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Welcome to the spring 2015 edition of Preview. It seems no time at all since my first introduction in the last edition of Preview.

It has certainly been a busy time. As Chapter President my main activity has been attendance and representing the UK Chapter at the INCOSE International Workshop in Torrance. It was the first time I have attended this event in a "Chapter leadership" role and it was certainly a new experience to represent the viewpoint of the whole UK Chapter, rather than just my own. There is a detailed report on the activities at the International Workshop later in this edition of Preview.

Outside that, my main INCOSE UK activities have been associated with various aspects of promoting professionalism. There are two items of importance to share with you.

Firstly, I attended a workshop at the Engineering Council for both the institutes that have Professional Affiliate status and those who are Fully Licensed Members about Registration Agreements. The focus for us was the INCOSE UK collaborative relationship with the IET which allows our members to become Professionally Registered via the 'Lite' associate membership route. It was interesting to share experiences with other small societies and to see the high level of support for this approach to Professional Registration from the Engineering Council. The Engineering Council outlined improvements to the guidelines on how the process works today and highlighted the introduction of the new CPD requirement for those who have successfully achieved Professional Registration which comes into effect on 1 January 2016 – I am sure that this topic will be a feature of a future article in Preview.

Secondly, I have been involved in work supporting the development of the Defence Growth Partnership Systems Engineering Masters Apprenticeship Programme. This is a very exciting development, as it is an example of an external pull for Professional Systems Engineers which INCOSE UK have been asked to support. The UK companies in the Defence Growth Partnership identified a shortfall in engineering, specifically in Systems Engineering skills. As a result of this a post-graduate “apprenticeship” programme has been proposed, and as a “trailblazer apprenticeship”, there will be some government contribution to the training costs. This apprenticeship scheme was announced by the Prime Minister David Cameron at the 2014 Farnborough International Air show and INCOSE UK have been part of a working group, led by Atkins, defining the standard and details. At the time of writing we await the result of government review of the proposed standard. The intended outcome for the apprentice will be both a “practitioner” level of Systems Engineering knowledge, based on the UK Competency Framework, and readiness to apply for CEng. We are looking at the level of support and engagement INCOSE UK will provide to the operation of this scheme although I am anxious not to over commit our resources. Engagement could include, definition of the standard for success, strongly linked to the proposal to develop a competency-based equivalent to CSEP reported in the outcomes from the International Workshop, advice to mentors and apprentices in determining specific programmes of learning, alignment of academic course learning objectives to the Competency Framework and the provision of approved assessors for the end point review. There is every intention to generalise the apprenticeship to make it applicable to every domain, not just defence. Exciting times for INCOSE UK.

Finally, as I write, the news is full of discussion from the twitter world about the colour of “that dress”. There is an important Systems Engineering issue in this. In Systems Engineering, and especially in application of Peter Checkland’s Soft Systems Methodology, it is important to recognise that different stakeholders can look at the same thing and see totally different things. What could be a clearer illustration than some people looking at a picture and seeing “black and blue” and others, including me in case you wondered, seeing “white and gold”. This illustrates that it is perfectly possible for two people to see the same thing totally differently and we must always, as professional systems engineers, avoid falling to the easy assumption that others see the world and situations the same way as we do, and spend our time searching for these assumptions that can lead to expensive problems and delays.

Happy thinking and best regards

Richard Beasley
President INCOSE UK
Thank you to Steve Fisher

As one of INCOSE UKs key outputs, Preview newsletter requires a good deal of work from various INCOSE UK members.

The obvious team is the Communications Director supported by other members of the Council as required.

The team at Dot-The-Eye are another important contributor to the publishing process.

The INCOSE UK Council get a break from having to march to the steady drumbeat of Preview every two or three years as they rotate. I would like to recognise and bring to light the important contribution made by a member of the Preview team who, over the years has tirelessly worked behind the scenes to bring Preview to the INCOSE UK membership; this person is Steve Fisher.

Steve does the desk top publishing for the Preview newsletter, this entails bringing together all the articles and laying them out in an eye catching fashion, ensuring all the advertisements and notices are in the right places and that the format is correct. He then turns around the various drafts with very little notice in order to get it back to Dot-The-Eye and their preparation for the printers. Steve does this with very little recognition or reward. He works this around his full time job, often giving up weekends to do the necessary work.

As a past Communications Director along with my predecessors and successor and the UK Council, we would like to thank Steve for his past and continuing invaluable support to the task of getting Preview out to the membership.

Robbie Forder
Communications Director 2011 - 2014

We would welcome any stories or articles that you would like to see appear in Preview. Please email preview-editor@incoseonline.org.uk

INCOSE 25th Anniversary

As you all should know by now, during 2015 we are celebrating the 25th anniversary of the launch of NCOSE (The US National Council on Systems Engineering) which rapidly evolved into INCOSE, our parent organisation. During this year we are both celebrating our history and achievements and looking forward.

The Board of Directors wants to ensure that everyone who is a member during this special year receives a memento of the year, therefore we commissioned a lapel pin featuring the anniversary logo to be distributed to all members. The eagle-eyed among our readers will note that this logo is based on an updated version of the INCOSE logo, which for the first time drops the spelling out of “International Council on Systems Engineering” across its centre. This streamlined logo is now being adopted across INCOSE and will feature prominently on the updated INCOSE website.

Your pin badge is attached to this copy of Preview. Please wear your pin badge with pride, and take the opportunities that it offers to explain INCOSE, our anniversary, and the exciting future for Systems Engineering and its practitioners.

Alan Harding CEng FIET MINCOSE
Immediate Past President INCOSE UK
President-Elect INCOSE
Report from INCOSE International Workshop 2015 – Torrance, California

By Richard Beasley, Alan Harding, Ivan Mactaggart, Ian Gibson, and Ian Presland

Introduction

INCOSE held its annual International Workshop in Torrance, near LA, in California. This is primarily an opportunity for INCOSE members to get together face to face and make active progress in the many international working groups that are part of Technical Operations for International INCOSE, and for a major MBSE event. Additional to that there are a large number of INCOSE “business meetings” where the leads from the various Chapters work with the top level INCOSE council teams to arrange and run INCOSE. The UK Chapter was very well represented, with five members of our council attending.

General news

This year is INCOSE’s 25th anniversary, and there is every intention to celebrate in style. The main focus will be the “blue riband” International Symposium in Seattle in July, but there will be plenty of other celebrations. See report on event planning below.

INCOSE have launched a new initiative – the Leadership Institute. The deadline for applications has passed, but it will run each year. It is a development programme for active INCOSE members seeking to improve their leadership skills in an open, collaborative environment. Patrick Godfrey and Ruth Deakin-Crick from Bristol University are two of a small band of coaches of this, so there is significant UK engagement. [Link]

INCOSE have appointed Paul Davies, well known to INCOSE UK as one of our past-presidents and regular contributors, to the important role of Outreach Director to formulate INCOSE policy for engaging across wide range of sectors (beyond the usual Defence and Aerospace focus). As the breadth of INCOSE UK membership extends this is something very important to us in the UK.

