



INCOSE UK

Newsletter

Brighter Prospects

I am writing this as summer finally arrives in Britain (at least until next week). I had hoped to be at the International Symposium in Minneapolis right now, but a change of job got in the way and instead I am on 'gardening leave' during the warmest week of the year so far. By the time you read this I will be working at Siemens Transportation in Solihull. I have always said that we need more input from outside the Aerospace and Defence industry, but I hadn't thought that I would be one of those to provide it. It will be very interesting to see at first hand the similarities and the differences between Aerospace and Railways.

Since the last Newsletter we have been busy sorting out the Autumn Assembly, and as you will see we are bringing together a strong programme. There should be something for all at the AA, and I hope that you will be able to attend for at least one of the two days.

We must be doing something right because we reached our highest ever membership figures so far in June this year. We had 378 members in June, and provided that you all sign up for 2000/2001 we could break the 400 barrier next year. I have just read Heinz Stoewer's article in the latest copy of Insight and it looks as though we are leading the 25% non-US INCOSE membership to which he refers. There is plenty of opportunity for the UK Chapter to make its mark if we can get ourselves together.

An analysis of the new joiners' top issues is leading us to a better understanding of what the membership wants from INCOSE UK. We are hoping to refine this understanding through a questionnaire to be distributed to the members. Requirements elicitation is a fundamental part of Systems Engineering so maybe we should have thought of it before, but better late than never I suppose. I have been developing a strategic plan for INCOSE UK and hopefully we can use the survey and

other information to engineer an INCOSE that is totally focused on the varied needs of our members - past, present and future.

There are things under way in the background that should surface over the next few months, but as always progress is limited by the effort available. The request for volunteers earlier in the year was quite successful, but there are still plenty of things to do. One major gap at the moment is the development of a strategy for involving industry at the corporate level. If there is anyone out there who has any ideas, or would like to form a team to work on this aspect, then please contact me. Some of you who volunteered in a general sense may be wondering why you haven't been called on to join in. This is simply because unless there is an activity leader it is not easy to assign willing helpers. You have not been forgotten, but feel free to remind me or suggest activities that are of interest to you.

So overall, prospects are looking much brighter in the second half of the year, and I am hopeful that INCOSE UK will again be leading the way for the rest of INCOSE. Don't forget to join up, join in and make the most of your INCOSE membership!

Pete Lister

Message from Minneapolis

What with Tech Board meetings and standing in for Peter Lister to fly the Union Jack at Chapters and Regional meetings, I didn't get to see as much of the Minneapolis Symposium as I would have liked. However, there was plenty going on that received good reports from those attending.

I took a half-day tutorial on 'Practical Systems Measurement' with a view to getting a metrics programme going at work. It was a good introduction, but could have been better if run as a full-day course. The

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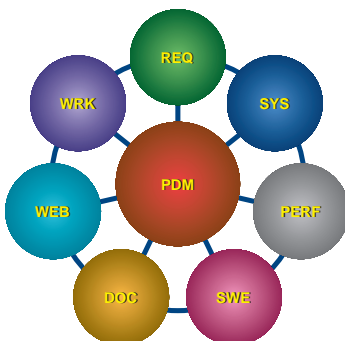
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full-day tutorial on 'Object Oriented Systems Engineering Method' received rave reviews from everyone I talked to, with praise also forthcoming for 'How to Hold a Good Requirements Review', 'Creativity and Innovation for Systems Engineers', and 'UML...for Systems Engineering'.

During the main body of the Symposium, I found once again that I enjoyed Panel sessions more than Paper presentations. A well-run panel, with a common theme but people taking different and possibly contradictory viewpoints, can be more enlightening, and make you think before rushing headlong into adopting a technique expounded in one paper with no opposing evidence. If time presses, you can always read the papers later, or back in the UK.

