

PAP32 Agenda item: 4
Normative and informative Recommendations - Result of survey within the Committee Chairs

Standard	General topic area	Recommendation			Guideline	
		No.	Normative Informative	Name	No.	Name
AtoN Planning and Service Requirements	Maritime Buoyage System					
	Obligations, International & national criteria	E-105	Normative	The Need to Follow National and International Standards	1054	Preparing for a Voluntary IMO Audit on Aids to Navigation Service Delivery
	Levels of service objectives, Availability and Categories	O-130	Normative	Categorisation and Availability Objectives for Short Range Aids to Navigation	1004	Level of Service
					1035	Availability and Reliability of Aids to Navigation
					1037	Data Collection for Aids to Navigation Performance Calculation
	Risk Management Toolbox	O-134	Informative	The IALA Risk Management Tool for Ports and Restricted Waterways	1018	Risk Management
		O-138	Informative	The Use of GIS and Simulation by Aids to Navigation Authorities	1033	The Provision of Aids to Navigation for Different Classes of Vessels, including High Speed Craft
					1046	Response Plan for the Marking of New Wrecks
					1057	The use of Geographic Information Systems (GIS) by Aids to Navigation (AtoN) Authorities
					1058	The Use of Simulation as a Tool for Waterway Design and AtoN Planning
					1078	The Use of Aids to Navigation in the Design of Fairways
					1079	Establishing and Conducting User Consultancy by Aids to Navigation Authorities
					1097	Technical Features and Technology Relevant for Simulation of AtoN
					1104	The application of maritime surface picture for analysis in risk assessment and the provision of Aids to Navigation
	Quality management, Record keeping	O-132	Normative	Quality Management for Aids to Navigation Authorities	1052	Quality Management Systems for Aids to Navigation Service Delivery
		P-137	Informative	Quality Management for Competent Pilotage Authorities and Pilotage Service Providers		
		O-118	Normative	The Recording of Aids to Navigation Positions		
	Offshore signals, Bridge signals, Traffic signals	E-111	Normative	Port Traffic Signals		
		O-113	Normative	The Marking of Fixed Bridges and Other Structures over Navigable Waters		
		O-139	Normative	The Marking of Man-Made Offshore Structures		
	AIS, AIS AtoN, Virtual AtoN	O-143	Normative	Provision of Virtual Aids to Navigation	1081	Provision of Virtual Aids to Navigation
					1062	The establishment of AIS as an Aid to Navigation
					1082	An Overview of AIS
					1084	Authorisation of AIS AtoN
AtoN Design and Delivery	Visual AtoN	E-106	Informative	The Use of Retroreflecting Material On Aids To Navigation Marks Within The IALA Maritime Buoyage System	1023	The Design of Leading Lines

		E-108	Normative	The Surface Colours used as Visual Signal on Aids to Navigation	1041	Sector Lights
		E-110	Normative	The Rhythmic Characters of Lights on Aids to Navigation	1043	Light Sources used in Visual Aids to Navigation
		E-112	Normative	Leading Lights (*including Leading Line Design Program ver 2.02)	1048	LED Technologies and their use in Signal Lights
		E-200-1	Normative	Marine Signal Lights Part 1 - Colours	1049	The Use of Modern Light Sources in Traditional Lighthouse Optics
		O-104	Normative	Off Station Signals for Major Floating Aids	1051	Provision and Identification of Aids to Navigation in Built-up Areas
					1061	Light Applications Illumination of Structures
					1065	Aids to Navigation Signal Light Beam Vertical Divergence
					1069	Synchronisation of Lights
					1073	Conspicuity of AtoN lights at Night
					1094	Daymarks for Aids to Navigation
	Range and Performance	E-200-0	Informative	Marine Signal Lights Part 0 - Overview	1038	Ambient Light Levels at which Aids to Navigation Lights should switch on and off
		E-200-2	Normative	Marine Signal Lights Part 2 - Calculation, Definition and Notation of Luminous Range		
		E-200-3	Informative	Marine Signal Lights Part 3 - Measurement		
		E-200-4	Informative	Marine Signal Lights Part 4 - Determination and Calculation of Effective Intensity		
		E-200-5	Informative	Marine Signal Lights Part 5 - Estimation of the Performance of Optical Apparatus		
	Design, Implementation & Maintenance				1005	Contracting Out Aids to Navigation Services
					1007	Lighthouse Maintenance
					1012	The Protection of Lighthouses and other Aids to Navigation against Damage from Lightning
					1015	Painting Aids to Navigation Buoys
					1047	Cost Comparison Methodology of Buoy Technologies
					1076	Building Conditioning of Lighthouses
					1077	Maintenance of Aids to Navigation
					1091	Bird Deterrents
					1092	Safety Management for AtoN Activities
					1108	The Challenges of Providing AtoN services in Polar Regions
					1109	Theft and Vandalism Deterrents
	Power systems				1011	Standard Method for Defining and Calculating the Load Profile of Aids to Navigation
					1039	Designing Solar Power Systems for Aids to Navigation
					1064	Integrated Power Systems Lanterns (Solar LED Lanterns)
					1067-0	Selection of Power Systems for Aids to Navigation and Associated Equipment
					1067-1	Total Electrical Loads of Aids to Navigation
					1067-2	Power Sources
					1067-3	Electrical Energy Storage for Aids to Navigation
	Floating AtoN	E-107	Informative	Moorings for Floating Aids to Navigation	1006	Plastic Buoys
					1066	The Design of Floating Aid to Navigation Moorings
					1099	The Hydrostatic design of buoys
					1098	The Application of AIS - AtoN on Buoys

