IEEE AESS Board of Governors Meeting
September 14-15, 2012

Disneyland Hotel, Anaheim, CA
Safari Room, Adventure Tower

International Director Report

Marina Ruggieri

The activities that have been carried in the last six months are described in the following together with the planned ones for the next six months. They will be shown in greater detail at the BoG by those International Directors who will attend the meeting.

1. Prof. Hugh Griffiths – UK and Ireland

IET/IEEE RADAR 2012 conference in Glasgow, 22-25 October, is part of the five-year cycle of international radar conferences. There were 314 submissions from 35 countries, and 223 were selected for oral and poster presentation, giving an acceptance rate of 71%. There is also a full tutorial program. Some other lectures are planning over the winter season.

2. Dr. Joe Fabrizio – Australia, New Zealand

Status update for 2013 International Conference on Radar Systems

1   Date of conference
The conference will be held from Monday 9 – Thursday 12 September 2013.

2   Venue
- Quotes were gained from a number of venues in Adelaide from hotel style to Convention centre.
- The Hotel Grand Chancellor Adelaide on Hindley was chosen.
- This decision was based on a significantly lower price, however service and style is of a good 4 star standard.
- It is a centrally located hotel in the CBD of Adelaide with close access to a range of other accommodation venues (in price and style).
- A small number of rooms at alternative accommodation venues, such as apartments, have been booked.

3   Theme
The theme for the conference is:
Beyond Orthodoxy: New Paradigms in Radar
 Much of the progress in radar science, technology and applications follows a path of evolutionary development, but every so often we encounter a revolutionary advance in some supporting technology, or a novel idea which changes the way we think about radar and how it can be exploited. Radar 2013 welcomes contributions in all areas of radar science and engineering, but particularly encourages papers which open exciting new avenues for exploration and force us to embrace new paradigms.

4   Program Outline
See Appendix A for a program outline.
- In summary the program overview is:
  Monday 9 September
  Tutorials
  Welcome Reception
  Tuesday 10 September
  Keynote and concurrent sessions
  Wednesday 11 September
  Keynote and concurrent sessions
  Conference Dinner
  Thursday 12 September
  Keynote and concurrent sessions

5   Budget
- A draft budget has been prepared with 3 scenarios of 200, 250 and 300 delegates.
- Registration fees are as follows:

Earlybird Member Registration	$750.00
Earlybird Non-Member Registration	$875.00
Standard Member Registration	$850.00
Standard Non-Member Registration	$975.00
Student/Discounted Registration	$400.00
Day Member Registration	$410.00
Day Non-Member Registration	$450.00
Student Day Registration	$250.00

- The sponsorship and exhibition target is $52,500.
- With the above amounts, and known and estimated expenditure, the breakeven figure is currently 175 paying delegates.

6   Keynote Speakers
- A comprehensive list of potential keynote speakers has been developed. 6-8 speakers are currently being shortlisted with invitations then to be issued.
- A mixture of Australian and international speakers will be chosen with an aim to include a speaker form the Asia-Pacific region.

7   Tutorials
- There is the potential to hold eight tutorials.
- Six have been confirmed so far (as listed below), with invitations for another 2 being issued.
    - Inverse problems in radar (Stuart Anderson)
    - OTH radars (Joe Fabrizio)
    - Foliage penetration radar – FOPEN (Mark Davis)
    - Introduction to ISAR (Marco Martorella)
    - Radar imaging – SAR processing (Fabrizio Berizzi)
    - STAP Techniques (Brahma Himed)
    - Tutorials will only proceed if minimum numbers are reached as they must cover costs.

8   Call for Abstracts
- The call for abstracts is currently being prepared (at the time of this report being prepared on 3/8/12), with the view of releasing in September 2012.
- A number of subthemes have been developed to guide the submissions and create streams of concurrent sessions.

9   Sponsorship and Exhibition
- A sponsorship prospectus has been developed with a range of sponsorship packages, and an exhibition component.
- This is currently being distributed to a database developed by the committee.

10   Social program
- Welcome Reception
    - The reception is to be held onsite at the conference venue on the evening of Monday 9 September.
    - This will be held amongst the exhibition providing additional exposure.
    - The cost is inclusive with full registration.
- Conference Dinner
    - The dinner will be held on the evening of Wednesday 10 September.
    - A decision at the next meeting is expected as to the location to the dinner.
    - The choices are either the conference venue or the National Wine Centre. The National Wine Centre is a short distance form the CBD, and would require coach transfers. It is a unique venue in Adelaide highlighting local produce, specifically the wine of South Australia.
    - The cost of the dinner is inclusive with full registration.