The papers I did see reminded me of something else – very often the material presented varies significantly from the paper content. In some cases this is probably due to a further 6 months experience since the paper draft was submitted for inclusion in the programme. In others it may be because the author got bored with the paper content, or uses graphics to cut down the communication of the central message to 20-25 minutes. But I also have a theory that some authors will say and present more about their subject in person (with no hard-copy to take away) than their employers will release for publication in print. This, coupled with the opportunity to ask questions of the author, and the panel sessions, makes it even more important to attend the Symposium rather than relying on Joe to bring copies of the CD back with him. Start lobbying your boss for Melbourne 2001 (and the UK Autumn Assembly 6-7 November 2000, of course) now!

The Symposium CD was a revelation – the team had managed to capture all the papers from the last ten years, and put them on a 2-CD set bundled with Adobe Acrobat 4 and its search engine. Given that some of the early papers were scanned images, I'm surprised it all fitted, but it works well even if you can't do word searches in the earlier papers. (*I want one!!!! Ed*)

Best paper of the symposium was generally reckoned to be Bill Mackey's 'A Systems Engineer's Approach to Brain Surgery'. I concur, having read it since my return, even if it is a little harrowing. My own favourite paper was by Barney Roberts on Risk Management for the NASA Genesis programme. What would you do if faced with the task of running risk management for the prime contractor, with NASA, JPL, Los Alamos and Lockheed Martin among the subcontractors? At the risk of getting sued, some of those named aren't exactly proactive about declaring that there is any risk at all....

'Hot topic' of the symposium was definitely Modelling, both of the systems engineering process and in terms of object-oriented modelling of requirement and (software-independent) solution domains. I certainly don't mean models in the form that Integrated Chipware provided us with in Brighton last year! Although I didn't get to spend much time in the exhibition hall, I understand it was strictly business in puritanical Minneapolis.

My overall impression? Definitely worth the trip, as usual, but perhaps the technical content wasn't as good as last year. But then, I would say that, wouldn't I?

Paul Davies

Racal Defence Electronics (A Thomson CSF Company)

New Joiners Survey

Any of you who have filled in the INCOSE application form for the UK Chapter will have noticed the bit where you are invited to let us know the top three issues that you would like INCOSE to address. If you actually filled these in, you are forgiven for wondering what we actually do with this information. The answer, until recently, was that John Mead filed the forms and nothing much happened. At a Board meeting earlier this year the discussion turned, as it often does, to guessing what it was that our members wanted from INCOSE. John Mead pointed out that he had several hundred forms that may help us to analyse the answer rather than guess!

At this point, Patrick Moore (of BSC Consulting) bravely took on the task of putting these many snippets of information into a form that could be used. After a trial run with 100 forms, a total of 250 forms were processed, and with a bit of artistic licence, some interesting facts began to emerge. Eleven categories were established, and individual issues were assigned to each category. The numbers of issues in each category were then calculated

as a percentage of the whole response to arrive at a rough order for 'hot topics'.

By far the biggest category, with 27.3% of the whole, was the setting of ideals/standards for SE. The individual comments in this category covered things such as an agreed set of terms and definitions, SE standards, SE process (and process improvement), provision of guidelines and many other related factors.

The second largest category, with 20.6% of the whole, was the increased involvement of SE in different sectors (i.e. IT, MoD, Rail, Automotive etc.). The individual responses here were rather more disparate than the ideals/standards category, but the overall flavour is one of cross fertilization of ideas across industry boundaries to end the traditional isolation.

The third largest category at 11.1% was training, and there was another 6.4% for the related issue of a recognised certificate for SE. The training category covered such things as whole-life education and training in SE, core SE skills, identification and provision of SE training, and awareness of training opportunities.

Two issues tied for fourth place (8.6%): a plea for information on practical case studies (as opposed to theoretical treatment) and recognition of the need to market SE. The marketing category includes various aspects of publicising SE both outside and inside the organisation.

