

ENG Work Programme Task Register

Updated at ENG2

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ENG Task 1.1.1 Produce a Guideline on marine signalling

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation systems and services for the safety of navigation, through capacity building and the sharing of experience.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on marine signalling.

Expected outcome

- Updated and new guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling to include apparent intensity, background lighting, modelling techniques, LED sector lights.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

- See tasks 1.1.2 and 1.1.3

Task revision

NA

ENG Task 1.1.2 Develop guidance on the selection of rhythmic characters including 1069 synchronisation

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Moray Waddell
- Aivar Usk
- Sigge Gustafsson

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation systems and services for the safety of navigation, through capacity building and the sharing of experience.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

A new guideline.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Application of fixed-flashing-light (ffl)
- Maximum eclipse time
- Minimum flash duration
- Use of flicker
- Synchronisation
- At ENG3: Liaison note to ARM

Task revision

NA

ENG Task 1.1.3 Update / Replace 1038 on ambient light levels

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Moray Waddell
- Aivar Usk

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation systems and services for the safety of navigation, through capacity building and the sharing of experience.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

New guideline on "Methods for the activation and control of AtoN lights"

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- include GPS astronomical time
- include visibility detectors
- use of local met data
- power concerns
- local turn on

Task revision

NA

ENG Task 1.5.2 Workshop on lights and batteries - IALABATT/IALALITE

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation systems and services for the safety of navigation, through capacity building and the sharing of experience.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

To plan and deliver a technical workshop on Lights and Batteries to be held in autumn of 2017.

Expected outcome

Host a successful IALA workshop on “IALA Batt & IALA Light”

Scope

(Describe key items that are in scope/out of scope)

Technical workshop covering all aspects of lights and power supplies for AtoN applications. Emphasis on sustainability in design, delivery, maintenance and disposal.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Scope of the workshop and draft content for Council approval
 - Identification of a host nation and suitable facilities
 - Firm up on dates, venue and content
 - Identification of exhibitors and presenters
 - Booking and invitations
 - Delivery
 - Review
-

Task revision

NA

ENG Task 2.1.1 Develop further guidance on plastic buoys, systems and sensors

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

- Adrian Wilkins
- Sipke Hoekstra

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation systems and services for the safety of navigation, through capacity building and the sharing of experience.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: : Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Review and update existing Guideline 1006 on plastics buoys. Update or create new guidance documentation on buoy sensors, monitoring and communication systems.

Expected outcome

Updated Guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

There will be reference to a new proposed guidance on AtoN design and maintenance for hot climates - refer task 2.3.1

Expected Sessions for Completion

ENG 1 ENG 2 ENG 3 ENG 4 ENG 5 ENG 6 ENG 7

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review and update Guideline 1006 on plastic buoys
- Consider where to place information on buoy sensors, monitoring and communication systems specific to buoy applications.
- Update or create new guidance documentation on buoy sensors, monitoring and communication systems

Task revision

NA

ENG Task 2.1.2 Engineering guidance on the implementation of e-Navigation systems

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G1: Ensure that aids to navigation systems and related services, including e-Navigation, Vessel Traffic Services, and emerging technologies, through international cooperation and the provision of standards are harmonised.

Strategy - S3: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P3: Develop guidance on positioning, communications, Maritime Services Portfolios and Data modelling for e-Navigation.

Objectives of the task

Develop guidance on the integration of e-navigation systems with conventional AtoN equipment and systems.

Expected outcome

Provide new guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

Awaiting advice from ENAV Committee.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Gather experience from on-going installations
- Liaise with ENAV Committee on scope of guidance
- Liaise with Industrial members on current available technology
- Update existing Guidance documentation e.g. AIS AtoNs on buoys

Task revision

1 April 2015 - Session numbers revised due to low priority - ENG Chairman

ENG Task 2.2.1 Develop guidance on sustainable AtoN design and maintenance

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S3: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P3: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Develop Guidance document: Taking into consideration methods to reduce impact on the environment, zero maintenance concept, service interval extension, recycling, reuse and disposal of equipment, decommissioning of AtoN site etc..