Events

Some of you may have missed this, but the big INCOSE UK news this year is that the INCOSE International Symposium will be coming to Edinburgh in July 2016. This clearly means that there will be many opportunities for UK members to get involved as presenters, delegates, reviewer, session chairs etc, but the most pressing need has been to appoint a UK Chapter lead to act as the Project Manager for all of the volunteer effort around the event. Having just been re-appointed UK Events Director for the next 3 years, Ian Gibson was something of an obvious candidate, and found himself on a flight out of Heathrow Terminal 5 at the end of January, to learn the ropes for International Symposium planning.

Whilst the rest of the IW2015 attendees were busy advancing the practice of Systems Engineering in Working Group sessions, or improving the state of the Systems Engineering discipline in sessions on CSEP, BKCASE etc, the Events Planning Team spent 4 days sat in meeting rooms from 8am-6pm running through everything that needs to be done between January and June for the 25th Anniversary International Symposium in Seattle. If all of the initiatives come off, then it’s going to be an excellent and memorable conference, with some new ideas being trialled this year which ought to play well at the IS2016 in Edinburgh with a more European audience. Perhaps the most exciting development is that The “Tool Vendor Challenge” will be taking a break this year in favour of a “Practitioner Challenge” where spontaneous teams of IS2015 delegates will try out a range of Systems Thinking techniques to address a complex and messy socio-technical problem.
So with IS2015 trialling several changes to the usual format, the stage is set for IS2016 in Edinburgh to use this as a springboard to something truly special. The call for Papers, Panels and Tutorials is currently being developed, but please do not delay – if you have an idea for a Paper then please start working it up as soon as possible. The International Symposium judging process requires a “near-final” Paper to be submitted by November 2015, and it’s always surprising how life in general and the day-job in particular can interfere with pulling together the perfect Paper. Since ASE2015 is also moving towards a Paper-based submission system, the Technical team have put together some guidance on how to write a Paper, which is well worth reading as a reminder. (Page 17-19 of this Preview)

Hosting IS2016 in Edinburgh is a significant coup for INCOSE UK, and it will be good to see a strong UK presence at the event. For those who have never attended an international conference before, it will be an experience not to be missed!

Professional Development

In 2004 INCOSE launched the Systems Engineering Certification programme, which now has three levels of accreditation: ASEP, CSEP and ESEP and over 2000 individuals in the scheme.

Assessment is based upon an independent validation of documented breadth and depth of experience (in months/years), plus successful passing of a separate Systems Engineering knowledge examination (for ASEP and CSEP) based upon the INCOSE Systems Engineering Handbook. For ESEP domain leadership and contribution to Systems Engineering in its widest sense are also examined.

In the UK, whilst the idea of formal accreditation is appealing, for the last decade or more, the emphasis in the majority of corporate HR circles has focused on a “competence-based” approach to individual assessment, rather than one based upon “time-served” (which can in some cases fall foul of age-discrimination legislation).

As a result, INCOSE UK has been striving for some years to gain traction within INCOSE for the idea of a competence-based alternative to the existing time-served schema. Ian Presland has been actively pursuing this in his role on the INCOSE Certification Advisory Group (CAG), which defines the certification process worldwide.

The good news is that at the IW2015, agreement was finally reached, defining a set of criteria against which any INCOSE Chapter wishing to use a competence-based model for certification (rather than the existing time-served approach) could be assessed as “equivalent”. The Chapter in question would be required to submit detailed evidence defining their local competence-based Certification process, which would then be evaluated by the CAG and if deemed to meet or exceed the defined criteria, would be deemed “equivalent” and therefore permitted to grant Certification using their equivalent process. Criteria were defined for ASEP, CSEP and ESEP equivalence.

This is a huge success and paves the way for future strategic developments in INCOSE UK both in the area of competence-based certification, but also at a more strategic level where we hope, at some point in future, to be able to define a relationship between proven Systems Engineering competency and Professional Registration through the Engineering Council.

The Council is now considering offering INCOSE UK up as a pilot for a programme to “test” that the competence-equivalent approach is viable. The main barrier to take-up will inevitably be the effort and associated costs of defining and implementing the process in such a way that it is robust, consistent and auditable. However, in return, the benefits to INCOSE UK members appear to be significant. We will report more on this as we consider the option in depth.

One of the imperatives outlined in the INCOSE Systems Engineering vision 2025 is to “enhance education and training to grow a Systems Engineering workforce that meets the increasing demand.” This develops to an intent to integrate Systems Engineering into the education of ALL engineers. Ric Adcock, from Cranfield University led a session on looking at how this will be done, building on the idea that Systems Thinking is broadly applicable, and we need to get it into all education of engineers, whilst developing some “real experts”. This aligns nicely with the sentiments Derek Hitchins presented in his key note speech at ASE2014 when he contended that the “saving of Systems Engineering” can come from restoring Systems Thinking as the central idea from which everything else flows. This will be a challenge in already busy engineering curriculum, so ideas would be welcome. In particular, how to apply the Royal Academy Engineering Habits of Mind included in “Thinking like an Engineer” – http://www.raeng.org.uk/publications/reports/thinking-like-an-engineer-implications-full-report
There is an International Competency Working group, with INCOSE UK well represented. They are looking to take the existing UK Competency Framework forward (rather than starting from scratch and presenting us in the UK with a problem of multiple standards – hurrah!). They are looking to add description of professional competencies (otherwise known as behaviours or soft skills), domain competencies, and a description of how to use the Competency Framework to define roles. This will progress towards making Systems Engineering more “competency” than just “process application”. Somewhat foolishly Richard Beasley has agreed to draft the Chapter on role statements. It is intended this will be an up-issue of UK Competency Framework, and so all UK distribution rights will remain.

EMEA sector news

EMEA is the European, Middle East and African sub-set of INCOSE Chapters. It is a growing sector, with new Chapters and increasing membership, and importantly (compared to the Americas) the Chapters are all national – which makes a tremendous difference to the nature of the Chapter compared to regional / local group based around a city or state in the US.

There is considerable focus in EMEA attempting to share information on what is of common interest. This is based around comparing what common working groups we have in our local chapters. The French Chapter (AFIS) are planning a “European Workshop” for the EMEA working group members can get together and compare notes. This is planned for 7th – 9th October in Paris, and will be conducted in English as the common language. We will keep you informed, if you are interested put the date in your calendar.

AFIS, the French Chapter, are producing a translation of their guide to “Systems Engineering for Product Lines” and this will be available to all INCOSE members. There is a small budget for translation from Central now, so we can expect more sharing from the rest of the sector.

INCOSE Operations

INCOSE UK made a strong submission to the Chapter Circle Awards, hoping to continue our run of high level acknowledgement. Ivan Mactaggart valiantly joined the assessment team to review the many applications, and we feed back our “good and bad” reflection of the process. The assessment process reviewed almost 1900 items of evidence from 29 chapters with the UK alone submitting over 200 documents in support of our claim team. Naturally there were some lessons to be learned and the main point we made was that we want the awards to be about “enabling and the encouraging good practice to achieve INCOSE mission”, and not just hearty back slapping at the IS (although when you get an award that is nice!). To that end we have asked for clarification, and for prompt feedback of the assessment, so we can quickly incorporate the calibration of our self-assessment into our Chapter planning. One immediate point is the Chapter Good Practice puts a lot of emphasis on recognition of those who support and help us – watch out in the UK because we intend to try much harder to do this.

