**IALA COUNCIL
63rd session**

IALA

**13-16 December 2016
IALA Headquarters
France**

8 – STRATEGY AND POLICY

8.4 – Technical documents

8.4.1 – Standards

Note by the Secretariat

1. BACKGROUND

At its 62nd session Council noted the progress on development of draft Standards for consideration and voting by the General Assembly in May 2018. Council also approved the scheme for the topic areas for Recommendations, Guidelines, Manuals, and Model Courses under the seven Standards, which was at Annex C of document C62-8.4.1.

Since then, good progress has been made, aided by advice to the Secretariat from LAP17 and PAP32.

2. DEFINITIONS OF STANDARD, RECOMMENDATION, AND GUIDELINE

Council will recall that definitions were considered at its 62nd session and the Secretariat advised that it would seek changes to the definitions of Recommendations and Guidelines at this 63rd session.

Following consultation with PAP members earlier in the year, and consideration by LAP17 and then PAP32, the LAP and PAP seek approval by Council of the following definitions.

IALA Standard (Approved by Council and unchanged)	IALA Standards form a framework, implementation of which by all coastal states will harmonize marine aids to navigation worldwide. IALA standards cover technology and services and are non-mandatory.
IALA Recommendation	IALA Recommendations specify what practices shall be carried out in order to comply with a Recommendation, and may be referenced, in full or in part, in an IALA Standard.
IALA Guideline	IALA Guidelines describe how to implement practices normally specified in a Recommendation.

3. THE SEVEN STANDARDS

At Council session 62, Council agreed the names of the first seven Standards for IALA and a diagram showing the subsidiary topic areas. Some minor changes were made to this diagram by LAP and PAP in October 2016 and Council is requested to note these.

The final table is reproduced as Annex A.

4. RECOMMENDATIONS REFERENCED AS NORMATIVE AND INFORMATIVE IN THE DRAFT STANDARDS

4.1. Normative and Informative references

Each Standard is a vehicle for referencing Standards. They may be referenced as Normative or Informative, where the meaning is as follows.

- ❖ Normative provisions are those with which it is necessary to conform in order to claim compliance with the Standard.

- ❖ Informative provisions are those which specify additional desirable practices but with which it is not necessary to conform in order to claim compliance with the Standard.

4.2. Selection of Normative and Informative Recommendations and their allocation to the seven Standards

Earlier in the year, PAP members were asked to advise the Secretariat on their recommendations for the Normative and Informative Recommendations for each of the seven Standards.

These recommendations were considered in depth at PAP32 and the report of that meeting carries the table reproduced here as Annex B, showing the allocation advised by PAP.

The PAP advice has been used for the seven draft Standards.

5. PREAMBLE TEXT FOR RECOMMENDATIONS

The Secretariat has prepared a new standard form for the preamble text for Recommendations. Following advice from LAP (session 17) and approval by PAP (session 32) this will be used in new and revised Recommendations.

6. TIME SCHEDULE

6.1. Schedule for the introduction of Standards – Preparation

Date	Organ	Activity
2016-10-05 to 07	PAP 32	Finalise above for input to Council 63 Decide Recommendations for Standards
2016-11		Secretariat prepares for Council 63
2016-12-13	Council 63	Consideration by Council
2017-04-03	LAP18	Consideration of advice from Council if needed.
2017-04-05	PAP 33	Consideration of advice from Council and LAP if needed.

		Final review of Standards and Recommendations
2017-06-13	Council 64	Final draft seven Standards to Council for Approval

6.2. Schedule for the introduction of Standards – General Assembly

Date	Organ	Activity
2017-12	Council 65,	To note preparation for the General Assembly
2018-01 onward	Secretariat	Information process to Members
2018-05	General Assembly, Korea	General Assembly voting on Standards
2018-06	Secretariat	Announcement of result of voting to membership
2018-07-31	Secretariat	On website

7. DRAFT SEVEN STANDARDS

The draft seven Standards are provided as input papers.

