is to do with awareness, training, and better integration of method and techniques. There also however seems to be something of a culture gap between those who specialise in HF, and the bulk of the SE community.

For what it is worth, my own opinion is that continuing, and increasing involvement of those with skills, experience and understanding of Human Factors in INCOSE can help to get over this culture gap. On the other hand, INCOSE members with a particular interest should consider becoming associates of the Ergonomics Society or the Human Factors and Ergonomics Society.

Ron Mcleod

System Dynamics Digest

Whilst looking around for links and resources on modelling, I came across a pointer to a list server for System Dynamics (SD), which may be of interest. System Dynamics is described as ‘The rigorous study of systems and their behaviour using the principles of feedback, dynamics and simulation.’ The emphasis is on problems in social systems (businesses, schools, governments…) and the environment, but they are generalising from control systems and engineering problems in the first place.

I am an avid follower of the INCOSE Discuss List server (see references below), but I will readily admit that much of the traffic descends into closed debates about who understands SE principles better, and exact taxonomies.

The SD equivalent list server, however (also see below), sets itself up to stimulate interest in:

1 Issues in conceptualisation of a problem into a feedback structure, including identification of reference modes and the creation of dynamics hypotheses.

2 Ideas and questions about how to formulate a particular type of structure.

3 Interesting models the contributors have built and their results; plus questions to others about certain types of problems.

4 Validation of SD models.

5 Implementation issues (i.e. modelling languages, execution, modularity and portability).

… in other words, bottom-up modelling of Soft Systems problems. For those of us looking for specific examples of how to model real-world problems, especially those involving user interactions, this is more than useful. Recent modelling topics have included the flow of people within / between airports; the impact of boom-towns on rural infrastructure; coastal erosion processes; and the agro-industrial supply chain. I think there is also a frequent topic on healthcare provision. Have a look!!

To subscribe to the INCOSE list server, send a message to listserv@incose.org containing the following text in the body (the subject line is ignored):

Subscribe discuss .

To subscribe to the System Dynamics digest list server, send a message to majordomo@world.std.com containing the following text in the body (the subject line is ignored):

Subscribe system-dynamics yourname@yourhost.com (or whatever)

The subscription will be entered using your 'reply-to' address if you leave out the yourname@yourhost.com bit. To save on the volume of email, you can put 'subscribe system-dynamics-digest' instead, which batches up the emails a week at a time.

Paul Davies

Membership Renewals

Keep an eye on your letter box because the membership renewals for 2001/2001 will shortly be landing on your doormat. The membership year runs from 1 June to 31 May and this year all UK Chapter renewals will be handled locally, so you will not receive the usual letter from America. Please renew promptly because a lot of effort (and cost) is expended every year following up the forgetful. In the unlikely event that you do not wish to renew (why would you want to miss out on four issues of Insight, four issues of the SE Journal, the UK Newsletter,

Bridging the gap between people and technology

nickleby

Nickleby HFE Ltd offers over 100 man years experience in Human Factors, Ergonomics and Applied and Organisational Psychology.

Human Factors management *Human-centred design*
Human contribution to safety *Human-centred requirements*
Organisational culture

Based on our Key Issues Tool (KIT), Nickleby offers unique capability ensuring people-related issues are identified, understood and managed. With offices in Glasgow and the South of England, the company has current experience in a range of industries

Defence *Rail* *Air traffic management*
Oil and Gas *Self service* *Medical systems*
e-commerce

For more information, contact Peter Jeanneret on +44 (0) 1329 665997 or at hf@nickleby.com
www.nickleby.com

Symposia and other meetings?) it would help us if you could let us know, and help us even more if you care to tell us why you are leaving INCOSE.

The annual subscription is £60 in the UK which can be paid by cheque or Direct Debit. We launched the Direct Debit option last year, and after a few teething troubles it is working well. Paying direct to the UK Chapter assists our cash flow, because we get up to 6 months use of the $60 per head of each subscription that has to go to INCOSE central.

If you prefer you may still pay $80 direct to the US by credit card or money transfer. Depending on how the exchange rate is going this may save you a pound or two, but don't forget that most cards will charge a percentage for a foreign currency transaction, as well as working on the 'buy' exchange rate which is lower than the market rate. If you are attending the International Symposium in Melbourne you may wish to pay your subscription together with your registration fee.

Don't forget, if like me you have to pay your own subscription, you can claim the cost of professional fees as a tax allowance. I did this for INCOSE subscriptions a few years ago, and will be doing it again this year since my new employer does not pay professional subscriptions.

If you have any queries about subscriptions then please contact John Mead.

Peter Lister

Election of Officers - Winter 2001/2

After several year's service within INCOSE, Jeremy Goulding (Secretary) has recently resigned his position. Jeremy has been very busy in the Far East, and has found it difficult to find the time for INCOSE. This has also meant that Mary Stoneham is no longer managing the membership database. We thank Jeremy, Mary and i-Logix for their contribution to INCOSE.