I found it interesting that the subject of tools was only mentioned in 5% of the issues, with aspects such as tool integration, tool/process integration and tool surveys being raised. On the last point, there is an excellent tools database that is accessible from the INCOSE web site (www.incose.org). Whilst the database does not recommend specific tools it contains details on a huge range of products, and the on-line search can be configured in a variety of ways. I discovered at the last International Workshop that this database is continually being updated and improved, so it is worth a second visit if you haven't been there for a while.

Also at the 5% level was requirements, covering issues such as elicitation, decomposition, validation and process. The relatively low level of interest may reflect the huge range of courses, products, books and even entire symposia set aside for this key aspect of SE.

The final three categories are linkage of SE and Project Management, Soft SE and defining terminology (3.6%, 2.5% and 1.1% respectively).

We have already used the survey to drive the content of and approach to the Autumn Assembly. There are also plans to use the survey as the basis for a questionnaire to be circulated to the members. The benefit of the open ended question is that it does not 'lead' the answer, however, as we have discovered it is sometimes difficult

to analyse the results. The other consideration is that the questions are asked before members have experienced INCOSE, and it is reasonable to suppose that there would be different responses a year or two later. Hopefully, a carefully constructed questionnaire will help to elicit more detailed information.

Our intention is to continue to stockpile the application forms, and at some time in the future repeat this initial analysis to see what has changed and look for new topics. I hope that you will find time to respond to the questionnaire when it is published because it is important that we understand our members' needs. There is much more detail on the survey forms. If any members would like a copy of the report for information or research, then please contact myself or John Mead and we will e-mail you a copy of the spreadsheet that holds the data. (The hard copies are a bit unwieldy, so we can only distribute the 'soft' format.)

Many thanks to Patrick and his assistant Rachel Durrant for creating order from the chaos.

Pete Lister

The Inside Track from INCOSE 2000, Minneapolis

TECH BOARD MEETING, 16 JULY

John Snoderly and Rich Harwell have rewritten the Technical Board Handbook, partly in response to criticism of its operations. The draft handbook is up for TB review now, Review participation will be widened soon, with feedback due 1 November 2000. An accompanying presentation is on the TB reflector, key points are:

- Ensure the technical community organisation, activities and projects are market driven
- Establish improved accountability of the leadership
- Apply SE principles to operations and products
- Ensure visibility of ongoing projects and activities (by raising and approving 'Technical Development Plans' – some hostility from WG leaders)
- Ensure Technical community structure spans breadth of SE concerns
- Ensure TB structure encourages sharing of knowledge
- Maintain the unique spirit of current teams

Some sections were acknowledged incomplete (5.2, 5.3 and 5.4) and suggestions were welcomed. The main change to the working group /TC structure is a proposal to have two TCs for 'SE Applications' (one Defence and Aerospace, the other for everything else, as per Bill Mackey's current set). The rest of the groups are re-jigged to cover the enabling processes and methods, techniques and standards with less overlap and

duplication. It was commented from the floor that it wasn't clear the process had been 'SE'd' and the Modelling and Tools WG (in particular Dave Oliver, Howard Lykins and Mike Dickerson) volunteered to model the workings of the TB to see if it really hung together.

Dave Oliver gave a presentation on the emerging AP-233 standard for data exchange between tools. He covered the relationship with STEP and SEDRES initiatives, and described the intended method of usage – all tool vendors publish a bridging utility to export data from their tool to a neutral 'vanilla' object structure. Tool vendors not subscribing to the initial definition are likely to have their favourite features unsupported! More information is available from Dave Oliver. Ownership seems to reside with the Object Management Group, who want reciprocity of membership and voting rights with INCOSE.

Steve Kuehl of Raytheon, representing AIAA, gave a short presentation on AIAA activities. Basically, despite being rich (24,000 members) and therefore a good means of getting SE stuff published, they only have less than 350 members interested in 'real' SE, maybe only 50 active, half of whom are INCOSE members anyway.