Other UK attendees

This report has focused on the adventures of the UK Council members, attempting to influence the operation of INCOSE – with Alan Harding bravely and successfully managing to wear two hats – one for the UK and one as President-Elect of the overall INCOSE behemoth. However, there were other UK members there, who were observed to be having fun and contributing strongly. Thanks to Rick Adcock, Jeremy Bryans, Claire Ingram, Dave Murray, Emma Sparks, Jerome Szarazi, and Jennifer Wilby for making the event international.

If you can manage the travel to the US in January this is a valuable event – it broadens your perspective by seeing how Systems Engineering is done in other countries, and getting to talk in detail with other systems engineers. There is, allegedly some time for socialising and drinking but there is certainly enough work to verify the title of the event. It was international and it was work!

Photographs of the International Workshop were taken by Andy Pickard
I am a Systems Engineer and I Do …
by Laura Shrieves

Q. Why did you choose to become a Systems Engineer?

I wouldn’t say it was a conscious choice to start with, I was happy as a graduate software engineer in Thales, but I have always wanted to understand the context and the user’s point of view in the work I did. It was a natural progression for me to move into Systems, and I’ve never looked back. Systems is an expansive discipline and I’ve been lucky enough to gain some great experience in aerospace, encryption and other sectors.

Q. Some people believe you cannot be involved in Systems Engineering until you have experience, and therefore you can only become a systems engineer when you are older, do you agree?

A. I don’t agree with this at all. There are some domain-specific specialisms that come with experience, and therefore with age, but I think that there are valuable systems skills, such as visualising and creative problem solving that contribute to Systems Engineering that don’t require years of experience. These skills are often learnt at primary school and then lost through our reductionist secondary education system. Thales has a number of very talented graduate systems engineers who are making a positive difference to the projects they are involved in.

What education/ qualifications do you have that enable you to become a Systems Engineer?

I have a BSc in Computer Science and an MSc in Human Centred Computer Systems, so by education or qualification, I’m not an engineer at all! I started work as a graduate software engineer, but soon realised that I had an aptitude for Systems. There are a number of important skills and behaviours that are apparent in good systems engineers, such as effective communication skills and holistic thinking, which women tend to have a natural aptitude for. I have met systems engineers with a wide variety of backgrounds, including Physics, Civil Engineering and Electronics.

What has been the most exciting project you have been involved in since becoming a Systems Engineer?

That is a tough question as I have been involved with a lot of different, exciting projects over the years, but if I had to pick one it would be Watchkeeper, the new unmanned aerial vehicle for the British Army, which was the first project I worked on at Thales. I had the opportunity to work directly with the users, which resulted in delivering a solution that was useful and usable.

What advice would you give to systems engineers just starting in their careers?

1. Try and get as many different experiences as you can, chances are you will really enjoy one of them and take it from there.
2. Say ‘yes’ to as much as you can – the working groups and extra activities that I am involved in help develop a very different set of skills and can be very rewarding.
3. Have fun – how you approach your work makes a massive difference, you spend such a large percentage of your life working, it should be fun!

Would you like to be the next person who is featured as ‘I am a Systems Engineer and I Do’? – If so please contact preview-editor@incoseonline.org.uk
INCOSE Academic Team Report

Over the years there have been several attempts within the UK Chapter to establish an “Academic Forum” for the airing of academic and educational concerns, similar to the one that has been running for a long time at the international level. For a variety of reasons, these attempts in the UK did not lead to any lasting arrangements and in late 2013 a new approach was sought, with the appointment of Mike Wilkinson, one time INCOSE UK President, to the role of Academic Director.

Mike’s first task was to consult widely within the membership to determine whether there was any appetite for an Academic Forum (or similar construct) – and, if so, what form it might take and how it might operate. A broad spectrum of individual and corporate members provided their views, which, in summary, were that there was indeed a role for some engagement mechanism specifically designed to address academic and educational issues of general relevance to UK Chapter members.

It was also clear from the early consultation that a traditional forum (mainly a “talking shop”) or traditional working group (with a product/output focus) would not be appropriate. Rather, what was needed was an enduring mechanism for facilitating transformation of the Systems Engineering research and education domain within the UK. This enduring mechanism came to be termed the Academic Team and volunteers were sought to join the team.

At an initial plenary session of volunteers hosted by University College London in June 2014 it was agreed that the Academic Team would:

• Act as a means of bringing together a network of interested parties within Academia, Industry and Government
• Be a catalyst for improving the quality and coherence of UK Systems Engineering research and education
• Develop new initiatives and action plans as appropriate

A set of initial themes and theme leads was also agreed, as follows:

• Systems Engineering Research (lead Rupert England, Cranfield University): understand the extant UK research strategy and current programme focus; develop a view on collaborative research priorities, informed by industry; engage with funding bodies to promote views on priorities
• Linking Academia and Industry (lead Jim Henderson, Selex ES): identify the community of potential academic/industry collaborators; capture case study and reference material for sharing by an appropriate mechanism; facilitate collaborative paper writing; facilitate industrial input to education/training
• Student Members (lead Neil Carhart, Bristol University): survey student members to establish a viewpoint baseline; develop proposals for increasing the value of student membership; explore mature student needs; develop new engagement models/activities
• Schools (lead Giles Dalton): understand the role of Systems Thinking in education, the national curriculum and specific Systems Engineering courses; survey what other professional bodies are doing; develop some standard education material; identify INCOSE members willing to brief to schools; solicit input for ASEC, Preview or other communications channels

Work on these themes was taken forward under the guidance of the theme leads and progress was reported at the second plenary session held in February 2015 at Niteworks in Farnborough. Details of the status of each theme are provided later in this article.

As the initial themes have progressed, the team has endeavoured to improve links with the international Academic Council. At the recent International Workshop in Torrance, California, the UK’s Academic Team presented a progress
The report is intending to become involved in the Academic Forum workshops now being planned by the INCOSE Central Director for Academic Matters, Art Pyster. Like all other aspects of INCOSE, the Academic Team relies on volunteers stepping forward to provide their time and effort in pursuit of our common cause in Systems Engineering. If you would like to get involved or have any views to convey, please get in touch with Mike Wilkinson.

academic-director@incoseonline.org.uk

Systems Engineering Research Theme

Six activities have been identified to address the high-level aim, as shown in the figure, which also shows the initial outputs and status of the theme. An initial data gathering exercise is underway to establish which organisations (including Academic, Government and Industrial) are active in Systems Engineering and what kind of research is being published in which journals. This information was used to inform the recent Season report.

As a consequence of firsthand experience of this (time consuming) data gathering activity the Team is proposing to establish a Systems Engineering Research Directory and a compendium of Research Abstracts to make this kind of basic information more widely available. Work is continuing through the six activities, jointly with the Linking Academia and Industry Theme where appropriate.

