

- SEE International Radar Conference 'RADAR 2009' held in Bordeaux, France, 12-16 October 2009. Very successful, also included meeting of AES Radar Systems Panel
- Presentation of Picard Medal to Dr Philip Woodward, 26 October 2009. Written up for AES website and for AES magazine
- AES Distinguished Lecture by Dr Eli Brooker, 21 April 2010: 'Amazing Breakthroughs in Radar / Phased Arrays'
- International Conference on *Synthetic Aperture Sonar and Synthetic Aperture Radar*, Lerici, Italy, 13/14 September 2010. Organised by Institute of Acoustics (UK) with AES co-sponsorship, financial support from US ONR Global



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AES Chapter Chair, UKRI



1. Continuous Survey

- Purpose of survey
- Design of online survey

2. Coherent graduate-level education and training

- Requirement and scope
- The proposal
- seek AES support
- and could the ideas be more widely applicable ?

Continuous Survey

- Purpose: to gather information on what industry wants of AES, opinion on the relevance and quality of what we currently provide, and on how we can do better
- Largely by tick box (five boxes), but with a box for text comments after each section – these is often the most useful source of information
- Online – with each respondent entered into a prize draw
- Emphasize that it is for industry – hence some questions which specifically identify this
- How do we analyze the results?
- Comments are invited on the scope and style of the questions

Continuous Survey



1. Yourself and your company

- How would you describe yourself – recent graduate, mid-career, senior management, ... ?
- How long have you been an IEEE member?
- What is your grade of membership?
- What is your level of qualification – undergraduate, masters, PhD, MBA, ... ?
- How would you describe the size of the company you work for – small, medium, large, multi-national, ... ? (need to define in terms of number of employees)
- How would you describe the nature of your company's work?



2. AES Chapter activities

- Is there an AES chapter local to you?
- If so, do you participate in local AES chapter activities?
- What type of Chapter activities do you/would you find most attractive?
- What single thing can you suggest that would make AES Chapter activities more relevant and useful to you?



3. Education and career development

- Do IEEE offerings feature in your company's career development program?
- Have you attended a tutorial at a conference?
- Have you used the online tutorials?
- Does your company have links with universities, for example in sponsoring student projects or for recruitment purposes?



4. Publications

- Do you read the AES Magazine (not at all, occasionally, regularly) ?
- On a scale of 1 – 5, how relevant do you find the AES Magazine to your work?
- On a scale of 1 – 5, how relevant and useful are the following to you:
 - review articles
 - technical papers
 - reports of events
 - information on future events
- Would you prefer to read the AES Magazine online or in printed form?
- Have you ever submitted an article to the AES Magazine?
- What single thing can you suggest that would make the AES magazine more relevant and useful to you?

Continuous Survey

- Do you read AES Transactions (not at all, occasionally, regularly) ?
- On a scale of 1 – 5, how relevant do you find AES Transactions to your work?
- Do you or your company have access to IEEE Xplore?
- Have you ever submitted a paper to AES Transactions?
- What single thing can you suggest that would make AES Transactions more relevant and useful to you?



5. AES website

- How often do you visit the AES website?
- On a scale of 1 – 5, how relevant and useful are the following to you:
 - information on events
 - video tutorials
 - student activities
 - quarterly email blast
 - membership information
- What single thing can you suggest that would make AES website more relevant and useful to you?



6. Conferences

- Have you attended an AES conference? (no, one or two, many)
- Have you ever submitted a paper to an AES conference?
- On a scale of 1 – 5, how relevant and useful are the following to you:
 - technical sessions
 - tutorials
 - networking
 - conference proceedings
 - exhibitions
 - social program
- What single thing can you suggest that would make AES conferences more relevant and useful to you?



MINISTRY OF DEFENCE



THALES



EMRS DTC
Electro-Magnetic Remote Sensing (EMRS) Defence Technology Centre (DTC)

Education and People

H Griffiths, M Federighi, A Colquhoun

Some questions

- 1. What exactly is the requirement for education and training for the UK defence sensors community?**
 - MSc; PhD; EngD; CPD?**
 - full-time or part-time?**
- 2. How is it addressed at present?**
- 3. How could we do better?**
- 4. Do we need new qualifications eg Master of Defence Eng?**
- 5. Do we need training in Technical/Capability Management?**

Some ideas

- **Bring together the best from a number of participating universities to address geographical spread of industry**
- **Both technical and management areas covered**
- **A range of modules that can be used for MSc / EngD / CPD**
- **Intensive one-week rather than spread over a semester, where possible**
- **Use existing modules wherever possible**
- **Link to DTC/CDT sponsored research**

What sort of modules?

- **Introduction to RF Sensors**
- **Introduction to EO/IR Sensors**
- **Introduction to Defence Acquisition**
- **Introduction to Systems Engineering**
- **Materials and Devices for Sensors**
- **Advanced RF Sensors**
- **Sensor Signal Processing**
- **Sensor Image Processing**
- **RF devices and subsystems**
- **Mathematics for Radar Signal Processing**
- **Antennas and Propagation**
- **Satellite Remote Sensing**
- **Nanotechnology and sensors**
- **Defence Acquisition Management**
- **Management of Innovation**
- **Corporate Finance**
- **Product Strategy**
- **Capability Planning**

Masters and Doctorates

- **Masters:**
typically 4 basic-level modules, 4 advanced modules + individual project (12 months full time)
- **EngD:**
typically 8 modules + individual research project or portfolio of research projects (4 years full time)
- **Projects should normally be unclassified, though in special circumstances classified projects could be considered**
- **Modules should support route to Chartered status**

Co-ordination

- **Qualifications can be delivered by any of the participating universities**
- **But the whole must be led and co-ordinated**
- **Would need advisory panel (industry and government)**
- **EPSRC support – important leverage**
- **RDA's (sustaining jobs), TSB?**

Model for adoption

- **Needs agreement from industrial partners**
- **MoU (model from UCL/LBS/Cambridge/ ... , UCL/Arup)**
- **Agree participating universities with industrial partners**
- **Funding: EPSRC, RDAs, ...**
- **Structure**
- **Could start September 2011**