David Cropley of the University of South Australia gave a short presentation on the status of preparations for the Melbourne symposium 2001. He is the Technical Chair for it (and a good bloke – I took part in a panel with him and with Stephen Cook, on 'Globalisation of Systems Engineering', which I enjoyed very much).

OTHER OVERSEAS ACTIVITIES

Unfortunately I was unable to attend the Chapters Committee meeting on Sunday morning due to the clash with the Tech Board meeting. However, I did get to a joint Chapter Presidents / BoD meeting (see below) and to an interesting Region III Meeting. Also of note was a presentation on AFIS, the French affiliate to INCOSE, which occurred at a Requirements Working Group meeting of all places. AFIS is relatively young, forming officially only in 1999. It is sponsored by major French companies, including Thomson CSF, EADS, Dassault Aviation, PSA-Peugeot Citroen, Alcatel, GIAT Industries, and EDF. There is a website (which you would never find unaided – I've tried) at:

http://perso.club-internet.fr/pagniez/AFIS/afis_acceuil.html

They have Interest/Working Groups in the areas of CMM, SE Architecture, V&V, and Requirements, plus several more I wasn't fast enough to catch. They are all mentioned on the website, usually by hyperlink to a website maintained by the WG leader.

REGION III MEETING 17 JULY

Highlights from my notes:

- AFIS had held their first (closed) conference on 21 June, with 180 attendees, and proceedings would be

available via their website (in French) by the end of the year.

- I, James Kirby and Christopher Dean reported on the 2000 Autumn Assembly plans (which solicited a lot of interest); on the local meetings, with a recommendation that this was a good pattern for other chapters to follow; on membership numbers and trends; and on IEE liaison.
- The German Chapter has re-titled itself Gesellschaft fur SystemsEngineering under German law, but is still a fully-signed up INCOSE Chapter.
- Finland and Israel are possible 'Emerging Chapters'. Fariba and the BoD have also had enquiries from Japan and Russia(!) in that respect.
- The BoD are encouraging bids for the 2003 and 2004 Symposia from joint Chapters, to spread the workload and the burden on 'local' sponsors. The intention is to make a bid for the 2004 Symposium jointly between France and Germany, possibly with France taking the lead. Michel Galinier (Thomson CSF, also AFIS President, also incidentally indirectly my new boss!) and Jean-Philippe Lerat of France, and Ralf Hartmann of Germany, agreed to work up the outline of a proposal. I promised, on behalf of the UK Chapter, to get a paper on 'lessons learned' from Peter Robson and Allen Fairbairn, and a copy of Stuart Cornes' hypertext / Access symposium organisation application, to them.

BoD /CHAPTERS MEETING 18 JULY

Donna Rhodes (INCOSE President for 2000) reported that INCOSE were co-sponsoring the forthcoming EIA Conference #34, and the EuSEC 2000 Conference in Munich, as well as the Minneapolis symposium. Her presentation included her aim, during the remainder of her tenure, to establish a Chapters' 'shareware' package, to include a clearing house for speakers for functions, administration aids and educational material.

Pat Hale (Budgeting Committee) reported that all Chapter Presidents will now have to prepare a budget for discussion at the International Workshop (e.g. Jan 2001 Mesa, Arizona), especially if there are any exceptional items requiring BoD funding, e.g. mini-Symposium costs, or costs associated with publications for e.g. work undertaken by the Chapter on behalf of the Technical Board. He also reported that the current year's budget was available for inspection on the BoD Reflector. The 99-00 statement shows an overall loss of \$130K, mainly due to the '99 Symposium results (but no blame was attached to the UK chapter here). Indeed, a typical budget is for the Symposium to make a \$100K loss; and an exceptional item had appeared due to miscalculation of the final costs for the 98 Symposium. The underlying problem was propounded to be a failure to meet membership growth targets, although this is not borne

out by the figures; growth has increased dramatically in the last 18 months due to the influx of new chapters outside the USA. The organisation is still assessed to be viable, although practices may have to change in future. The main change may have to be an increase in Symposium fees. Potentially, relatively wealthy chapters may be approached to accomplish specific Technical Board tasks, and absorb any costs incurred (although this suggestion met with murmurs of opposition).