Linking Academia and Industry Theme

The interactions between Academia and Industry are numerous and varied, covering, for example, knowledge transfer, targeted research activities, consultancy, transfer of staff and students and Continuing Professional Development. These are conducted through numerous fora established to encourage such interaction. When placed within the wider context of the national research framework, in which both Academia and Industry operate, the complexity of these interactions becomes significant. Consequently, a key activity has been the definition and development of a relationship model that captures the scope of activities to be addressed, specifically relating to research in Systems Engineering. The initial
The model defines the interactions in the wider environment, the extended stakeholder maps and the necessary interactions with the other INCOSE Academic Team themes.

The team continues to evolve the details of this base model and current activities include the creation and testing of a more detailed context model. This model further develops the scope of the activity and captures the drivers and benefits, for both industry and academia, with regard to conducting joint Systems Engineering research, with appropriate course arterial and case studies for education and development. The roles of INCOSE UK are also being addressed within this context model as are the interfaces to the students within academic institutes. In conjunction with the Research Theme, the Team has started to identify the participants involved in Systems Engineering research activities within the UK. The mapping of current and future research activities will be carried out to identify and inform INCOSE UK members of the potential opportunities for collaborative research and, where appropriate, consider the mechanisms required for industry and INCOSE UK to support the development of course material and relevant case studies. Further, both existing and potential communication channels between academia, industry and INCOSE UK are being reviewed to facilitate discussions concerning possible collaboration opportunities.

**Student Members Theme**

Relevant STEM based professional institutions have been surveyed, their offerings and value proposition to student and graduate members have been identified. These have been used to inform the design of a questionnaire to gather data on the views and values of current and potential student and graduate members of INCOSE UK. Routes through which to publicise and administer the questionnaire have also been identified though a survey of UK higher education facilities. The student and graduate member engagement questionnaire will be made available on a suitable online platform. The questionnaire will be publicised via suitable contacts, which have already been identified. The results of the questionnaire will then be reported and used to identify actions for increasing engagement with student and graduate members, increasing the value of membership to these groups, and therefore potential avenues to increasing student and graduate membership.

**Schools Theme**

The scope of the work being addressed by this theme has been bounded to encompass the UK only and an age range from Key Stage 2 to age 17/18. Initial investigations have shown that there is a substantial body of STEM related activity and materials already in existence – including that showcased in the recent Preview article – and the Team have decided to build on this work rather than reproduce it. The strategy being adopted therefore focuses on establishing the Academic Team as a ‘clearing house’ for guidance, materials, and support to be made available to the broader INCOSE UK membership and potentially beyond. The intent will be to promote Systems Engineering as an integrating mechanism across STEM and other disciplines. The team intends to offer a tutorial at ASEC2015 to assist members interested in getting involved in STEM engagements.

**News in Brief**

**Z-9 Update** – The INCOSE UK Z9 ‘What is Model Based Systems Engineering’ has now been revised and reprinted. A hardcopy is included with this edition of preview and it is also available for download on the INCOSE UK website.

**Recent Website updates** include the creation of “Hall of Fame”, “Fellows” and “Past-Presidents” Pages”, they can be found in the ‘About Us’ section.

**ePreview 62** – Did you see the Call for Presentation and Tutorials as well as details on how to entry the Poster Competition this year?

**The new INCOSE website** (http://www.incose.org) has launched! You have been sent an email that enables you to create your personal password on the new International Council on Systems Engineering site so you can login and access the new Connect and your New Profile Home. You will now be able to use your email address as your login ID.

Don’t forget to catch up with the latest news and interesting articles on our Linkedin page INCOSEUK and Twitter Feed @incoseuk These two mediums are very powerful tools and can spread the word across the globe in a matter of a few minutes!
Communications progress

First, a definition.

‘Communication: Two-way process of reaching mutual understanding, in which participants not only exchange (encode-decode) information, news, ideas and feelings but also create and share meaning. In general, communication is a means of connecting people or places. In business, it is a key function of management—an organisation cannot operate without communication between levels, departments and employees.’

http://www.businessdictionary.com/definition/communication.html

The Chapter planning for the year is a significant piece of work, and the Communications Team planning is just one part. The plans are built on previous plans, but as I am new in post, I have the opportunity to rework the plan to include some of the aspects that I feel are important. We have a number of different audiences for our communications and the aim is to address all of them. Members and potential members, both individual and corporate, and external bodies being the main groups.

Preview is an important part of our communication, and it is well established. I am particularly interested in some newer approaches to communication, with clear routes for the two way traffic referred to in the definition above. LinkedIn, Twitter, blogs, forums, Facebook, and other social media channels are all useful. There is a Facebook page that has been set up by INCOSE Central, we have an INCOSE UK LinkedIn group INCOSEUK and Twitter account @incoseuk and we also have a new blog. These things all thrive on interaction with members. Studies show that you won’t all comment, but benefit is gained by the silent readers. We can track the number of visitors for some of these things, and that gives us information about whether we are headed in the right direction. I would love to do more, but with a limited number of volunteers I am being careful not to overreach. If you wish to comment privately on the communications efforts, then use the email address at the end of this article.

We have also launched a Flipboard magazine which you can find from the blog, or if you open up the iPhone or Android app and search for INCOSE UK, you should find it. This magazine is curated content from elsewhere on the Internet. You will see stories from various news sources, Tweets, and items from INCOSE Central. If you have a Twitter account, or a Systems Engineering related blog then let me know and we will include your content in the magazine. There is a small team of volunteers who are helping in the communications area, and if you would like to join then please let me know at communications-director@incoseonline.org.uk

The blog

We have started a blog on the website at http://incoseblog.org.uk

The comments are, or will very soon be, open to all members to discuss any articles. Content will be provided by members of the INCOSE UK Council, the UKAB, groups, or any member that has a topic to propose. In general, the opinions are those of the individual author, and do not necessarily represent those of either their employer, or of INCOSE UK. Comments are posted under the same terms.

You can expect to see regular content here, and much of it will be cross posted to our LinkedIn group, and referenced on Twitter. It will also be flipped into our Flipboard magazine for consumption on your mobile device or a Web browser. The blog is the focus of the conversation between the Chapter leadership and the members. As a part of that conversation, members should find it easier to gain an understanding of the opportunities to become part of the leadership, which is far from a closed club.

We will be encouraging posts from the working groups, local groups and interest groups as well as opinion pieces from UKAB representatives, and an assortment of topics from the INCOSE UK Council. The blog will evolve over time and the intention is to deliver more of what is viewed, shared, and commented upon, so you can have an effect on the future content with your interactions.

By cross posting, we are not giving you another place to look in addition to sources you already use, but are giving you another opportunity to find content, in a format convenient to you. The blog also offers an rss feed and is WordPress based so can be followed through that route as well for those of you who already follow WordPress blogs. Find us at http://incoseblog.org.uk

Hazel Woodcock
Communications Director
INCOSE UK Chapter Tutorial Day Wednesday 10th June

INCOSE UK tutorial days provide an excellent opportunity to extend or reinforce your Systems Engineering skills by learning from acknowledged experts. This year we have commissioned tutorials to ensure a good balance of subjects and quality of content. There is a mixture of tried and tested presentations and new material on offer, all brought to you by experienced presenters.