This leaves us without a Secretary and underlines the importance of identifying some new candidates to serve on the UK Chapter Board. My appeal in the last Newsletter for volunteers to stand for election as officers of INCOSE UK has not had any discernable result, so I am reminding you of the call. We are able to co-opt members onto the Board at any time, so if you feel that you can help please let me know.

Also there is a vacancy for someone to manage our membership database. The key to this task is to keep on top of the changes as they happen (and they do!), so it is ideal for someone who can manage brief bursts on a weekly basis. The database runs on Microsoft Access.

Pete Lister

Events – Reports and Advance Notices

Bristol Local Group - Requirements and Design for Safety

Hilton Waterside Hotel Rossiter Road Widcombe, Bath

18:30 for 19:00 start on 2 May 2001

Complete and correct Requirements are essential to the success of any project. Safety Requirements are crucial in many applications. This meeting will address some aspects of how to improve the requirements process.

Revealing requirements with safety

Mr T. Cockram, Praxis Critical Systems Ltd.

The talk will describe a process for integrating the requirements engineering process and the safety engineering process by a systematic and traceable method. The talk includes the use of the Reveal® process, the DOORS tool and the Praxis Safety Engineering approach to ensure that safety is adequately addressed in the systems requirements.

UML for Systems Engineering

Mr M. Hause, Artisan Software Ltd.

Systems Engineering practitioners have recently been experimenting with the use of the Unified Modelling Language (UML) for requirements modelling. Unfortunately, the UML as a language is deficient in specifying many important aspects of Systems Engineering. Using UML with real-time extensions, the requirements are more clearly and comprehensively covered, and more easily understood even by those who are unfamiliar with UML.

A Panel Discussion will follow the presentations.

The Speakers

Trevor Cockram is a senior systems engineer with Praxis Critical Systems. He has 26 years experience in the aerospace industry and has interests in the relationship between requirements and safety.

Matthew Hause is a principal consultant with Artisan Software Tools. He has been developing real-time systems for the past 20 years in Power Systems Process Control, Communications, SCADA, Distributed Control, and many other areas of real-time systems. His roles have varied from project manager to developer.

As usual for INCOSE local events, the meeting is open to both members and non-members, so why not bring a friend and introduce them to INCOSE. This event is kindly sponsored by Praxis Critical Systems Ltd.

Contacts:
Christopher Dean, christopher.dean@baesystems.com
Chris Davies, christopher.davies@baesystems.com

International Symposium 2001 – Melbourne

Full brochures should be arriving soon, but if you want to see the full programme right now, go to the Symposium website at www.incose.org/symp2001.

If any of you are planning to attend can you respond to this plea from Paul Davies. "I'd like to know who's going and when, so we might organise a UK chapter get-together sometime over there; particularly anyone taking their partners and intending to stay on for some extra holiday. I can't be the only one who has noticed, for example, that the British Lions Rugby Union team is touring at the same time?"

Paul's e-mail address is:
paul.davies@uk.thalesgroup.com

The Generic Unified Systems Engineering Metamodel (G.U.S.E.M.)

The GUSEM event mentioned in the last Newsletter has been postponed to late summer 2001. For further information contact either George Wallace at george.wallace@lmc.com, or George Caple at georgecaple@cs.com.

The IEE People in Control Conference at UMIST, Manchester, 19-21 June 2001

An international conference on Human Interfaces in Control Rooms, Cockpits and Command Centres.

The second IEE People on Control Conference builds on the considerable success of the first event held in 1999. It aims to bring together representatives from industry, academia, customers and users from differing application domains who are working in the development of control rooms in chemical plants, power stations, railway networks, emergency services, military platform and command centres etc.

Programme and registration details can be found at the Conference web site: www.iee.org.uk/Conf/PIC2001 or contact the PIC Secretariat at IEE Event Services, Savoy Place, WC2R 0BL on +44 (0) 207 344 8425.

Contact Details

President of the UK Chapter, and Editor of the INCOSE UK Newsletter

Pete Lister
Siemens Transportation Systems Limited
4 Highlands Court
Cranmore Avenue
Shirley
Solihull
B90 4LE

Phone: 0121 713 4311
Fax: 0121 713 4360
e-mail: listerp@plcsun.siemens.co.uk, or pete@lister.globalnet.co.uk

INCOSE UK Administrator

John Mead
20 Beehive Lane
Binfield
Berks, RG12 8TU

Phone: 01344 422325
Fax: 01344 481035
e-mail: John.Mead9@hemscott.net

Chairman of the SEPDC (Technical issues and queries)

Mike Prince
BAE SYSTEMS
Grange Road
Christchurch
Dorset, BH23 4JE

Phone: 01202 404840
e-mail: michael.prince@bae.co.uk

President Elect

Paul Davies

e-mail: paul.davies@uk.thalesgroup.com