- 8.4.1.1   IALA Standard 1010 AtoN Planning and Service Requirements
- 8.4.1.2   IALA Standard 1020 AtoN Design and Delivery
- 8.4.1.3   IALA Standard 1030 Radionavigation Service
- 8.4.1.4   IALA Standard 1040 Vessel Traffic Services
- 8.1.4.5   IALA Standard 1050 Training and Certification
- 8.1.4.6   IALA Standard 1060 Digital Communication Technologies
- 8.1.4.7   IALA Standard 1070 Information Services

These have been prepared by the Secretariat following consideration by LAP17 and PAP32 of a standard template/example, followed by minor editing by the Secretariat of that template/example agreed by the Chair of LAP.

The Secretariat will ask the Council to approve these drafts at its 64th session in June 2017 and requests Council to provide any comments on the drafts to the Secretariat before Friday 24 March 2017.

Councillors are reminded that the Committees are working to revise a number of Recommendations and Guidelines into a state that more correctly reflects the pyramid structure agreed at Council Session 59, and the above definitions. Some of this work will be completed before Council session 64, June 2017, and so some changes in Normative and Informative Recommendations listed in the draft Standards should be expected.

8. THE COUNCIL IS REQUESTED TO

a) **Approve** the definitions of Recommendation and of Guideline

C62-8.4.1

b) **Note** the Standards table at Annex A

c) **Note** the schedule towards a General Assembly vote on adoption of Standards in May 2018.

d) **Note** the seven draft Standards provided as input papers and provide any comment on these to the Secretariat before Friday 24 March 2017

e) **Note** that these seven draft Standards will be re-presented to Council at session 64 in June 2017 with a view to Approval.
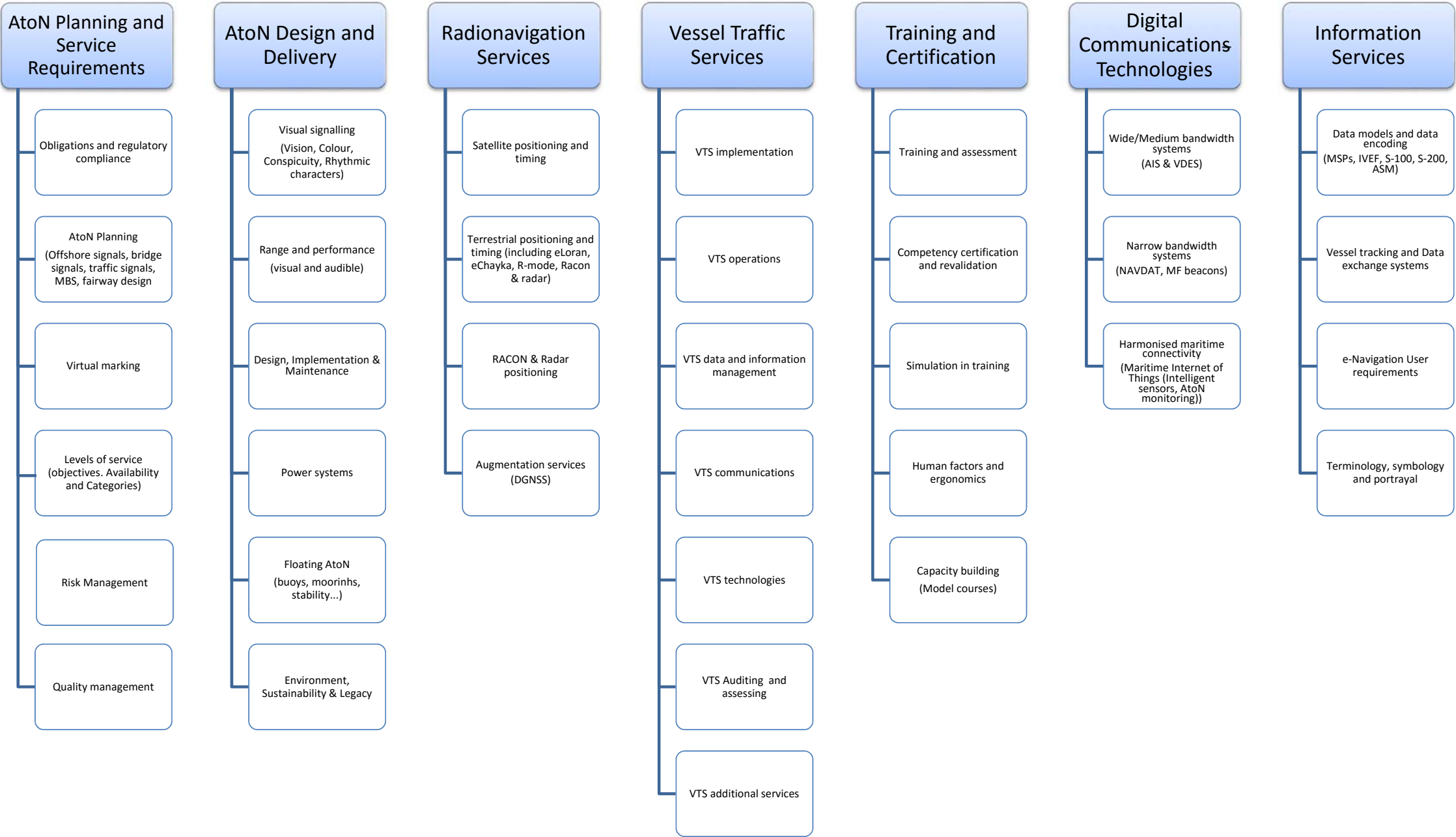
9. ANNEX A –STANDARDS SCHEME