11   Website
- A conference website has been developed detailing the major components of the conference and is to be used as the main source of information for delegates.
- www.radar2013.org.au

12   Marketing

- Networks and databases via IEEE and Engineers Australia will be used to publicise the conference.
- Engineers Australia will send three e-blast to members on key dates – call for abstracts announcement, 2 weeks prior to close of early bird date, and 2 weeks prior to the conference.
- A LinkedIn event page has been set up and will be regularly updated announcing key information.
- The website will be a major tool in providing current information about the conference.

Appendix A

Draft program

Monday 9 September			
7.00am-3.00pm-	*Exhibitor build and bump-in*		Torrens Room 2 &3
9.00am-5.00pm	*Workshops (4 in am and 4 in pm)*		
3.00pm-6.00pm	*Registration*		Foyer
6.00pm-8.00pm	**Welcome Reception**		Foyer
Tuesday 10 September			
8.00am-5.00pm	*Registration*		Foyer
9.00am-9.15am	Official Welcome & Welcome to Delegates		Ballroom
9.15am-10.00am	Plenary – Keynote Speaker		Ballroom
10.00am-10.45am	Plenary – Keynote Speaker		Ballroom
10.45am-11.15am	*Morning Tea*		Foyer
11.15am-12.45pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
12.45pm-1.45pm	*Lunch*		Foyer
1.45pm-3.15pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
3.15pm-4.15pm	*Afternoon Tea*		Foyer
4.15pm-5.15pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
Wednesday 11 September			
8.30am	*Registration*		Foyer
9.00am-9.45am	Plenary - Keynote Speaker		Ballroom
9.45am-10.30am	Plenary - Keynote Speaker		Ballroom
10.30am-11.00am	*Morning Tea*		Foyer
11.00am-12.30pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
12.30pm-1.30pm	*Lunch*		Foyer
1.30pm-3.00pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
3.00pm-3.30pm	*Afternoon Tea*		Foyer
3.30pm-5.00pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
7.00pm-11.00pm	**Conference Dinner**		Ballroom, Grand Chancellor

Thursday 12 September			
8.30am-1.00pm	*Registration*		Foyer
9.00am-9.45am	Plenary - Keynote Speaker		Ballroom
9.45am-10.30am	Plenary - Keynote Speaker		Ballroom
10.30am-11.00am	*Morning Tea*		Foyer
11.00am-12.30pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
12.30pm-1.30pm	*Lunch*		Foyer
1.30pm-3.00pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3
3.00pm-3.30pm	*Afternoon Tea*		Foyer
3.30pm-5.00pm	Concurrent Session 1 Hindley 1	Concurrent Session 2 Hindley 2	Concurrent Session 3 Hindley 3

3. Dr Reza Djzaii – Canada

1) The Organizing Committee meeting of Radar 2013 was held on Aug. 31, 2012. The conference paper submission will be open on Sept 15, 2012.
2) Five university student teams from across Canada competed in the Operational Phase of the 4th Unmanned Systems Canada UAV Student Competition hosted by Southport Aerospace Centre south of Portage la Prarie Manitoba, Canada on May 2012. The teams were challenged to use unmanned air vehicles (UAVs) in support of forest fire fighting. The first place finisher was Team VAMUdeS from Université de Sherbrooke (QC), followed by Team Guardian from Simon Fraser University (BC) and Team Blackbird from Carleton University (ON).

4. Prof. Yuri Abramovich – East Europe and Russia

I have not prepared the formal report, yet let me inform Hugh and Board Members on some of my not very successful initiatives. After our previous meeting, I engaged my colleagues in Russia, Ukraine, Poland and Czech Republic regarding closer cooperation with AESS. Unfortunately, I was not able to clearly answer on quite a simple question: what are we going to gain due to such an engagement? Most Universities have IEEE Xplorer, member fees are still too high for most of them, their ability to attend Western IEEE conferences is still very limited, especially in Russia and Ukraine.. I think, that if AESS, or more generally, IEEE consider a closer cooperation with the former Eastern bloc (especially, on-EU) countries, there should be some specific policy put in place. Most probably, this issue runs beyond just AESS, and should be brought to the IEEE headquarters attention.

5. Prof. Marina Ruggieri – Italy and Western Europe

The relevant international activities in Italy and Western Europe have been strongly interleaved with those of the Space Systems Panel and they are:

1. Activities related to the development of the first IEEE AESS ESTEL Conference on *Satellite TELecommunications* (**ESTEL**) that will take place in Rome, Italy on October 2-5, 2012. This Conference is financially sponsored by IEEE AESS. Conference Record #: 19294 (*www.estelconference.org*).