John Snoderly (Tech Board Chair, and ipso facto Technical Director on the BoD) briefed that the SE Handbook was being re-drafted by the SF Bay Area Chapter, but that he wanted others to take an active part in reviewing. He also commented that Chapters seemed to be able to organise their members more effectively than Working Groups, and hence that in future he would be looking for Chapters to take on tasks rather than WGs in some instances.

CLOSING PLENARY

Highlights from the closing Plenary session / General Members Meeting included the following:

- Final count was 857 attendees from 17 countries. [However, attendance from UK was disappointing apart from the quite large contingent from BAE Systems and Airbus.] *(It's a fair cop, but I will be interested to see the breakdown by nationality to compare with Brighton. Ed)*
- Cecilia Haskins and Ginny Lenz are drafting a Chapters procedure with Standard Operating Practices and templates for doing business.
- Over the last 12 months the most popular www.incose.org links hit were:
 - Chapter Links
 - Tools Database
 - SE Applications Profiles
 - The online SE Handbook
 - Working Group sites and their product download FTPs
 - Within the Members-only area - the online SE Journal, and the Membership list
- David Cropley again advertised Melbourne 30 June to 5 July 2001, where the average temperature will be 55-60F and the hotels averaging \$80-\$90 per night (£55-60 at current rates), in stark contrast to the Hyatt Regency for Minneapolis (\$140 per night). Get your draft papers submitted by 14 October 2000!
- The Systems Engineering Education and Research Technical Committee is in the process of drafting a Guide to the 'Systems Engineering Body of Knowledge' (SEBOK), an analogous publication to the PMBOK and the similarly planned EMBOK. Dennis Buede reported that the first draft is due to be

released for review in January 2001, with final publication planned for July 2002.

Paul Davies

Have You Renewed This Year?

Last year 378 members either joined UK for the first time, or renewed, making the UK Chapter of INCOSE the second largest in the world. During last year we overtook the second largest and at the end of last year were only 120 behind Washington Metro the most populated. It is also encouraging to see the growth in Region 3 - Europe, with 93 in the Netherlands, 83 in Norway, 80 in Germany, and 59 in Sweden. The French are doing their own thing of course, but have affiliate status, and there are around 25 members in Italy waiting for a Chapter to start up.

We knew that we had the best Systems Engineers, but we did not know how many. I am sure that there are a lot more in the woodwork, or wherever Systems Engineers come from. Please take this as a reminder and give an instant response by completing the form sent with your reminder and returning it with your cheque for £54. Please ensure that your membership number is correct and legible.

If you would like an application form to be sent to another potential member please enclose their name and address.

We also have the opportunity for you to pay by Direct Debit and if you can do it this way it cuts down on the administration and paperwork.

Lastly if any of you did not receive a reminder please just send me a cheque for £54 with your contact details and membership number.

Palm Pilot draw – 95 of you renewed by the July 1st deadline and have been entered for the draw for the Palm Pilot, so keep your fingers crossed. You all went in whether you returned the form or not. Many more have joined since then but it is difficult to keep a running total with renewals going to both the US and UK, and I know of at least one new member who joined via the Symposium registration.

As a further incentive, we are offering a FREE book to one lucky winner to be drawn from those who get their renewal in to me by 18 August. The Systems Engineering Guidebook (CRC Press) - A Process for Developing Systems and Products, is written by James Martin who is one of the leading lights of the INCOSE standards activities. A draw will take place at a date to be advised of all the UK members that have currently joined/renewed for this year or do so by the closing date. Good Luck!

John Mead, 20 Beehive Lane, Binfield, Berks, RG12 8TU.