Attendee feedback for the tutorials presented in previous years was very positive, most importantly regarding the quality of the learning experience. Here is a sample of the comments:

“Good practical demonstration of topic through targeted appropriate exercises”

“Excellent content extremely relevant and appropriate level of delivery”

“Great presenters, good breadth of topics - good discussions and practical advice”

“Very informative day”

“Wished I could have attended multiple tutorials”

The tutorial day will be held at the Lydiard House Conference Centre near Swindon on the 10th June 2015. Overnight rooms will be available for those not wishing to travel on the day of the tutorial.

We are offering a choice of six full day tutorials that explore a range of Systems Engineering topics:

1. Communication Skills for Systems Engineers
   Presenters Kirsty Akroyd-Willis and Ivan Maclaggart

2. How to ‘Systems Think’
   Presenter Stuart Burge

3. Building the Business Case for Systems Engineering
   Presenter Paul Davies

4. Saving the Earth Using Enterprise Architecture
   Presenters Ian Gibson and Kevin Howard

5. TeamStorming – Applying Systems Thinking to Problem Solving
   Presenters Jon Holt and Simon Perry

6. Systems Engineering for Interfaces
   Presenters Hazel Woodcock and Ian Presland

At least 6 registrants are required for a tutorial to be run and there is a maximum of 15 places on each tutorial. Book early to secure a place on your chosen tutorial and ensure that it has enough participants to run.

The registration fee is £300 (ex VAT) for INCOSE members and £360 (ex VAT) for non-members. Non-members who sign up for annual membership of INCOSE at the time of registering for the event (£195) will be charged at the member rate. Student and retired member concessions are available – see our website for details.

For any enquiries related to this event please contact the INCOSE UK Secretariat at enquiries@incoseonline.org.uk.
Volunteering in INCOSE – breaking into the inner circle

INCOSE counts volunteerism as one of its key principles. As a worldwide organisation INCOSE believes in “volunteers and staff working together to achieve objectives and to deliver benefits to our members, individuals and society.”

In the UK Chapter we endorse this view and the experience of the last 20 years has taught us that the Chapter cannot exist or grow without involvement of and contributions from its volunteers.

There are many benefits from volunteering for INCOSE UK; including Professional Development (communication skills, getting specific insights and advice on Systems Engineering issues), and building a support network of contacts willing to advise, listen, (on occasion sympathise) and support.

Of course, there are barriers to volunteering for INCOSE UK – including lack of time, not knowing how or where to engage, and whether one has enough specific Systems Engineering knowledge to contribute. Additionally, there is a perception that there is a clique, or inner circle, of INCOSE UK elite which is hard to break in to.

I believe that for INCOSE UK to achieve its ambitions, and to support the ever-growing membership, increasing our volunteer numbers and diversity is essential. During my term of office I intend to promote volunteering within the INCOSE UK Chapter. This will begin with active communication on how to volunteer and will then continue by supporting and recognising those who volunteer. This article marks the start of this activity. It explores my journey as a volunteer and documents how I progressed from feeling on the outside as an initial volunteer to being at the heart of our organisation as Chapter President.

I first joined INCOSE UK in 2006 and was new to “explicit” Systems Engineering. There appeared to be a core group of “wise” individuals within the organisation who seemed to both run everything and know everything. For a few years I attended the Bristol Local Group meetings and conferences, and felt I wanted to get more involved in order to learn and contribute more. This began with writing a paper for IS08 in Utrecht and at the Autumn Assembly in 2008 I asked how to get more involved – the answer was simple “volunteer – we need all the help and enthusiasm we can get”.

I decided to become a regular “event coordinator” in the Bristol Local Group and started to regularly attend meetings, and plan events which included being able to suggest topics for discussion that I was interested in. Before long I was elected as chair and coordinated the Bristol Local Group for several years. This was particularly rewarding as I got satisfaction from the range of events run, practice at chairing and delegating at committee meetings, and introducing and occasionally moderating discussion at meetings. By regular attendance I was picking up a range of Systems Engineering experience.

When my employer joined the UKAB I was fortunate to become the company representative. I recognise that each company does only get a single representative, and (as companies pay to join) this is not strictly volunteering, but the individual representatives do have to make space in their diaries to attend. It was through the UKAB that I got my first engagement in a working group whilst working as part of third phase of the UKAB competency working group (which was a sub-set of the UKAB). In the summer of 2012 my volunteering role stepped up a level when I was asked to put my name forward as President-Elect, and became I President of the UK Chapter in due course at ASEC 2014. So in 6 years from feeling on the outside at the Autumn Assembly in 2008 I had progressed to the very centre of our organisation.

At ASEC 2014, having just become President of the Chapter, I was approached by someone who appeared to be in exactly the same situation I had been in 6 years previously. They asked ‘my’ question - how they could get involved?

To an outsider I was now the “unapproachable” core. I didn’t feel any wiser or that I knew it all, but I remembered how it felt to be on the outside and I realised how the situation could occur.

There are two morals to this story (which is why I tell it):

- Whilst it may appear “closed”, INCOSE is very open and there are many ways to get involved and contribute or set the agenda. The only limit is what the individual wishes to put in
- It is all too easy to forget how difficult it can appear to a newcomer to get involved, and how easy it is to forget the situation we faced when we started. Those leading the UK Chapter are “human” and both approachable and more than anxious for help!

It is my aim as President to work on promoting and encouraging volunteers, and ensuring not only that INCOSE UK is open to all, but that it appears this way.

There are many ways that an individual can volunteer. These include:

- Joining a local, interest or working group.
Suggesting the creation of a local, interest or working group and then becoming part of the “organising committee”

Offering to support one of the current directors by joining their team

Standing for election as a council officer

Some current examples of where members have got involved include

- The setting up of MBSE Working Groups – this come from a member suggestion
- The creation of Academic Director’s team in 2013

Examples of current areas where volunteers could help

- The Communications Director, Hazel Woodcock, is looking for volunteers to help with Social Media activities
- The President-Elect, Ivan Mactaggart, is looking to set up a team to look at issues such as future strategy refinement and engagements with external organisations
- The area of Professional Development continues to grow and we are always looking for more Certification Reviewers or Professional Registration Advisors

Please recognise that you can contribute whilst learning. If you do volunteer all that is asked is that you don’t explicitly promote your own business or product, you respect the opinions of others (especially recognising that there is a wide range of Systems Engineering approaches and methods – and INCOSE supports the diversity), and that you are realistic in what you commit to.

If you are unable to dedicate time to groups and committees there is still a valuable contribution you can make. Do not be shy in asking for areas that you are interested in to be covered if you feel they are not. Everyone can and should help the direction that our UK Chapter covers. When attending events ask questions and contribute to the discussions. This is part of what makes INCOSE UK so worthwhile, the willingness to discuss the full range of Systems Engineering topics openly and with intent to learn, share and develop understanding.

If any of you have any interest in volunteering, please feel free to ask any of the Chapter Council Members, Group Leads or the Secretariat – at any meeting or via the contact details in the INCOSE UK website. INCOSE UK will work hard to see that your efforts are recognised and acknowledged, and if you need confirmation of contribution for a reference please contact the appropriate people.

