



One-day Seminar

FROM ACTIVE MODULES TOWARDS DIGITAL RADAR



Theme

Active antennas have introduced new functional capabilities to radar and have provided new ways to exploit antennas for both reception and transmission. The active array antenna is no longer a component whose characteristics are fixed at the design stage but is now a complex sub-system of multiple parts, separately configurable. For example, it can be used to generate complex transmission waveforms across frequency and direction for spatial analysis of the search volume. In reception it provides the prospect of space-time broadband processing.

The seminar will include presentations that will introduce the subject, including its historical evolution to applications in ever more radar domains. There will be overviews of what presently exists in radars (naval, ground, airborne and space), the technological issues for different radar applications and future evolutions.

This seminar should be of interest to those involved in the design and manufacture of radar and academic researchers. Topics include:

- Review of some existing development of ground, naval, airborne and space AESA
- New semiconductor technologies for AESA: GaN, SiC and diamond
- Digital radar architectures
- New Antenna architectures
- Digital Beam Forming (DBF) antenna processing, multi channel processing including STAP
- Reliability of AESA Radar, feed back from existing programs in progress

Venue and getting to DGAC (Paris)

DGAC

50 rue Henry Farman à Paris 15^{ème}

near Paris Heliport

Métro : take line 8 « Balard-Créteil » - station « Balard »
Bus : PC1, station « Place Balard » - 39, station « Balard »
169, station « Porte de Sèvres »

RER : take line C, station « Issy Val de Seine »
Tramway : take line T2, station « Issy Val de Seine »

Registration information

See registration form overleaf

SEE

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Wednesday the 28th of November 2007

from 09h00 to 18h00

DGAC

50 rue Henry Farman – Paris 15^{ème}

Programme

9h00	Welcome
9h30	Survey and status AESA Development of airborne active Scan Arrays, Marc Leconte (Thales Aerospace, France) Novel Array Techniques, Chris Baker (UCL, United Kingdom) AMSAR Active Antenna, Jean-Luc Milin (Celar, France) et Steve Moore (DSTL, United Kingdom) ASEA reliability : operational feedback, J.-M. Chabroux (Thales Aerospace, France) Blinking Sub-Arrays for low Cost STAP with Airborne Active Antenna, Laurent Savy (ONERA, France) Thales Components And Technologies Developments for T/R Modules, Yves Mancuso (Thales Aerospace, France)
14h30	MESAR, Sampson & Radar Technology for BMD, W. Stafford (BAE Systems, Integrated Systems Technologies United Kingdom) AESA Technology for Extended Air Defence Applications : the M3R System, Odile Adrian (Thales Air Systems, France) Calibration of Active Arrays using Signals of Opportunity, Andy G. Stove (Thales UK Aerospace Division, United Kingdom) Evolution for Space Based Radar Technologies, Massimo Comparini (Thales Alenia Space, Italy) Naval Phased Arrays, Julia Tagg (DSTL, United Kingdom) From Array Antennas to Arrays of Antennas, Philippe Lacomme (Thales Aerospace, France)
17h30	Conclusion