Prepared by the Policy Advisory Panel at its 31st session, April 2016. Noted by Council at its 62nd session June 2016. Change of order of "Virtual marking" and additions of "MSPs" by LAP and PAP October 2016

Blue boxes are the seven Standards and white boxes are topic areas for Recommendations, Guidelines, Manuals, and Model Courses. White boxes are not document names but are content area descriptions.

Consider changing the table below – for discussion if there's a priority set with the view presented

Mis en forme : Couleur de police : Rouge

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AtoN Planning and Service Requirements	AtoN Design and Delivery	Radionavigation Services	Vessel Traffic Services	Training and Certification	Digital Communications Technologies	Information Services
Obligations and regulatory compliance	Visual signalling (Vision, Colour, Conspicuity, Rhythmic characters)	Satellite positioning and timing	VTS implementation	Training and assessment	Wide/Medium bandwidth systems (AIS & VDES)	Data models and data encoding (MSPs, IVEF, S-100, S-200, ASM)
AtoN Planning (Offshore signals, bridge signals, traffic signals, MBS, fairway design	Range and performance (visual and audible)	Terrestrial positioning and timing (including eLoran, eChayka, R-mode, Racon & radar)	VTS operations	Competency certification and revalidation	Narrow bandwidth systems (NAVDAT, MF beacons)	Vessel tracking and Data exchange systems
Virtual marking	Design, Implementation & Maintenance	RACON & Radar positioning	VTS data and information management	Simulation in training	Harmonised maritime connectivity (Maritime Internet of Things (Intelligent sensors, AtoN monitoring))	e-Navigation User requirements
Levels of service (objectives. Availability and Categories)	Power systems	Augmentation services (DGNSS)	VTS communications	Human factors and ergonomics		Terminology, symbology and portrayal
Risk Management	Floating AtoN (buoys, moorinhs, stability...)		VTS technologies	Capacity building (Model courses)		
Quality management	Environment, Sustainability & Legacy		VTS Auditing and assessing			
			VTS additional services			