John Mead

Autumn Assembly 2000

We have booked the Goddard Arms at Swindon for the Autumn Assembly 2000 on 6 and 7th of November. Some of you may remember the venue from previous events, and we have selected it based on its location, capacity and reasonable rates. There has been quite a bit of refurbishment since we were last there so we should be perfectly comfortable. Prices have yet to be fixed, but we are continuing the practice from last year of allowing you to sign up for either or both of the days. As usual, there will be a dinner on the Monday night and we are arranging for a speaker to aid the digestion after the meal.

We have selected four topics for presentation, and each is being organised by a separate session chair. Each topic will include presentation material from invited speakers, but there will be an emphasis on interaction both on the podium and on the floor of the hall. The aim is to use rapporteurs to record the interchange which will then be published on the website together with presentation material. If there is sufficient demand we may consider publishing the material on a CD-ROM. I am well aware that the publishing side of last year's AA was not a resounding success, but we have learnt from the experience and promise to do better this time.

One session at the Autumn Assembly, chaired by Paul Davies, will be devoted to Capability Maturity Models and their measurement. Earlier this year Racal became the first UK company to be assessed externally against EIA-731, the current industry standard for Systems Engineering (meaning, in this context, Project Engineering Management) Capability Maturity. You will hear presentations from the DERA team who conducted the assessment, from the Racal team who underwent it, with the emphasis on what was learnt from the exercise, and how Racal intend to use it as a mechanism for improving their Engineering process. We are negotiating for additional input from two major players in the SE business. This will be followed by a panel session where the presenters will invite questions from the floor.

The Unified Modelling Language (UML) is a rich notation for expressing ideas about software and systems. It is well supported with tools, books and courses, and offers an expressive, clear, extensible syntax. For these reasons it has become the *de facto* standard for many areas of software development. More recently the notation has started to be used in Systems Engineering contexts, particularly in systems that involve hardware-software co-design.

This session will include presentations by a variety of industry practitioners who have used UML for large scale Systems Engineering. The speakers will provide insights into the uses of the language, advantages, and potential problems and pitfalls. Speakers will discuss the various tools available for creating UML diagrams and the way in which the various UML diagrams can be adapted in a SE context.

We will try to provide a practical and useful set of ideas and heuristics for using UML in areas such as:

- Systems analysis
- Requirements Traceability
- Architectural models
- Real-Time modelling
- Model driven Systems Engineering and executable models

We already have a programme of speakers for this session, but if you have used UML on your project or have experience (negative and positive) of using UML in a Systems Engineering context, we would like to hear from you. We would like to encourage as many industry practitioners as possible to contribute to the sessions. If you think that you have something to contribute then please contact the session chair Rob Collins at Entelechei@aol.com

The theme of the third session is to build on the ongoing Academic Outreach work by reviewing current system engineering related research in academia. INCOSE UK is seeking closer ties with academia to benefit both academics and SE practitioners. This session will give academics an opportunity to demonstrate the value of their research. It is also expected that the session will consider how SE practitioners can contribute to academia. It is planned to present four papers during the session which is being organised by Martin Testo. You should contact him at mtesto@aol.com if you have anything that you wish to contribute.

The final subject for discussion is the integration of Human Factors Engineering into Systems Engineering. HF practitioners often complain that Systems Engineers focus too much on the machine rather than the man. SEs can find HF methodologies and analysis too difficult to integrate with the system definition process. Both camps tend to use similar language to describe different things. The session will provide a platform for some leading HF practitioners to present their views on the way to integrate the two disciplines more closely. Col David Wright will be chairing this session, and we are looking forward to a lively debate from both the platform and the floor.

If there is anyone who would like to assist with the preparation or rapportage of any of these topics let me know and I will pass your details on to the session chair.

This is a good opportunity to get involved with event planning and find out how it is done.

