AOC
AUSTRALIAN CHAPTER

AOC 2023
AUSTRALIA CONVENTION

26 – 28 SEPTEMBER, 2023
ADELAIDE CONVENTION CENTRE
ADELAIDE, SOUTH AUSTRALIA

Pocket Program

Australian Information Warfare:
Beyond the Defence Strategic Review

Welcome

On behalf of AOC Australia, welcome to Convention 23. This year's Convention theme – "Australian Information Warfare: Beyond the Defence Strategic Review" – was selected in recognition of Australia's evolving geopolitical environment and government's recent and ongoing response to that evolution.

The challenge posed by the paired influence of complex Indo-Pacific dynamics and military application of advanced technologies is driving a necessary and urgent revitalisation of domestic capability priorities and strategic partnerships.

The Defence Strategic Review identified the information environment and its associated disciplines – cyber, electronic warfare, and information operations – as critical future-focussed, joint-enabling capabilities, but failed to elaborate on the objectives that will bring these capabilities to fruition. The other major initiatives of AUKUS Pillar II and the Advanced Strategic Capabilities Accelerator are also in the early phases of scoping their engagement with the information warfare community, and so the pathway to delivery of comprehensive information warfare capability remains unclear.

This Convention aims to narrow that gap. To thrive in this dynamic global security paradigm, it is imperative that we comprehend the information ecosystem, understand the opportunities it offers and the vulnerabilities it presents, and identify how best to exploit information technologies to deliver competitive advantage to our warfighters.

Presenting this week are some of Australia's key stakeholders from end-user organisations. Sitting in this room are Australia's most qualified and experienced information warfare professionals, representing investment from government, Defence, industry, and academia. Invited speakers and attendees from partner nations have travelled to participate, in recognition of Australia's important contribution to combined capability.

Together, and through this Convention, we will seek to broaden the discussion around information warfare capability need, identify the associated challenges and opportunities, and discuss the ways in which we can move forward as a community to guide fit-for-purpose capability outcomes for Defence.

Importantly, we will also seek to understand how we best grow and support the workforce that underpins that capability.

This Convention is an unrivalled opportunity to engage with Australia's professional information warfare community and I urge you share your experience here with your networks. Thank you for your support of this event and of AOC Australia; we look forward to engaging with you over the coming days.

Katherine Head
President – AOC Australia

General Information

Venue Details

Adelaide Convention Centre
North Terrace – Adelaide

Wifi

The ACC offers Free WiFi with 75MB data allowance at 512Kbps bandwidth. Delegates will need to search the network (ACC_Free) – open an internet page and agree with T&Cs.

There is also a personal pre-paid package available for purchasing:

Exhibition / Day Time Catering / Welcome & Networking Reception

Panorama Ballroom

Dress Code

Uniforms during the day and business suit with tie for the dinner

Name Badges

Please wear your name badge at all times. Admission to all sessions – morning and afternoon teas – and lunches is by name badge only.

Conference Organising Committee

Katherine Head
Jeffrey Malone
Glen Deards
Peter Jenkins
Ashley Robinson

Registration Opening Hours

The AOC 2023 registration desk will be located in the City Rooms Foyer of the Adelaide Convention Centre – West Wing and will open during the following times:

Date	Registration Desk Hours	Social Functions
Tuesday 26 September	08:00 – 19:00	**Welcome Reception** 17:00 Panorama Ballroom Adelaide Convention Centre *Followed by* **Convention Dinner** 19:00 Foyer E Adelaide Convention Centre
Wednesday 27 September	08:00 – 16:00	
Thursday 28 September		**Classified Day**

Sponsors

Thank you to the following partners for their support of AOC 2023:

Exhibitors

Thank you to the following exhibitors for their support of AOC 2023.