I hope you can all contribute in your own way. A significant part of INCOSE remit is to provide learning opportunities for the members – and engagement in the activities is satisfying, and (truly!) fun.

Richard Beasley
President INCOSE UK

**Continuing Professional Development with INCOSE UK**

**INCOSE UK first CSEP via our online system**

On Monday 2nd February 2015 INCOSE UK launched online Certification and on 23rd March 2015 the first UK CSEP Steven Turner was approved. After congratulating Steven on his success, we asked Steven about his experience:

How does it feel to be the first CSEP to be appointed via the UK online certification route?

I’m pleased to become a CSEP and to be the first through the UK online process. I think I might also be the first in WSP Parsons Brinckerhoff to go through the process. I would definitely recommend it.

You were part of a group who took part in the initial pilot and worked with INCOSE UK to test the system, how did you find it?

There were a couple of little bugs in the online system, but on the whole it was much easier than filling in paper forms. I liked the way it mapped your experience to the competences and the references. It did take me a while
to get my references together though and the online system could benefit from providing more information on the progress of this, but I’m sure the system functionality will be added to over time.

How did you find the exam process?
The exam was tough! I had been on one of the INCOSE handbook courses before and that helped a lot. But even so, there is a huge volume of information in the Handbook that I don’t think anyone can go into the exam feeling they know everything. I think I probably answered 50% of the questions using elimination, 25% from first principles and the remaining 25% from memory recall. I’m not sure that’s how it supposed to be done, but it was enough to get me through!

What was your motivation for becoming a CSEP?
In the UK Rail industry there aren’t many CSEPs yet and I don’t think it’s got the widespread recognition it deserves. My opinion is this will only change if more of our system engineer leaders set an example. Also, in my career with WSP Parsons Brinckerhoff I’m beginning to do more work internationally and I felt that the CSEP qualification has more international cross-over and will help me differentiate from others.

Do you have any advice for others who are considering SEP Certification?
At the moment, in the UK at least, I don’t think it’s an alternative to becoming chartered. But if you’re serious about pursuing a career in Systems Engineering then I think it’s an excellent way of gauging your capabilities with your immediate peers in the discipline. I would add that I actually learned quite a lot in the process – both about the broader role of Systems Engineering but also about my own strengths and weaknesses in the field.

Certification
Our members can now apply for ASEP, CSEP or ESEP directly through the INCOSE UK website with all parts of the certification process, including review, being completed in the UK. Initially this was offered directly to those members who sat and passed the Beta exam at ASEC 2014; those who engaged with the trial and a limited number of other members who contacted the Secretariat offices. Already 15 are in the system with 7 who have applied and are preparing for the exam or are undergoing review.

SE Handbook and Exam Update
The INCOSE Certification knowledge exam will transition on 13 July 2015. From that date forward, the exam will be based on the Systems Engineering Handbook V4. The exact date of release for the handbook is not yet finalised, but we are hoping with will happen during April 2015. If any members wish to apply for ASEP or CSEP and would like to sit the exam based on the current SE handbook V3.2.2 they should apply as soon as possible as it will not be possible to sit the current exam after the end of June 2015. For more details on how to do this contact Lynn Davis on; 01460298217 or profdev@incoseonline.org.uk

Certification 2015

<table>
<thead>
<tr>
<th>CSEP</th>
<th>Name</th>
<th>Date</th>
</tr>
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<tbody>
<tr>
<td>Mohammed Mirza</td>
<td>CSEP</td>
<td>30-Jan 2015</td>
</tr>
<tr>
<td>John Rawlinson</td>
<td>CSEP</td>
<td>09-Feb 2015</td>
</tr>
<tr>
<td>Steven Turner</td>
<td>CSEP</td>
<td>23-Mar 2015</td>
</tr>
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</table>

Professional Registration
Chartership continues to grow and develop within the INCOSE UK Chapter. Since last Preview an additional three workshops have been held with some 35 candidates joining the process. In February the total of Chartered members who have gone through the INCOSE UK route totalled 42 with an additional 3 imminent. After three years of a developing relationship with the IET we are now looking to review and improve the process of Chartership via our collaborative route. INCOSE UK candidates now are asked to send applications directly to INCOSE UK which makes it easier for us to know who is in the system and support them effectively. We hope to further improve the process by working with the IET incoming weeks to update our Memorandum of Understanding and also issue some guidelines for Systems Engineering in fitting their experience to the UK SPEC. INCOSE UK have two further workshops planned for 2015

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<tr>
<th>Date</th>
<th>Venue</th>
<th>Title</th>
<th>Cost</th>
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<tbody>
<tr>
<td>4/6/2015</td>
<td>INCOSE UK Secretariat</td>
<td>Professional Registration Workshop ‘Beginning the process’</td>
<td>£35.00</td>
</tr>
<tr>
<td>16/11/2015</td>
<td>ASEC 2015 Heythrop Park</td>
<td>Professional Registration Workshop ‘Beginning the process’</td>
<td>£35.00</td>
</tr>
</tbody>
</table>

If any members are interested in attending a Professional Registration Workshop or would like more details on Professional Registration they should contact Lynn Davis on: 01460298217 or profdev@incoseonline.org.uk
Both modules are intensely focused on sound principles based on historical evidence, and on the astute application of these principles to avoid the most common source of project problems on average – i.e. requirements problems.

The requirements analysis module teaches actionable methods, some not requirements to an objective and measurable standard.

The requirements analysis module takes a single system through all major requirements analysis activities in workshop format, to achieve a high degree of learning by doing.

The specification writing module provides substantial detail in the two major aspects of effective specification practice - the use of language in writing individual requirements in English, and the organization of a set of requirements to satisfy appropriate criteria (language-independent).

Delegates receive a library of high quality data item descriptions of various types of requirements specifications, with matched example requirements specifications in a coordinated set.

Delegates receive copies of two very useful, substantial, PPI-published guides: “Guide to Requirements Capture and Validation” and “Specification Writing Guide.” Each of these guides is consistent with course content, and provides an excellent reference in its subject area.
ASEC2015 17th – 18th - get involved

It’s that time of the year again when we start to think about INCOSE UK’s flagship event, the Annual Systems Engineering Conference (ASEC). There are many ways to get involved as an author or a reviewer and this article provides some guidance as to how to get involved and what the expectations are for your submissions.

The review process

This year’s ASEC sees the introduction of a completely re-vamped review process for submissions for authors and speakers.

The previous process has worked very well over the last couple of decades but, as a result of the continuous growth of INCOSE UK, we saw unprecedented numbers of submissions for ASEC2014 which led us to a re-think re-write of the whole review process. INCOSE UK delegates have a high level of expectation of the quality and content of the presentations and we have a responsibility to respond to the membership and periodically revisit the way that we do things.

Perhaps the biggest change is that we are now looking for six-page full papers, rather than a three-page extended abstract. This means that we can provide the delegates and the wider Systems Engineering community with a better record of what is presented, rather than just relying on a straightforward slide set.