Pete Lister

Local Events – Reports and Advance Notices

BLENDING IN AT BRISTOL

On 25 July the Bristol Branch of the UK Chapter held its second technical meeting this year. Entitled 'Practical Requirements Engineering – Blending Theory with Experience' this event attracted an audience from both the locale and as far afield as London.

Following a welcome and an introduction by Chris Davies of BAE SYSTEMS, Paul Davies of Racal delivered his presentation entitled 'Requirements in Context – Finding a common culture with an overseas customer'. Paul drew a distinction between 'market-led' and 'customer-dictated' product developments and considered how this continuum affected the engineering process, particularly during requirements capture. Whilst recent systems engineering process standards can be useful, they don't always align well with international procurement practices. Product development processes must be compatible with these cultural factors and expectations because they have a significant impact on how, when, and where a requirement becomes apparent.

Jeremy Dick of QSS delivered the second presentation entitled 'Requirements Management for Product Families'. He described the configuration management issues that arise when the requirements for sub-systems or components are reused across members of a product family. Jeremy explained a three dimensional framework that has been applied to address these issues and enables reuse of requirements. The first dimension considers the *Evolution* of requirements across successive generations and variants of a product. *Composition* defines the constituent parts that make up a particular product variant, in effect its PBS. Finally, *Traceability* binds requirements within and between levels of a decomposition hierarchy. This framework has allowed companies who already have well defined requirements to increase the value of their investment.

Dave Riddlestone of Quintec and Derrick Hewkin of BAE SYSTEMS joined the speakers to answer audience questions. As the audience was drawn from aerospace and defence industries, telecommunications, technical consultants, and academia, the questions were too numerous and diverse to do justice in this brief report. Suffice it to say that whilst the audience found the exchanges informative, the panel found it stimulating...

The continued sponsorship of these events by Gary Wicks of BAE SYSTEMS, Airbus, means we are able to

raise awareness of Systems Engineering in and around Bristol. This style of open meeting, without charge, has also stimulated interest in INCOSE itself and the benefits of membership.

A recent collaboration agreement with the regional branch of the Association of Project Managers (APM) ensures notification of future events reaches more people. Opportunities for a joint INCOSE/APM meeting are also being considered.

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Monitor the UK Chapter web site (www.incose.org.uk) for details of our next meeting planned for late November.

Christopher Dean christopher.dean@baesystems.com

BIRMINGHAM

The first local meeting in the Birmingham area will be held at the TRW lecture theatre in Shirley on 11 September 2000. We have secured the services of John Clouet, who is passing through on his way to Coventry (ICSE) and Munich (EuSEC). John is the INCOSE President Elect, and will be speaking about the SE challenges associated with the management of Nuclear Waste. This should prove an interesting topic in itself, given the mind boggling problem of designing a system that has to last for millennia, but John will draw parallels with everyday Systems Engineering to help us understand what lessons we can learn from this application.

Full details of this meeting will be published soon. If you want to be sure of receiving them please contact Michelle Smith at TRW (michelle.e.smith@trw.com).

SOUTHAMPTON

A meeting was held on 27 June, but we don't have a report at the time of going to press. I am reliably informed that the next meeting is being planned for 10 October but have no further details. Contact Sarah Curran at sarah.curran@baesystems.com for information on the Southampton group.

AND DON'T FORGET, YOU CAN STILL PHONE A FRIEND....

Remember that local meetings are free and are open to all. So if you know someone who might be interested in a meeting in your locality, please pass on the information. The only penalty is a bit of a sales pitch regarding INCOSE, but I think most would agree the quality of the meetings makes this a fair exchange.

We must also remember to thank all those organisations that have kindly provided meeting rooms and refreshments for local meetings and thereby enabled

INCOSE to bring them to you without charge. And while I'm about it we must also thank the speakers who turn out and freely give their time to help spread the word on Systems Engineering. I think that we have managed to disprove the adage that 'there's no such thing as a free lunch'.

Pete Lister

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