



Australian Government  
Australian Maritime Safety Authority



# Aids to Navigation Engineering Workshop

Delivering the service, designing the future

14-18 October 2024 | Sydney, Australia

**WORKSHOP PROGRAM**



Time	Activity
0900 – 1030	Registration and morning tea
<b>1030 – 1200</b>	<b>SESSION 1: OPENING OF THE WORKSHOP</b>
1030 – 1035	Welcome to Country
1035 – 1040	Introduction and housekeeping
1040 – 1055	Address from AMSA
1055 – 1110	Welcome from IALA
1110 – 1120	Workshop aim and objectives IALA ENG Committee Chair
1120 – 1140	Operating environment for delivering AtoN Services Captain Lawrie Corda, Port Authority of New South Wales
1140 – 1200	Technology changes – impacts on engineering and design Jens Ohle, SPX Aids to Navigation
<b>1200 – 1250</b>	<b>LUNCH</b>
<b>1250 – 1420</b>	<b>SESSION 2: REGIONAL PERSPECTIVE</b>
1250 – 1310	Pacific Safety of Navigation Project Faranisese Kinivuwai, SPC
1310 – 1330	G1165 Sustainable structural design of marine AtoN Sarah Robinson, IALA World-Wide Academy
1330 – 1350	AtoN in the Great Barrier Reef Bill Morley, Maritime Safety Queensland
1350 – 1410	AtoN solutions in the Pacific region Adam Hay and Adrian Van Boven, M-NAV Solutions Pty Ltd
1410 – 1420	Questions
<b>1420 – 1440</b>	<b>BREAK</b>
<b>1440 – 1640</b>	<b>SESSION 3: A GLIMPSE INTO THE FUTURE</b>
1440 – 1500	Machine readability and Artificial Intelligence Owain Brennan, Seer BI
1500 – 1520	S201 / S125 and MRN and what it means to AtoN providers Minsu Jeon, IALA
1520 – 1540	Maritime Connectivity Platform implementation Dr Julius Moeller, AMSA
1540 – 1600	MASS update, current thinking on MASS use of AtoN Hideki Noguchi, Japan Coast Guard
1600 – 1620	Complimentary use of AtoN and Tsunami monitoring Mónica Herrero, Mediterraneo Señales Maritimas SL (MSM)
1620 – 1630	Questions
1630 – 1640	Day 1 wrap up and admin – IALA ENG Committee Chair

**1800 – 2000** **WELCOME RECEPTION | SPONSORED BY SPX**  
 Australian National Maritime Museum – Tasman Light Gallery  
 Darling Harbour  
 Dress code: smart casual



**DAY 1 – Monday 14, October 2024**

Time	Activity
<b>0900 – 1050</b>	<b>SESSION 4: LIGHTS</b>
0900 – 0920	Review of IALA documentation on lights Malcolm Nicholson, SPX Aids to Navigation
0920 – 0940	LED's with coloured filters Alwyn Williams, General Lighthouse Authorities of the UK and Ireland
0940 – 1000	Replacing obsolete light sources and environmental considerations Daniel Atkins, AMSA
1000 – 1020	Sustainable leading light lanterns and power developments (Peter Schneider, WSV Germany) Link Powell, General Lighthouse Authorities of the UK and Ireland
1020 – 1040	Measurement process and uncertainty Link Powell, General Lighthouse Authorities of the UK and Ireland
1040 – 1050	Questions
<b>1050 – 1120</b>	<b>BREAK</b>
<b>1120 – 1250</b>	<b>SESSION 5: POWER</b>
1120 – 1140	Photovoltaic technologies and sustainability of materials Dr Moonyong Kim, School of Photovoltaic & Renewable Energy Engineering, UNSW
1140 – 1200	Impact on power systems due to lantern selection Peter Dobson, Trinity House
1200 – 1220	Battery developments and options – Lithium experience Jonas Lindberg, SPX Aids to Navigation Oy
1220 – 1240	Enhancing AtoN System Safety: Remote Diagnosis & Monitoring of Lithium Batteries Tae Uk Chang, Quantum Solution
1240 – 1250	Questions
<b>1250 – 1340</b>	<b>LUNCH AND WORKSHOP PHOTOGRAPH</b>
<b>1340 – 1520</b>	<b>SESSION 6: POSITION, NAVIGATION AND TIMING</b>
1340 – 1400	Need for Resilient PNT Dr. Kiyeol Seo, KRISO – Korea Research Institute of Ships & Ocean Engineering
1400 – 1420	Resilient PNT Requirements Florin Mistrăpău, GMV
1420 – 1440	Resilient PNT Guideline Kaisu Heikonen, Finnish Transport Infrastructure Agency
1440 – 1500	Timing and synchronisation Stefan Gewies, German Aerospace Center (DLR)
1500 – 1520	SouthPAN – Southern Positioning Augmentation Network Update – Australia and New Zealand's SBAS Vincent Rooke, Geoscience Australia
1520 – 1530	Questions
<b>1530 – 1550</b>	<b>BREAK</b>
<b>1550 – 1730</b>	<b>SESSION 7: PNT CANDIDATE TECHNOLOGIES</b>
1550 – 1610	ERPS Enhanced Radar position system Paul Mueller, Half-PI Electronic Product Development
1610 – 1630	Development Status of Resilient PNT Younghoon Han, KRISO – Korea Research Institute of Ships & Ocean Engineering
1630 – 1650	New technology racon (NT Racon) Chunhai Liu, Shanghai Navar
1650 – 1710	R-Mode (Michael Schütteler – WSV Germany) Stefan Gewies, German Aerospace Center (DLR)
1710 – 1720	Questions
1720 – 1730	Day 2 wrap up – IALA ENG Committee Chair
<b>Evening</b>	<b>FREE NIGHT TO EXPLORE SYDNEY</b>