The process will be executed as follows:

• **Call.** There will be a general call for submissions
• **Abstracts.** Authors will respond by submitting a short abstract. These will then be assessed for the content, how it matches the themes of the ASEC and the general applicability and interest to the Systems Engineering community. Authors will be asked to classify their submission according to a set of broad Systems Engineering categories. Successful authors will then be invited to submit a six-page paper for full review
• **Papers.** Each six-page submission will then have a set of three reviewers allocated to it, each of whom will be experts in the subject area of the paper. Each reviewer will have extensive experience and will hold CEng or CSEP level expertise in their specialist field. All papers will be blind-reviewed and each reviewer will be asked to produce a score of between 0 (terrible) to 10 (earth-shattering) and also to produce a set of comments that can be used for feedback to the authors
• **Review.** All scores will then be aggregated and a final decision will be made by the events committee, with ultimate responsibility lying with the INCOSE UK Technical Director. All authors will receive the feedback comments and a final decision: the paper will be accepted, the paper will be held for a reserve paper or the paper will be declined

All submissions and feedback will be handled by the INCOSE UK Secretariat at Dot-the-Eye to ensure that nothing slips through the gaps.

In order to ensure that the review process is as fair as possible, authors should bear in mind the following guide on what makes a good paper and that will be used by the reviewers as part of their assessment.
Anatomy of a good paper

The papers should be submitted bearing in mind the following structure.

![Diagram of paper structure](image)

Figure 1 Anatomy of the paper

The diagram above shows a recommendation for the structure of the paper. Please bear in mind that this is a recommendation and, therefore, feel free to tailor the structure, but the overall structure should cover the key areas.

Author details

As an absolute minimum, authors must supply:

- Name. The names of all of the authors
- Affiliation. The organisation or organisations that they are representing
- Email. An email address for each author

Authors may also include other details, such as addresses, phone numbers, etc.

Categorisation

Each submission will be categorised by the authors in three broad categories: Accessibility, Application and Topic.

- **Accessibility**. This indicates the level of knowledge required by the delegates to fully understand the paper and gain the maximum benefit from its content. There are three levels here: ‘Beginner’ which is aimed at people who are new to the topic and will typically hold the Awareness level of competence in this area; ‘Practitioner’ which is aimed at people who have performed some work in this area and are looking to increase their knowledge and who will typically hold the Supervised Practitioner or Practitioner level of competence; and ‘Advanced’ which is aimed at people with extensive experience and who are looking to hone their skills and knowledge in the area and who will typically hold the Expert level of competence.
• **Application.** There are three levels here, which are: ‘Research’ aimed at new ideas that have been carried out as part of a research project; ‘Case Study’ that details examples of how Systems Engineering good practice has been applied on real projects, showing real results; and ‘Good Practice’ that details how mature Systems Engineering practices are being disseminated, deployed and adopted.

• ‘**Topic**’. A number of broad categories have been identified from existing Groups and are: MBSE, Architecture, Enterprise Systems Engineering, Agile Systems, STEM, Service Systems, Education, Project Management, Capability, Organisational Capability, Sports and Human Factors. If your topic does not appear here, feel free to add it to the list but use the suggestions wherever possible. Authors must identify between one and three topics for their submission.

The categorisation criteria will be used by delegates to allow them to identify relevant papers and also will be used to identify appropriate reviewers.

**Abstract**
The abstract should be between 200 and 300 words and should provide an overview of the scope and purpose of the paper and touch on any key conclusions.

**Paper body**
The main body of the paper must cover the following areas:

• **Introduction.** This section will describe the ‘why’ of the paper. It should introduce the subject matter and provide a justification of its relevance. This section also gives the authors the opportunity to demonstrate that they have sufficient background knowledge to justify the paper, including any relevant references to existing work. This section must also explicitly define the basic aims of the paper.

• **Approach.** This section describes the basic approach that was taken to carry out the work. It may describe any life cycles, processes, procedures, techniques, tools, etc that were followed.

• **Result.** Any results from the work should be stated here. This may take the form of formal result tables, observations, emergent properties, lessons learned etc.

• **Conclusion.** The conclusions should provide a summary of the salient points of the paper and present any conclusions that were reached. This section must explicitly address the main aims that were identified in the introduction – remember ‘Introduction + Conclusions = Paper’. This section may also identify any follow-up or future work resulting from the paper.

Again, this structure is a recommendation, but will be used by the reviewers to be used as part of their assessment.

**Reference**
The references are an essential part of any paper. They provide the provenance for the work and help to establish that the authors know the area that they are writing about. The references will also help to resolve any claims of plagiarism that may arise from the paper or presentation.

Each reference should take the following format:

[REFNAME]  
*Title*, Authors, Publisher, Date

For example:

[Holt13]  

[INCOSE15]  
‘Z9 – MBSE’, INCOSE UK,  

[Hitchins2014]  
‘Respice, Adspice, Prospice’, Derek Hitchins, INCOSE UK ASEC presentation, 19.11.2014

**Reviewers**
If you would like to become a reviewer for INCOSE UK, please contact INCOSE UK directly using: enquiries@incoseonline.org.uk. Please send a brief biography of you and your experience and indicate the areas of Systems Engineering (using the classification criteria above) that you feel that you could review.

**Queries**
If you have any queries regarding these guidelines, please contact INCOSE UK using: enquiries@incoseonline.org.uk

*Jon Holt*  
Technical Director
INCOSE UK Individual Membership Update

INCOSE UK individual membership continues to grow and is now approaching 900. Obviously, membership fluctuates with members leaving through retirement or job changes and new members joining, but pleasingly the overall trend is upward. This is good news and shows we are meeting our goal, which is to achieve a steady and sustained increase in the number of members, and to further broaden the base of that membership to include new industries.

The generation of automatic receipts for members renewing or joining has been well received and this has allowed the Secretariat to provide a more timely service to members. For membership enquiries contact Sophie via email membership@incoseonline.org.uk or by phone (+44 (0) 1460 298217) from 9am to 4.30pm, Monday to Friday.

Nobody likes increasing membership fees, but rising costs are a fact of life. However, to help members reduce costs it is now possible to renew for 3 and 5 years. The table below shows the current membership fees and the savings available. Remember that membership dues paid to INCOSE UK are accepted by HM Revenue & Customs for income tax relief.

<table>
<thead>
<tr>
<th>Membership Class</th>
<th>Annualised rates</th>
<th>2015 charge</th>
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<th>2015 Direct Debit charge</th>
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<tr>
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<tr>
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<td>2015 Senior five year</td>
<td>£54.00</td>
<td>£270.00</td>
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</table>

News from the UK Advisory Board (UKAB)  

2015 has started extremely well for the UK Advisory Board. So far we have already had a very productive workshop on the theme of “The future of Systems Engineering” and made positive progress on the subject of Organisational Capability Development.

UKAB Meeting: The future of Systems Engineering

UKAB hold three meetings per year which are our opportunity to network, discuss the progress and development of Systems Engineering and be brought up to speed on all the work being undertaken by INCOSE UK through the Council directors and their teams, Working Groups and Interest Groups. In addition, half a day is given over to a workshop where we can debate a topic of interest before taking the output forward in terms of possible actions, recommendations or working groups.