	Environment, Sustainability & Legacy				1036	Environmental Management in Aids to Navigation
					1063	Agreements for Complementary use of Lighthouse Property
					1074	Branding and Marketing of Historic Lighthouses
					1075	A Business Plan for the complementary use of a Historic Lighthouse
					1080	The Selection and Display of Heritage Artefacts
					1093	The Management of Surplus Lighthouse Property
	Additional AtoN systems, including Sound signal	E-109	Informative	The Calculation Of The Rnage Of A Sound Signal	1090	The Use of Audible Signals
Radionavigation Services	Satellite positioning and timing					
	Terrestrial positioning and timing					
	RACON & Radar positioning	e-NAV-146	Normative	Strategy for Maintaining Racon Service Capability	1010	Racon Range Performance
		R-101	Normative	Marine Radar Beacons (racons)		
	Terrestrial augmentation services (DGNSS)	R-115	Normative	The Provision Of Maritime Radionavigation Services In The Frequency Band 283.5-315 kHz In Region 1 and 285-325 kHz In Region 2 And 3	1016	Bilateral Agreements and Inter-Agency MOU's on the Provision of DGNSS services in the frequency band 283.5 khz - 325 khz
		R-121	Normative	The Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 - 325 kHz	1053	The Submission of a DGNSS Service for Recognition as a Component of the IMO WWRNS
		R-129	Informative	GNSS Vulnerability and Mitigation Measures	1060	Recapitalisation of DGNSS
		R-135	Informative	The Future of DGNSS	1112	Performance and Monitoring of DGNSS Services in the Frequency Band 283.5-325kHz
Vessel Traffic Services	VTS implementation	V-102	Informative	The application of the 'User Pays' principle to Vessel Traffic Services	1083 N	Standard Nomenclature to identify and refer to VTS centres (Normative)
		V-119	Normative	The Implementation of Vessel Traffic Services		
		V-120	Informative	Vessel Traffic Services in Inland Waters		
	VTS operations	V-127	Normative	Operational Procedures for Vessel Traffic Services	1070	VTS role in managing Restricted or Limited Access Areas
					1071	Establishment of a Vessel Traffic Service beyond Territorial Seas
			Normative		1089	Provision of Vessel Traffic Services (INS, TOS & NAS)
					1102	VTS Interaction with Allied or Other Services
					1110	Use of Decision Support Tools for VTS Personnel
	VTS data and information management	V-125	Normative	The use and presentation of symbology at a VTS Centre		
	VTS communications		Normative			
	VTS technologies	V-128	Normative	Operational and Technical Performance of VTS Systems	1056	The Establishment of VTS Radar Services
					1111	Preparation of Operational and Technical Performance for VTS Equipment
	Auditing and assessing of VTS		Normative		1101	Auditing and Assessing VTS
					1115	Preparing for IMO Member State Audit Scheme (IMSAS) On Vessel Traffic Services