Expected outcome

Update of existing Guidance document 1036 on environmental considerations and review other existing maintenance documentation.

Scope

(Describe key items that are in scope/out of scope)

Review and upgrade of 1036, the green guide. This was re written in the last workplan so can be put on hold if needed.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review existing Guidance documentation at ENG 3 and 4
 - Update Guidance documentation at ENG4 and 5
 - Finalise output at ENG6
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Task revision

1 April 2015 - Priority reviewed following Standards proposal - ENG Chairman

ENG Task 2.2.2 Develop guidance on the commissioning of AtoN equipment and systems and engineering audits

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Develop guidance on the commissioning of AtoN equipment and systems and Engineering audits.

Expected outcome

New Guidance document.

Scope

(Describe key items that are in scope/out of scope)

Pre-installation and testing of equipment and confirmation of correct system configuration and performance following installation. Guidance on auditing AtoN sites from a technical perspective to ensure correct AtoN operation and performance.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review existing documentation from members
- Develop guidance outline and Confirm scope of guidance at ENG2
- Develop guidance content at ENG3 and 4
- Finalise guidance documentation at ENG5.

Task revision

NA

ENG Task 2.3.1 Develop guidance on AtoN design and maintenance for hot climates

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Develop guidance on AtoN design & maintenance for hot climates.

Expected outcome

Updating of existing guidance documents and/or development of a single new document on this subject. This guidance should be the outcome from the Workshop on Extreme Heat.

Scope

(Describe key items that are in scope/out of scope)

Taking into consideration work already completed on polar regions, additional guidance is required for AtoN in extreme heat environments.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review existing guidance documents eg 1092 on Safety Management for working in hot climates.
- Review existing documentation from members on experience in hot climates
- Develop guidance outline and confirm scope of guidance at ENG4
- Further development content following hot climate workshop
- Develop guidance content at ENG5 and 6
- Finalise guidance documentation at ENG7.

Task revision

21 May 2105 - Updated timing for task to align with output of proposed workshop - WG2

ENG Task 2.3.2 Workshop on AtoN delivery and maintenance in extremely hot climates

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability, with input from Working Group 1: Visual & Physical AtoN.

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

Plan and deliver a Workshop on AtoN delivery and maintenance in extreme heat in autumn/winter of 2016.

Expected outcome

Host a successful IALA workshop on "AtoN delivery and maintenance in extreme heat".

Scope

(Describe key items that are in scope/out of scope)

Identify issues with material selection for power systems and AtoN equipment in hot environments, including worker safety.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Scope of the workshop and draft content for Council approval
 - Identification of a host nation and suitable facilities
 - Firm up on dates, venue and content Planned for September 2016 in Abu Dhabi
 - Identification of exhibitors and presenters
 - Booking and invitations
 - Delivery
 - Review
-

Task revision

1 April 2015 - Priority updated and date and venue added - ENG Chairman

ENG Task 2.4.1 Review and update guidance on safety of personnel

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability.

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Review and update Guideline 1092 on the safety of personnel.

Expected outcome

Update guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

Comment – Not sure of the priority of this as it cuts across National legislation etc. Put on hold until work plan gains traction and clarity.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review existing guidance documentation and seek input from members
 - Develop guidance outline and confirm scope of guidance at ENG4
 - Develop guidance content at ENG5
 - Finalise guidance documentation at ENG6.
-

Task revision

- 1 April 2015 - Comment on priority added, see scope section - ENG Chairman
- 21 May 2015 - Change to milestones based on priority change - WG2

ENG Task 2.5.1 Populate the S-100 registry for relevant AtoN classes

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S3: Harmonise the information structure, Maritime Services Portfolios and communications for e-Navigation by creating standards and by cooperating with other IGOs to achieve worldwide interoperability of shore and ship systems including IMO sustainability goals for a maritime transport system.