10. ANNEX B – NORMATIVE AND INFORMATIVE RECOMMENDATIONS

PAP32 Agenda item: 4.3

Normative and informative Recommendations - Result of survey within PAP32

Standard	General topic area	Recommendation			Remarks
		No.	Normative Informative	Name	
AtoN Planning and Service Requirements	**Maritime Buoyage System**				
	Obligations, International & national criteria	E-105	**Normative**	The Need to Follow National and International Standards	
	Levels of service objectives, Availability and Categories	O-130	**Normative**	Categorisation and Availability Objectives for Short Range Aids to Navigation	
	Risk Management Toolbox	O-134	**Informative**	The IALA Risk Management Tool for Ports and Restricted Waterways	use of risk toolbox should be informative but need a normative recommendation on risk management
		O-138	**Informative**	The Use of GIS and Simulation by Aids to Navigation Authorities	informative content should normative recommendation
	Quality management, Record keeping	O-132	**Normative**	Quality Management for Aids to Navigation Authorities	
		P-137	**Informative**	Quality Management for Competent Pilotage Authorities and Pilotage Service Providers	deleted. Should be withdrawn after approval C63
		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	
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	
		E-108	**Normative**	The Surface Colours used as Visual Signal on Aids to Navigation	
		E-110	**Normative**	The Rhythmic Characters of Lights on Aids to Navigation	
		E-112	**Normative**	Leading Lights (*including Leading Line Design Program ver 2.02)	
		E-200-1	**Normative**	Marine Signal Lights Part 1 - Colours	should be guideline
		O-104	**Normative**	Off Station Signals for Major Floating Aids	
	Range and Performance	E-200-0	**Informative**	Marine Signal Lights Part 0 - Overview	change to normative as master for E-200-xx series to become guidelines
		E-200-2	**Normative**	Marine Signal Lights Part 2 - Calculation, Definition and Notation of Luminous Range	should be guideline
		E-200-3	**Informative**	Marine Signal Lights Part 3 - Measurement	should be guideline
		E-200-4	**Informative**	Marine Signal Lights Part 4 - Determination and Calculation of Effective Intensity	should be guideline
		E-200-5	**Informative**	Marine Signal Lights Part 5 - Estimation of the Performance of Optical Apparatus	should be guideline
	Design, Implementation & Maintenance	A-126	**Informative**	Use of the AIS in Marine Aids to Navigation Service	added, consider to split in Recommendation and guideline

	Power systems				
	Floating AtoN	E-107	**Informative**	Moorings for Floating Aids to Navigation	
	Environment, Sustainability & Legacy				
	Additional AtoN systems, including Sound signal	E-109	**Informative**	The Calculation Of The Rnage Of A Sound Signal	
Radionavigation Services	**Satellite positioning and timing**				
	Terrestrial positioning and timing				
	RACON & Radar positioning	e-NAV-146	**Informative**	Strategy for Maintaining Racon Service Capability	change from normative to informative, revision needed
		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	
		R-121	**Normative**	The Performance and Monitoring of DGNSS Services in the Frequency Band 283.5 - 325 kHz	
		R-129	**Informative**	GNSS Vulnerability and Mitigation Measures	should be guideline, do not list in standard
		R-135	**Informative**	The Future of DGNSS	should be guideline, do not list in standard
Vessel Traffic Services	**VTS implementation**	V-102	**Informative**	The application of the 'User Pays' principle to Vessel Traffic Services	
		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	
			Normative		
	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	
	Auditing and assessing of VTS	XXXXXX	**Normative**		requires new recommendation
Training and Certification	**Training and assessment**	E-141	**Normative**	Standards for Traning and Certification of AtoN Personnel	
		V-103	**Normative**	Standards for Traning and Certification of VTS Personnel	keep related Model Courses as is
	Competency certification and revalidation	XXXXXX	**Normative**		requires new recommendation
			Normative		
	Simulation in training		**Normative**		
	Human factors and ergonomics				

Digital Communication Technologies	Wide/Medium bandwidth systems (AIS & VDES)	A-123	Normative	The Provision of Shore Based Automatic Identification System (AIS)	
		A-124	Informative	The AIS Service	consider to draft one normative recommendation. Rest to guideline(s)
		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)				
Information Services	**Harmonised maritime connectivity framework (CMDS)**	e-NAV-140	**Normative**	The Architecture for Shore-based Infrastructure 'fit for e-Navigation'	
		e-NAV-148	**Normative**	The need to implement regional e-Navigation solutions based on international standards	
	Data models and data encoding (IVEF, S-100, S-200, ASM)	e-NAV-144	**Normative**	Harmonized implementation of Application Specific Message (ASM)	
		e-NAV-147	**Normative**	Product Specification Development and Management	
		V-145	**Normative**	The Inter-VTS Exchange Format (IVEF) Service	split in Recommendation and guideline
	Data exchange systems (Traffic Information)	E-142	**Informative**	Maritime Data Sharing 'IALA-NET'	keep
	User requirements				
	Terminology and symbology (IALA Dictionary)				