Training and Certification	Training and assessment	E-141	Normative	Standards for Training and Certification of AtoN Personnel	1020	Training Related to AtoN
		V-103	Normative	Standards for Training and Certification of VTS Personnel	1017	The Assessment of training requirements for existing VTS Personnel, candidate VTS Operators and the revalidation of VTS Operator Certificates
					1032	Aspects of Training of VTS Personnel relevant to AIS
					1103	Train the Trainer(VTS)
	Competency certification and revalidation		Normative		1100	The Accreditation and Approval Process for Aids to Navigation Personnel Training
			Normative		1014	The Accreditation and Approval Process for VTS Training
	Simulation in training		Normative		1027	Simulation in VTS Training
	Human factors and ergonomics				1045	Staffing Levels at VTS Centres
Digital Communication Technologies	Wide/Medium bandwidth systems (AIS & VDES)	A-123	Normative	The Provision of Shore Based Automatic Identification System (AIS)	1028	The Automatic Identification System (AIS) Volume 1, Part I Operational Issues
		A-124	Informative	The AIS Service	1029	The Universal Automatic Identification System (AIS) Volume 1, Part II – Technical Issues
		A-124 APPENDIX 0	Informative	References, Glossary of terms and Abbreviations		
		A-124 APPENDIX 1	Informative	Basic AIS Services, AIS Data Model and AIS Service specific MDEF sentences		
		A-124 APPENDIX 3	Informative	Distribution model		
		A-124 APPENDIX 4	Informative	Interaction and Data Flow Model of the AIS service		
		A-124 APPENDIX 5	Informative	Interfacing model of the AIS Service		
		A-124 APPENDICES 9/10/11	Informative	Functional Description of the AIS Service components (AIS-PCU, AIS-LSS & AIS-SM)		
		A-124 APPENDIX 12	Informative	Co-location issues at AIS Physical Shore Stations (AIS-PSS) and on-site infrastructure considerations		
		A-124 APPENDIX 14	Informative	FATDMA Planning and Operation of an AIS Service		
		A-124 APPENDIX 16	Informative	DGNSS Broadcasts from an AIS Service		
		A-124 APPENDIX 17	Informative	Channel Management by an AIS Service		
		A-124 APPENDIX 18	Informative	VDL Load Management		
		A-124 APPENDIX 19	Informative	Satellite AIS Considerations		
	Narrow bandwidth systems (NAVDAT, MF beacons)					
	Maritime Internet of Things (Intelligent sensors, AtoN monitoring)				1008	Remote Control and Monitoring of Aids to Navigation
Information Services	Harmonised maritime connectivity framework (CMDS)	e-NAV-140	Normative	The Architecture for Shore-based Infrastructure 'fit for e-Navigation'	1107	The Reporting of Results of e-Navigation Testbeds
		e-NAV-148	Normative	The need to implement regional e-Navigation solutions based on international standards	1113	Design and Implementation Principles for Harmonised System Architecture of Shore-based Infrastructure
					1114	A Technical Specification for the Common Shore-based System Architecture (CSSA)

	Data models and data encoding (IVEF, S-100, S-200, ASM)	e-NAV-144	Normative	Harmonized implementation of Application Specific Message (ASM)	1072	AtoN Information Exchange & Presentation
		e-NAV-147	Normative	Product Specification Development and Management	1085	Standard Format for Electronic Exchange of AtoN Product Information
		V-145	Normative	The Inter-VTS Exchange Format (IVEF) Service	1087	Procedures for the Management of the IALA Domains under the IHO GI Registry
					1088	Introduction to Preparing S-100 Product Specifications
					1095	Harmonised implementation of Application-Specific Messages (ASMs)
					1106	Producing an IALA S-100 Product Specification
	Data exchange systems (Traffic Information)	E-142	Informative	Maritime Data Sharing 'IALA-NET'	1050	The Management and Monitoring of AIS Information
					1086	The Global Sharing of Maritime Data & Information
	User requirements				1096	Anticipated user e-Navigation requirements from Berth to Berth, for AtoN Authorities
	Terminology and symbology (IALA Dictionary)				1105	Shore-side portrayal ensuring harmonisation with e-Navigation related information