**DAY 2 – Tuesday, 15 October 2024**

Time	Activity
<b>0900 – 1030</b>	<b>SESSION 8: ASSET MANAGEMENT AND WORKING ENVIRONMENT</b>
0900 – 0920	Optimising asset management and information systems Kylie Tully, AMSA
0920 – 0940	Contracting out AtoN upgrade work in New Zealand Ashton McGill, Maritime New Zealand
0940 – 1000	AtoN performance in the field, managing risk and defining nautical requirements Terry Skinsley, AMSA
1000 – 1020	Assessment of the PNG – NMSA AtoN Navigation Network Harvey Lahani, National Maritime Safety Authority of PNG
1020 – 1030	Questions
<b>1030 – 1100</b>	<b>BREAK</b>
<b>1100 – 1200</b>	<b>SESSION 9: IALA AND PANEL DISCUSSION</b>
1100 – 1120	Overview of IALA guidance Minsu Jeon, IALA
1120 – 1200	Panel discussion on IALA and application for AtoN services
<b>1200 – 1250</b>	<b>LUNCH</b>
<b>1250 – 1430</b>	<b>SESSION 10: TECHNICAL DISCUSSION FORUM</b>
	Technical discussion group – Lights and vision Malcolm Nicholson, SPX Aids to Navigation
	Technical discussion group – Coatings, corrosion and maintenance Daniel Atkins, AMSA
<b>1430 – 1450</b>	<b>BREAK</b>
<b>1450 – 1630</b>	<b>SESSION 11: TECHNICAL DISCUSSION FORUM</b>
	Technical discussion group – Power systems and monitoring Peter Dobson, Trinity House
	Technical discussion group – Radio Navigation services and technologies Jeffrey van Gils, Ministry of Infrastructure and Water Management
1630 – 1640	Day 3 wrap up

**1800 – 2100 Evening social event – Sydney Harbour cruise and dinner**

**CO-SPONSORED BY MSM and M-NAV SOLUTIONS**

Location: Captain Cook Cruises

King Street Wharf No.1-2,

Darling Harbour

Dress code: smart casual



**DAY 3 – Wednesday, 16 October 2024**

Time	Activity
<b>0900 – 1000</b>	<b>SESSION 12: IALA WORLD WIDE ACADEMY</b>
0900 – 0920	WWA achievements to date
0920 – 0940	Organisations who benefit from WWA
0940 – 1000	Wrap up and establish working groups
<b>1000 – 1030</b>	<b>BREAK</b>
<b>1030 – 1230</b>	<b>SESSION 13: WWA COURSE CONTENT REVIEW</b>
	WG1 – L2 C2001 series and C2002 series (Buoys and Power)
	WG2 – L2 C2003 series and C2004 – C2011 (Lights and Various)
	WG3 – L1.1 Modules: <ul style="list-style-type: none"> <li>• 2A (2a.1): Visual AtoN</li> <li>• 2A (w2a.6): Channel design</li> <li>• 2B (2b.1): Types of Radio AtoN; New Technology Radars and Racons</li> <li>• 2B (2b.7): Remote Control and Monitoring</li> </ul>
	WG4 – C1004 Aids to Navigation Management Training Level 1 – Global Navigation Satellite Systems and e-Navigation. Reference to 2B (2b.6) in Level 1.1 Model course.
<b>1230 – 1320</b>	<b>LUNCH</b>
<b>1320 – 1450</b>	<b>SESSION 14: WG FEEDBACK WWA COURSE CONTENT REVIEW</b>
1320 – 1340	WG1 feedback
1340 – 1400	WG2 feedback
1400 – 1420	WG3 feedback
1420 – 1440	WG4 feedback
1440 – 1450	Overview and comments
<b>1450 – 1510</b>	<b>BREAK</b>
<b>1510 – 1610</b>	<b>SESSION 15: WORKSHOP CONCLUSIONS</b>
1510 – 1540	Workshop conclusions Michel Cousquer, Cerema
<b>1540 – 1610</b>	<b>WORKSHOP CLOSING REMARKS - IALA ENG COMMITTEE CHAIR</b>

**DAY 4 – Thursday, 17 October 2024**



Time	Activity
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OPTION 1 – SYDNEY	
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0900 – 1200	<b>TECHNICAL VISIT MACQUARIE LIGHTHOUSE SYDNEY</b> AMSA – Bus from Darling Harbour
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Time	Activity
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OPTION 2 – MELBOURNE	
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0900 – 1600	<b>SPX FACTORY TOUR MELBOURNE</b> Delegates to provide own transport to Melbourne – bus pickup Melbourne airport 11am
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