Priority - P3: Develop guidance on positioning, communications, Maritime Services Portfolios and Data modelling for e-Navigation.

Objectives of the task

To support the compilation of the S-100 registry as requested.

Expected outcome

Revised and updated S-100 registry data as requested by ENAV Committee. Put on hold until a more concrete requirement appears from ENAV or IHO.

Scope

(Describe key items that are in scope/out of scope)

Comment – Not sure of the priority of this as it cuts across National legislation etc. Put on hold until work plan gains traction and clarity.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

Task revision

1 April 2015 - Put on hold pending further information - ENG Chairman

ENG Task 3.1.1 Support the WWA in updating recommendations and guidelines on standards for training and certification of AtoN personnel

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S2: Continue to develop capacity building activities to improve the global operations and management of aids to navigation systems and related services including Goal G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

Review and update guidance as a result of feedback from WWA training events, other training providers and developments in technology.

Expected outcome

Updated WWA Guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

Review and update WWA guidance documentation in consultation with WWA program manager.

Expected Sessions for Completion

ENG 1 ENG 2 ENG 3 ENG 4 ENG 5 ENG 6 ENG 7

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review guidance documentation identified by WWA at each ENG meeting
- Update guidance documentation and submit to WWA for approval

Task revision

NA

ENG Task 3.2.1 Support the WWA in updating model courses on standards for training and certification of AtoN personnel

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S2: Continue to develop capacity building activities to improve the global operations and management of aids to navigation systems and related services including Goal G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

Review and update guidance as a result of feedback from WWA training events, other training providers and developments in technology.

Expected outcome

Updated WWA Model Courses.

Scope

(Describe key items that are in scope/out of scope)

Review and update WWA documentation in accordance with IALA WWA model course update program.

Expected Sessions for Completion

ENG 1 ENG 2 ENG 3 ENG 4 ENG 5 ENG 6 ENG 7

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review model course documentation identified by WWA at each ENG meeting
- Update model course documentation and submit to WWA for approval

WWA Update schedule

Course	Ed	Subject	Last updated	Review	Remarks	Date
E-141	3	Standards for AtoN Training	ENG1	ENG5	Gone to Council 60	May 15
E-141/1	0	AtoN Level 1 Manager Training	Dec 11	ENG2		

Task revision

NA

ENG Task 4.1.1 Develop guidance on the use of heritage lighthouses for modern AtoN equipment and systems

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Develop guidance on the use of heritage lighthouses for modern AtoN equipment & systems.

Expected outcome

New Guideline.

Scope

(Describe key items that are in scope/out of scope)

Taking into consideration installation of AIS AtoN, LED light sources, optical focussing and removal of mercury from lens rotation systems.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Incorporate 1049 modern lamps in traditional optics into new Guidance documentation.
 - Review existing documentation from members on experience
 - Develop guidance outline and confirm scope of guidance at ENG3
 - Develop guidance content at ENG4 and 5
 - Finalise guidance documentation at ENG6.
-

Task revision

- 1 April 2015 - Priority lowered pending work plan progress - ENG Chairman
- 21 May 2015 - Updated milestones based on change to priority - WG2

ENG Task 4.1.2 Develop guidance on maintenance of AtoN structures

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P8: Provide guidance on management, engineering and sustainability in aids to navigation, particularly concerning modern materials and light sources.

Objectives of the task

Develop guidance on AtoN structure protection systems & repair techniques.

Expected outcome

Update and consolidate existing Guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

Taking into consideration corrosion prevention systems (cathodic protection, jackets and paint systems), concrete repair, erosion and scour prevention and effects of impacts of global warming. Specific repair techniques, products and the use of alternate modern materials such as acrylic glazing etc.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review existing documentation from members on experience
- Develop guidance outline and confirm scope of guidance at ENG2
- Develop guidance content at ENG3, 4 and 5
- Finalise guidance documentation at ENG6.