Booth	Organisation
03	SOIO
04	Leonardo
07	Mellori / Alkath
08	Rohde & Schwarz Aus
09	Defcon Technologies Group
10	L3 Harris
11	Nova Systems

Booth	Organisation
12	Association of Old Crows
14+15	Dedicated Systems Aus
17	JEDS
18	DEWC
19	Consunet
20	PLATH Signal Products

*Be sure to visit the exhibition space,
located in the Panorama Ballroom, during the Convention*

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AOC 2023 Program Overview

DAY 1

TUESDAY 26 SEPTEMBER

8:00am - 8:55am	Registration	*City Room Foyer*
Session 1 - Convention Open		*City Room 1,2*
9:00am - 9:05am	**Convention Welcome; Welcome to Country** **Katherine Head**, AOC	
9:05am - 9:25am	**Keynote Address** **MAJGEN Colin Karotam**, Australian Signals Directorate	
9:25am - 9:50am	**Host State Welcome** **Dr David Ormrod**, Defence SA	
9:50am - 10:10am	**Platinum Sponsor Address** **Dr Tom Millhouse**, Raytheon Australia	
10:10am - 10:20am	**AOC President's Address** **Mr Brian Hinkley**, AOC	
10:20am - 10:45am	Morning Tea	*Panorama Ballroom*

Fighting in the grey zone

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Nova Systems

Australian Information Warfare:
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DAY 1

TUESDAY 26 SEPTEMBER

Session 2 - Strategic Perspectives		*City Room 1,2*
10:45am - 11:10 am	**Australia's Strategic and Technological Environment: Implications for Defence and EW** **Dr Michael Shoebridge**, Strategic Analysis Australia	
11:10am - 11:30am	**Australian EW Imperatives Post DSR** **Mr Allan Dundas**, DEWC Services	
11:30am - 11:50am	**DST Group Strategic Initiatives** **Dr David Kershaw**, DST Group	
11:50am - 12:05pm	**Australian Strategic Capability Accelerator** **Prof Michelle Gee**, ASCA	
12:05pm - 12:25pm	**Concept Enablers for Distributed IW Operations in the Indo Pacific** **Mr David Enchelmaier**, L3Harris	
12:25pm - 1:15pm	Lunch	*Panorama Ballroom*

Electronic Warfare Capability Partner

Raytheon Australia is developing next generation, integrated and interoperable advanced Electronic Warfare (EW) capabilities that include mission planning and execution at sea, on land, in the air and in space, with EW mission systems and support systems designed and manufactured for expansion and upgradability.

This ensures Australia stays ahead of emerging threats to national security, meets the demands of ever-increasing complex environments and keeps our nation and its defenders safe.

As a trusted capability partner for Australia's Defence, Raytheon Australia is committed to delivering effective support to those who serve their country in the Australian Defence Force, our employees and our partners.

Scan here to learn more about how you can develop real skills and solve real challenges as part of some of the most exciting programs in the country as a member of our world class team.

Raytheon
Australia

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DAY 1

TUESDAY 26 SEPTEMBER

	Session 3 – Panel Session: Spectrum Policy and Regulation *City Room 1,2*	Session 4 – Tech Sessions *City Room 3*
1:15pm - 1:30pm	**Panel Discussion** *Chair: **Mr Glenn Odlum***	**Worst-Case Centre Frequency Estimation** Dr Robby McKilliam, Whipbird Signals
1:30pm - 1:45pm	**AOC Australia Spectrum Working Group** **Mr Glenn Odlum**, AOC Australia	**A Versatile Procedure for the Design of FIR and IIR Filters with Phase-Derivative Estimation Examples and EW Applications** A/Prof Hugh Kennedy, DEWC Services
1:45pm - 2:00pm	**International Competition and Conflict in Spectrum** **Mr David Murray**, DITRDCA	**RFSoC FPGAs for Wideband EW Applications** **Mr Ian Coat**, RFTEQ
2:00pm - 2:15pm		**The Power of Graphs** **Mr Andrew Savchenko**, Team3
2:15pm - 2:35pm	**Defence Spectrum Regulation, Functions, and Processes** **Mr Anoop Vanguru**, Defence Spectrum Office	**Applying Information Philosophy Criteria as a Conceptual Mapping Tool in the Contested Indo Pacific Region** **Dr Gavin Mount**, UNSW
2:35pm - 3:05pm	Afternoon Tea	*Panorama Ballroom*