The topic of interest for the February UKAB was “The future of Systems Engineering”. This resulted in a very engaged and animated debate where a wide range of ideas were put forward, everything from ‘the use of SE in non-prescriptive related industries’ to ‘how do we make our kids think Systems Engineering is cool’ A small team will now take these ideas forward to provide some proposals for consideration.

UKAB Working Group: Organisational Capability Development

The Organisational Capability Working Group is using Soft Systems Methodology to conduct a generic organisational analysis as an attempt to develop understanding of the concerns organisations have in developing their Systems Engineering Capability. This work is looking to identify several conceptual models based on the analysis and will be formed around a number of good practice examples provided by UKAB organisations. It is envisaged that the Group’s output will be available for publication in September 2016.

Spring Joint Meeting: How does INCOSE UK become the respected Authority for Systems Engineering in the UK.

Each year, two joint meetings are held between UKAB and Council. These are opportunities for UKAB and Council to engage directly and discuss topics of strategic importance. The subject of the meeting in April will be “How does INCOSE UK become the respected Authority for SE in the UK”.

Kirsty Akroyd-Wallis
INCOSE Events Calendar

This calendar is a summary of events at the time of going to press. For the latest, up-to-date information please visit the Events page at the UK INCOSE website: [www.incoseonline.org.uk](http://www.incoseonline.org.uk)

**Dates for your diary**

<table>
<thead>
<tr>
<th>Date/Time</th>
<th>Organisation &amp; Location</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>04 June 2015</td>
<td>UK Chapter</td>
<td><strong>Professional Registration Workshop</strong></td>
</tr>
<tr>
<td>Full Day</td>
<td>Dot-The-Eye Ltd, First</td>
<td>This workshop is open to all INCOSE UK members who are interested in achieving</td>
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<tr>
<td></td>
<td>Floor, The Dyers Building,</td>
<td>their Professional Registration via INCOSE UK and the IET. Members who would</td>
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<tr>
<td></td>
<td>21 Silver Street, Ilminster,</td>
<td>like INCOSE UK to assist them through the Professional Registration process and</td>
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<tr>
<td></td>
<td>TA19 0DH</td>
<td>would like to attend a workshop can secure a place by emailing Lynn on</td>
</tr>
<tr>
<td></td>
<td></td>
<td><a href="mailto:profdev@incoseonline.org.uk">profdev@incoseonline.org.uk</a></td>
</tr>
<tr>
<td>10 June 2015</td>
<td>UK Chapter</td>
<td><strong>INCOSE UK 2015 Tutorial Day</strong></td>
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<tr>
<td>Full Day</td>
<td>Lydiard House, Swindon</td>
<td>An opportunity to extend or reinforce your Systems Engineering skills by learning</td>
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<tr>
<td></td>
<td></td>
<td>from acknowledged experts.</td>
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<tr>
<td>13 – 16 July 2015</td>
<td>INCOSE</td>
<td><strong>INCOSE 25th Annual Symposium IS 2015</strong></td>
</tr>
<tr>
<td></td>
<td>Seattle, Washington, USA</td>
<td>Don’t miss out on the 25th celebration! Mark your calendar for the silver anniversary symposium year! Visit the website for updates: <a href="http://www.incose.org/symp2015">http://www.incose.org/symp2015</a></td>
</tr>
<tr>
<td>7 – 9 October 2015</td>
<td>EMEA Sector</td>
<td><strong>European Workshop</strong></td>
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<tr>
<td></td>
<td>Paris</td>
<td>The French Chapter (AFIS) are planning a “European Workshop” for the EMEA</td>
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<tr>
<td></td>
<td></td>
<td>working group members can get together and compare notes.</td>
</tr>
<tr>
<td>16 November 2015</td>
<td>UK Chapter</td>
<td><strong>Professional Registration Workshop</strong></td>
</tr>
<tr>
<td></td>
<td>Heythrop Park, Oxford</td>
<td>This workshop is open to all INCOSE UK members who are interested in achieving</td>
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<td>their Professional Registration via INCOSE UK and the IET. Members who would</td>
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<td>like INCOSE UK to assist them through the Professional Registration process and</td>
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<td>would like to attend a workshop can secure a place by emailing Lynn on</td>
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<td><a href="mailto:profdev@incoseonline.org.uk">profdev@incoseonline.org.uk</a></td>
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<tr>
<td>17 November 2015</td>
<td>UK Chapter</td>
<td><strong>AGM</strong></td>
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<td></td>
<td>Heythrop Park, Oxford</td>
<td>To be held the evening before ASEC 2015</td>
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<tr>
<td>17 – 18 November 2015</td>
<td>UK Chapter</td>
<td><strong>Annual Systems Engineering Conference 2015 (ASEC2015)</strong></td>
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<td></td>
<td>Heythrop Park, Oxford</td>
<td>A date for your diary.</td>
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<tr>
<td>30 January - 2 February 2016</td>
<td>INCOSE</td>
<td><strong>International Workshop</strong></td>
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<td>Torrance, California USA</td>
<td>Mark your calendar!</td>
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**NewsFlash – ASEC2015 Call for Presentation Extension**

**Events Team**

- **1st May 2015** Submission of abstracts – abstracts should be between 250 and 300 words outlining your poster topic and main points. A shortlist of posters will be selected on the basis of the abstracts received.
- **1st June 2015** Submission of proposed poster - successful researchers will be asked to submit a single-page draft of their poster which should give a good indication of objectives, structure, main themes, supporting evidence, conclusions, etc. Final conference posters will be selected and notified by mid-June 2015.

All submissions should be emailed to: [mailto:ASEC2015submissions@incoseonline.org.uk](mailto:ASEC2015submissions@incoseonline.org.uk)
Book Review

Architecting Systems

Hillary Sillitto, Past President INCOSE UK, INCOSE Fellow

This is an important and timely book. Drawing on his considerable experience, and a world-wide network of like-minded and influential thinkers in the field, Hillary has set out a thoroughly modern synthesis of systems science, systems thinking and systems engineering with Architecting as its central, unifying discipline. In so doing he addresses head-on the issues which INCOSE faces in moving forward from its traditional base in the engineering of largely technical systems, generalising its principles and practices to fit the of 21st Century world.

It is organised into three main parts. Part 1 covers the foundations, including the nature of systems, the types of unprecedented problems we are having to address and what we know about approaching them; Part 2 elaborates these principles and places them in the context of a practical Six-Step Architecting Process of the widest applicability; and Part 3 brings together a number of reflections on making it happen and the challenges we face in building ‘open systems for a closed planet’. References are up to date and very useful, many from the INCOSE community, with diagrams simple and clear.

Perhaps unexpectedly for a book of this nature, it is a really enjoyable read. The writing style is engaging and unstuffy using many familiar real-world illustrations, including some from Hillary’s personal background such as the Edinburgh Tram Project. What I liked most of all was that the book never deviates from good simple English or hides behind jargon. Difficult issues are admitted, as are unresolved issues in the systems community, and complexity embraced rather than avoided. This is a tribute to both the clarity of Hillary’s vision and his ability to explain.

For this and many other reasons I believe the book will serve both to allow systems engineers to understand the modern underpinnings of their discipline and how it should be practised, and to assist in taking the systems message to the wider, non-technical community in a convincing manner.