Task revision

NA

ENG Task 5.1.1 Update the Navguide

Working Group/Task leaders

- Working Group 1: Visual & Physical AtoN
- Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P1: Transform the IALA product line by redefining and restructuring existing documentation to meet the future needs of the organisation, including document content, the approval process and accessibility.

Objectives of the task

To maintain the IALA Navguide as an up to date information source for all AtoN service providers.

Expected outcome

The relevant sections of the IALA Navguide are reviewed and updated as requested by the ARM Committee.

Scope

(Describe key items that are in scope/out of scope)

As requested by ARM Committee, selected chapters of the Navguide to be reviewed and updated and submitted to ARM Committee, PAP and Council for approval.

Committee members to provide updated pictures and illustrations of suitable publishing quality that are relevant to the technical content being updated.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review Navguide update schedule from ARM Committee
- Develop review plan for ENG Working Groups 1 and 2
- Review relevant sections of the Navguide and provide feedback to the ARM Committee.

Task revision

NA

ENG Task 5.1.2 Review of IALA documents

Working Group/Task leaders

- Working Group 1: Visual & Physical AtoN
- Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P1: Transform the IALA product line by redefining and restructuring existing documentation to meet the future needs of the organisation, including document content, the approval process and accessibility.

Objectives of the task

Document review to update the IALA product line Some will need deleting, amalgamating, Editing, Updating. As per input paper on document ownership.

Expected outcome

Delivery of updated guidance documentation.

Scope

(Describe key items that are in scope/out of scope)

Covers the range of documents that the ENG committee is responsible for updating.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review and update document ownership register
- Identify documentation that can be merged
- Identify documentation that requires updating
- Identify documentation that is superseded
- Update documentation.

Task revision

NA

ENG Task 5.1.3 Review and update E-200 on marine signal lights

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- E-200-0 Malcolm Nicholson / Moray Waddell
- E-200-1 Frank Hermann / Yves-Marie Blanchard
- E-200-2 Frank Hermann / Greg Hansen
- E-200-3 Malcolm Nicholson / Aivar Usk / Frank Hermann
- E-200-4 Malcolm Nicholson
- E-200-5 Yves-Marie Blanchard

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling to include Apparent Intensity, Background Lighting, Modelling techniques, new measurement techniques.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- E200-0 – Update references
- E200-1 – Temporary Regions
- E200-2 – definition for background lighting, introduce apparent intensity, Range calculator, expand calcs for range in reduced visibility,
- E200-3 – Goniospectradiometry
- E200-4 – Examples of MAM required, introduce apparent intensity
- E200-5 – update factors for modern materials.

Task revision

NA

ENG Task 5.1.4 Update E-106 on the use of retro-reflective material on AtoN marks within the IALA maritime buoyage system

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Sigge Gustafsson
- Jorgen Royal Petersen

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Clear diagram showing the standard and comprehensive codes
- Review use of blue/white for cardinal marks.

Task revision

NA

ENG Task 5.1.5 review and update E-108 on surface colours used as visual signal on AtoN

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review of general content.
-

Task revision

NA

ENG Task 5.1.6 Review and update E-110 on rhythmic characters of lights on AtoN

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P1: Transform the IALA product line by redefining and restructuring existing documentation to meet the future needs of the organisation, including document content, the approval process and accessibility.

Objectives of the task

Document review to update the Recommendation.

Expected outcome

update to Recommendation E-110 for the Rhythmic Characters of Lights on Aids to Navigation (2012).

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- update the use of Fixed Flashing Character
- make reference to new guidelines on the selection of rhythmic characters including synchronisation.

Task revision

- 22 may 2015 - brought forward in work programme - WG

ENG Task 5.1.7 Review and update E-111 on port traffic signals

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on port traffic signals.

Expected outcome

update to Recommendation E-111 for Port Traffic Signals.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Include variable message signs
- Review of general content.