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TUESDAY 26 SEPTEMBER

	Session 5 - Electromagnetic Battle Management *City Room 1,2*	Session 6 - UAS, Counter-UAS and Air Defence *City Room 3*
3:05pm - 3:25pm	**Electromagnetic Battle Management: Contemporary Challenges and Solutions** Dr Thomas Millhouse, Raytheon Australia	**Exquisite vs Mass Adoption Systems and Learnings from Ukraine** **Mr Angus Bean**, Droneshield
3:25pm - 3:40pm	**Electromagnetic Manoeuvre Assurance in a Complex Geopolitical Environment** **Mr Peter La Franchi,** Nova Systems	**High-Power Microwave and High-Energy Laser Countermeasures Against Commercial UAS** Dr Andrew Piotrowski, DEWC Services
3:40pm - 3:55pm	**A Lack of Spectrum Awareness** **Mr David Devine OAM,** Mellori Solutions	**Hypersonic Missile Counter-Threat Considerations for AUKUS** **Dr Bob Andrews**, AOC
3:55pm - 4:10pm	**Challenges in Dynamic Spectrum Access** **Mr Glenn Odlum**, Nova Systems	

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DAY 1

TUESDAY 26 SEPTEMBER

4:10pm - 5:00pm	**AOC Australia Annual General Meeting**	*City Room 1,2*
5:00pm - 6:30pm	**Welcome Drinks, Networking Function**	*Panorama Ballroom/Exhibition*
7:00pm - 10:00pm	**Convention Dinner**	*Foyer E*

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AOC 2023 Program Overview

DAY 2

WEDNESDAY 27 SEPTEMBER

8:00am - 8:55am	Registration	*City Room Foyer*
Session 7 - ADF and International Perspectives		*City Room 1,2*
9:00am - 9:20am	**Keynote Address** **RADM David Mann**, Joint Capabilities Division	
9:20am - 9:40am	**Perspectives from the Land Domain** **COL Pinghan Chua**, Army Headquarters	
9:40am - 10:00am	**Perspectives from the Air Domain** **GPCAPT Jason Powers**, Air Warfare Centre	
10:00am - 10:20am	**US Perspectives – EW and EMSO Initiatives** **Mr Brian Hinkley**, AOC	
10:20am - 10:45am	Morning Tea	*Panorama Ballroom*
Session 8 - Panel Session: EW Workforce Challenges		*City Room 1,2*
10:45am - 11:45am	**Panellists:** **Dr Sylvie Perreau**, DST Group **Dr Thomas Millhouse** *Chair: **Dr Brett Biddington**, Biddington Research*	

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WEDNESDAY 27 SEPTEMBER

Session 9 - Information Operations	City Room 1,2
11:45am - 12:05pm	**The Influence of AUKUS, DSR and ASCA on the Modernisation of Australian Counterintelligence** **Dr Aaron Matthews**, DEWC Services
12:05pm - 12:25pm	**Understanding Deterrence Capabilities - Quantifying PRC Information Operations in Response to OAIs** **Mr John Bair**, Two Six Technologies
12:25pm - 1:15pm	Lunch *Panorama Ballroom*

Session 10 - EW in the Space Domain	City Room 1,2
1:15pm - 1:35pm	**An Overview of Space EW** **Mr Tim Fountain**, Rohde & Schwarz
1:35pm - 1:55pm	**Space EW, Space Domain Awareness, and Space Control under AUKUS** **Dr Brett Biddington**, Biddington Research
1:55pm - 2:10pm	**Artificial Intelligence for Space Domain Awareness** **Dr Daniel Floreani**, CyberOps
2:10pm - 2:25pm	**Novel Asymmetric EW Solutions for the Space Domain** **Mr Florian Sindel**, Nova Systems
2:25pm - 2:55pm	Afternoon Tea *Panorama Ballroom*

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**DAY
2**

WEDNESDAY 27 SEPTEMBER

Session 11 - Artificial Intelligence for Information Warfare	*City Room 1,2*
2:55pm - 3:10pm	**AI Architectures for EW** **Dr Christopher Young**, Jenkins Engineering Defence Systems
3:10pm - 3:25pm	**Utilising Autonomous Systems to Achieve Distributed EW** **Dr Andrew Lucas**, Agent Oriented Software
3:25pm - 3:40pm	**Autonomous Situation Assessment for Electronic Support** **Mr Zi Huang**, Revolution Aerospace
3:40pm - 3:55pm	**Counter-teaming: An Adaptive Human-machine Teaming System to Counter Opposing RAS-AI** **Dr David Johnson**, Mission Systems
3:55pm - 4:20pm	**Cognitive EW Systems: Addressing Mode-Agile Threat Emitters, Development of Cognitive EW Datasets** **Mr Tim Fountain**, Rohde & Schwarz
4:20pm - 4:30pm	**Conference Close** *City Room 1,2*

Notes

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Notes

PROTECTING AUSTRALIA'S
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