2. Activities related to the development and organisation of the second IEEE AESS Summer Workshop **on Integrated Satellite Communication and Navigation Systems** (**ISaCoNaS**): "*Advanced Services and Applications, Architectures and Terminals To improve Quality of Life*" which will be held in Nicotel Pineto in Castellaneta Marina, Apulia, Italy on July, 25-28 2013. This course is focused on systems, technologies and relative services associated to Earth Observation and Earth Science Applications, Advanced Satellite Communications and Navigation, Swarm Intelligence and Advanced Modulation and Coding Techniques which can significantly improve the Quality of Life (http://isaconas-workshop.uniroma2.it/).
Conference Record #: 19177.

3. Activities related to the co-chairing of Track 2 Space Missions, Systems and Architecture of the 2013 IEEE Aerospace Conference that will take place in Big Sky in March 2013.

4. Activities related to the role of Editor of Space Systems of the AES Transactions and for the Systems Magazine.

5. Organisation of training and thesis activities of students at the University of Roma Tor Vergata in the field of space systems.

6. Development of the 9th edition of the Master Course in "Advanced Satellite and Communications Systems" at the University of Roma Tor Vergata and preparation for the 10th edition.

7. The 6th edition of the on line Master Course in "Satellite Communications and Navigation Systems" organized by University of Rome Tor Vergata and Scuola IaD (**Istruzione a Distanza**) is in progress. The 7th edition of this course is in preparation.

8. Activities related to projects, publications and teaching in the space system related topics.

9. Development and publication of several papers about space systems in conference proceedings and journals.

10. Activities related to the IEEE AESS liaison with 2014 ION PLANS 2014 Conference.

11. The M. Sc. Course in "Advanced Communication and Navigation Satellite Systems" organized by University of Rome 'Tor Vergata' foresees a project work, called th*e "Internet of Things: Enabling Technologies and Smart Devices to improve the Quality of Life"*, in the frame of the AESS GOLD activities. The Internet of Things refers to uniquely identifiable objects (e.g. sensors and actuators) and their virtual representations in an Internet-like structure. The Internet of things concept is based on the interaction of different independent systems through the Internet and can be considered as a "System of Systems Interconnected Through Internet". The project work concerns the realization of a smart integrated system including a smartphone and new secure low-power wireless standards (as DASH7, 6LoPAN, Bluetooth Low Energy) to support innovative and advanced applications in the fields of healthcare, fitness and homeland security. The

project work will be fulfilled in about 10-12 months by nearly 20 students divided in 2 teams. Each team will be involved in one of the following two activities:

    a. to develop a smart integrated system for healthcare applications (including e.g. a pulse oximeter, glucose and blood pressure monitoring, etc.).
    b. to develop a smart integrated system for homeland security applications.

12. In the scenario of GOLD for GOLD activities, we are contacting AESS GOLD people to realise tutorials. Among them we received the confirmation of:

- Susanna Spinsante (Department of Information Engineering-Marche Polytechnic University) in order to provide a tutorial on *Home Automation Systems Control by Head Tracking in AAL Applications* during the IEEE ESTEL Conference *Session # 9: Tele Healthcare, Medical Applications & Information Systems, Smart Homes & Assisted Living, Mobile Technologies for Health care Applications* on Wednesday, October 03 2012: *Special Day on Smart Life Technologies*.

13. Support to Durban University of Technology (DUT) in South Africa through the Professor Dimov Stojce Ilcev in order to establish an *Institute of Space Science* (www.dut.ac.za/space_science or http://www.ist_africa.org/home/default.asp?page=doc-by-id&docid=6077). The following activities, proposals and projects will be carried out in that Institute on the followings items:

1. African Satellite Augmentation System (ASAS) as a new project instead of the Extension of EGNOS on Central and South Africa;
2. Road Traffic Control and Management, which can reduce mortality on the roads up to 30% in Africa;
3. Satellite DVB-RCS Scenario for Fixed and Mobile Solutions, which provides Voice, Data and Video over IP (VDVoIP), IPTV, IPPC, enhanced Broadcast content, Broadband, fast Internet and all E-solutions (in particular E-education or E-medicine to cover all schools or clinics, respectively);
4. Satellite Asset Tracking and Fleet Management (SATFM) and SCADA or M2M Systems such as projects for Global Container Tracking (GCT), Global Vehicle Tracking (GVT), Global Wagon Tracking (GWT), Global Ship Tracking (GST), Global Aircraft Tracking (GAT), M2M and so on;
5. Intelligent Transportation Systems (ITS) such as Electronic Vehicle Registration (EVR) and so on;
6. Stratospheric Communication Platforms (SCP);
7. SCP for Transfer of energy from Solar cells in the Space to the Ground;
8. Development of Multipurpose GEO/LEO Space Segment;
9. Homeland Security System (HSS).

Prepared on September 7, 2012 by Marina Ruggieri & Cosimo Stallo