Task revision

NA

ENG Task 5.1.8 Review and update E-112 on leading lights and 1023 on the design of leading lights

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Frank Hermann
- Yves-Marie Blanchard

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review for some minor changes Minor updates
- Cross reference to the guideline on daymarks
- Cross reference with guideline on synchronised lights
- Update the calculating programme from excel 98 to maintain compatibility
- Use of LED technology.

Task revision

- 22 May 2015 - brought forward in work programme - WG

ENG Task 5.1.9 Merge and update 1043 on light sources with 1048 on LED technologies and 1049 on the use of modern light sources in traditional lighthouses

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Malcolm Nicholson
- Manuel Santos

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Update to reflect LED developments since publication
- Update and check that measurement section is still valid
- Review of general content.

Task revision

- 22 May 2015 - Changed session priority to align with IALALITE workshop - WG

ENG Task 5.1.10 Review and update 1041 on sector lights

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Frank Hermann
- Malcolm Nicholson

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Updated Guideline 1041 on Sector Lights.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Measurement procedure and installation procedure
 - add section on goniospectroradiometry
 - revise definitions
-

- update links to other recommendations and guidelines.

Task revision

NA

ENG Task 5.1.11 Review and update 1061 on illumination of structures

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Malcolm Nicholson

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Updated Guideline 1061 on Illumination of Structures.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- design process and techniques
- add links to raytracing applications
- add design process formula and examples (MN)
- consider referring to extended light sources in 1043.

Task revision

- 22 May 2015 - Additional session added to complete work - WG

ENG Task 5.1.12 Review and update 1065 on AtoN signal light beam vertical divergence

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P7: Continue to improve guidance on light and vision aspects of marine signalling, consolidating documentation.

Objectives of the task

To provide guidance for AtoN authorities on Marine Signalling.

Expected outcome

IALA Guideline - Guidelines provide detailed information on an aspect of a specific subject, indicating options, best practices and suggestions for implementation. IALA Guidelines relate to planning, operating and managing Aids to Navigation.

Updated Guideline 1065 on Aids to Navigation Signal Light Beam Vertical Divergence.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review of general content.

Task revision

NA

ENG Task 5.1.13 Review and update 1073 on conspicuity of AtoN at night

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Malcolm Nicholson
- John Corio

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P1: Transform the IALA product line by redefining and restructuring existing documentation to meet the future needs of the organisation, including document content, the approval process and accessibility.

Objectives of the task

Document review to update the IALA product line Some will need deleting, amalgamating, Editing, Updating. As per input paper on document ownership.

Expected outcome

Updated Guideline 1073 on Conspicuity of AtoN at night.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Update information on optical filters and the use of LEDs and filters
- Check for other updates/techniques.

Task revision

NA

ENG Task 5.1.14 Review and update 1069 on synchronisation of lights

Working Group/Task leaders

Working Group 1: Visual & Physical AtoN

- Malcolm Nicholson

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P1: Transform the IALA product line by redefining and restructuring existing documentation to meet the future needs of the organisation, including document content, the approval process and accessibility.

Objectives of the task

Review existing Guideline 1069 on synchronisation of lights and update with the latest developments in this area.

Expected outcome

Updated Guideline 1069 on Synchronisation of lights.

Scope

(Describe key items that are in scope/out of scope)

To give guidance on Marine Signalling.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review and existing guideline
- Check for other updates/techniques
- Update Guideline with latest methods on synchronisation.

Task revision

NA

ENG Task 5.2.1 Identify current documents as potential standards, recommendations, guidelines and manuals

Working Group/Task leaders

- Working Group 1: Visual & Physical AtoN
- Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P2: Deliver a limited suite of high level standards suitable for direct citation by States and by other international organisations.

Objectives of the task

Identify current documents as potential Standards, Recommendations, Guidelines & Manuals.

Expected outcome

One or two standards proposed for adoption by the Council.

Scope

(Describe key items that are in scope/out of scope)

Note - Potential current documents for standards may be E109 Range of Fog Signals.

Expected Sessions for Completion

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review current documentation
- Identify potential standards
- Modify documentation into standard format for consideration by the Council.

Task revision

NA

ENG Task 5.3.1 Presentation to ENG committee on new developments in AtoN technology and related products

Working Group/Task leaders

- Working Group 1: Visual & Physical AtoN
- Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

To inform ENG Committee members of new technological developments in AtoN related areas.

Expected outcome

Committee members being informed of current and emerging technologies to enable them to consider their application within their area of operation.

Scope

(Describe key items that are in scope/out of scope)

To consider any field of interest relating to aids to navigation engineering, maintenance, design, application of technology, modern durable materials and emerging technology in their delivery of aids to navigation services. These will be in the form of presentations to the committee and any related papers made available for committee

members to use as they see fit. These will not be official IALA publications or approved but may lead to further debate and potential inclusion in the development of IALA guidance documentation. To be presented by the committee rapporteurs or any informed committee member as presentations. Presentations and reports will be made available to members on the IALA website Committee Area and will be posted on the IALA Wiki.

Expected Sessions for Completion

ENG 1 ENG 2 ENG 3 ENG 4 ENG 5 ENG 6 ENG 7

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Rapporteur reports and presentations at each ENG committee meeting
- Posting presentation material and reports on the IALA website and IALA Wiki following each committee meeting.

Task revision

NA

ENG Task 5.3.2 Develop the IALA Wiki

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S5: Ensure the resources and capabilities of the Secretariat are sufficient to enable IALA and its committees and organs to reach its goals.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

To develop the Wiki and use of the Wiki as the source of committee knowledge sharing and document development.

Expected outcome

Wiki in use as the media for document development and knowledge and information sharing.

Scope

(Describe key items that are in scope/out of scope)

Further development ENG page and category structure.

Expected Sessions for Completion

ENG 1 ENG 2 ENG 3 ENG 4 ENG 5 ENG 6 ENG 7

Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Update ENG page structure
- Add content from ENG meeting input papers
- Add task register to Wiki.

Task revision

NA

ENG Task 5.3.3 Develop the IALA Dictionary

Working Group/Task leaders

Working Group 2: Technical Knowledge and Sustainability

Strategic alignment

Goal - G2: All coastal states have contributed to an efficient global network of aids to navigation and services for the safety of navigation, through capacity building and the sharing of expertise.

Strategy - S1: Position IALA as the source of standards, knowledge and expertise that will enable States to undertake and share the technical developments of aids to navigation, in accordance with UNCLOS, SOLAS, and other obligations.

Priority - P14: Promote technology transfer and knowledge sharing concerning aids to navigation.

Objectives of the task

Review and update the IALA Dictionary on the Wiki.

Expected outcome

Update terms in the IALA dictionary as existing terms require updating and new terms are identified.

Scope

(Describe key items that are in scope/out of scope)

Dictionary terms to updated by Dictionary editors following approval of new or updated terms.

Expected Sessions for Completion

ENG 1	ENG 2	ENG 3	ENG 4	ENG 5	ENG 6	ENG 7
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Key milestones

(Brief and concise description of the work to be undertaken and programme milestones where appropriate.)

Key milestones for completing the task include:

- Review and update IALA Dictionary policy
- Establish Dictionary editing group
- Develop Dictionary review program to maintain current dictionary terms
- Review and add new terms as required.

Task revision

NA

Article Sources and Contributors

ENG Task 1.1.1 Produce a Guideline on marine signalling *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2359> *Contributors:* Djij, Oferiks, Seamusd

ENG Task 1.1.2 Develop guidance on the selection of rhythmic characters including 1069 synchronisation *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2298> *Contributors:* Djij

ENG Task 1.1.3 Update / Replace 1038 on ambient light levels *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2299> *Contributors:* Djij

ENG Task 1.5.2 Workshop on lights and batteries - IALABATT/IALALITE *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2300> *Contributors:* Djij

ENG Task 2.1.1 Develop further guidance on plastic buoys, systems and sensors *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2301> *Contributors:* Djij

ENG Task 2.1.2 Engineering guidance on the implementation of e-Navigation systems *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2352> *Contributors:* Djij

ENG Task 2.2.1 Develop guidance on sustainable AtoN design and maintenance *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2339> *Contributors:* Djij

ENG Task 2.2.2 Develop guidance on the commissioning of AtoN equipment and systems and engineering audits *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2304> *Contributors:* Djij

ENG Task 2.3.1 Develop guidance on AtoN design and maintenance for hot climates *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2342> *Contributors:* Djij

ENG Task 2.3.2 Workshop on AtoN delivery and maintenance in extremely hot climates *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2306> *Contributors:* Djij

ENG Task 2.4.1 Review and update guidance on safety of personnel *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2353> *Contributors:* Djij

ENG Task 2.5.1 Populate the S-100 registry for relevant AtoN classes *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2308> *Contributors:* Djij

ENG Task 3.1.1 Support the WWA in updating recommendations and guidelines on standards for training and certification of AtoN personnel *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2309> *Contributors:* Djij

ENG Task 3.2.1 Support the WWA in updating model courses on standards for training and certification of AtoN personnel *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2354> *Contributors:* Djij

ENG Task 4.1.1 Develop guidance on the use of heritage lighthouses for modern AtoN equipment and systems *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2355> *Contributors:* Djij

ENG Task 4.1.2 Develop guidance on maintenance of AtoN structures *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2357> *Contributors:* Djij

ENG Task 5.1.1 Update the Navguide *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2314> *Contributors:* Djij

ENG Task 5.1.2 Review of IALA documents *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2315> *Contributors:* Djij

ENG Task 5.1.3 Review and update E-200 on marine signal lights *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2316> *Contributors:* Djij

ENG Task 5.1.4 Update E-106 on the use of retro-reflective material on AtoN marks within the IALA maritime buoyage system *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2317> *Contributors:* Djij

ENG Task 5.1.5 review and update E-108 on surface colours used as visual signal on AtoN *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2318> *Contributors:* Djij

ENG Task 5.1.6 Review and update E-110 on rhythmic characters of lights on AtoN *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2367> *Contributors:* Djij

ENG Task 5.1.7 Review and update E-111 on port traffic signals *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2320> *Contributors:* Djij

ENG Task 5.1.8 Review and update E-112 on leading lights and 1023 on the design of leading lights *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2369> *Contributors:* Djij

ENG Task 5.1.9 Merge and update 1043 on light sources with 1048 on LED technologies and 1049 on the use of modern light sources in traditional lighthouses *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2361> *Contributors:* Djij

ENG Task 5.1.10 Review and update 1041 on sector lights *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2323> *Contributors:* Djij

ENG Task 5.1.11 Review and update 1061 on illumination of structures *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2371> *Contributors:* Djij

ENG Task 5.1.12 Review and update 1065 on AtoN signal light beam vertical divergence *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2325> *Contributors:* Djij

ENG Task 5.1.13 Review and update 1073 on conspicuity of AtoN at night *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2326> *Contributors:* Djij

ENG Task 5.1.14 Review and update 1069 on synchronisation of lights *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2365> *Contributors:* Djij

ENG Task 5.2.1 Identify current documents as potential standards, recommendations, guidelines and manuals *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2327> *Contributors:* Djij

ENG Task 5.3.1 Presentation to ENG committee on new developments in AtoN technology and related products *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2328> *Contributors:* Djij

ENG Task 5.3.2 Develop the IALA Wiki *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2329> *Contributors:* Djij

ENG Task 5.3.3 Develop the IALA Dictionary *Source:* <http://www.iala-aism.org/wiki/ialawiki/index.php?oldid=2330> *Contributors:* Djij