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| IALA Guideline |

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VTS Language Competency Test (tentative TITLE) or ASSESSING COMPETENCY OF VTS COMMUNICATIONS

Edition x.x

Date (of approval by Council)

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Revisions to this document are to be noted in the table prior to the issue of a revised document.

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|  |  |  |
|  |  |  |

1. IntroDUCTION 5

1.1. The Scope of VTS Voice Communication 6

1.2. Relationship to Key documents 6

2. DOCUMENT PURPOSE 5

3. Developing a Competency Test 6

3.1. **The Length of the Test 6**

**3.2. Number of Questions 6**

**3.3. Question Difficulty 6**

**3.4. Rating Scale 6**

**3.5. Composition of Test Developer/Raters 6**

**3.6. Qualification of Test Developer/Raters 6**

**3.7. Validity period of the examination (Expiration date) 6**

**3.8. Testing Environment: Sound-proof Facility 6**

**3.9. The Storage and Security of Test Data 6**

**3.10. A procedure for Endorsing Licences to Indicate the Holders’ Language Proficiency Level 6**

**3.11. Legal Implications Arising from the Test 6**

4. Establish Evaluation Criteria 7

4.1. ??? RATING SCALES 10

4.2. ??? Language Evaluation 10

5. Assessment Processes 10

5.1. Assessors 10

5.2. ???ONGOING PERIODIC ASSESSMENTS rather than - Expiration DATE? 11

6. ????? QUALIFICATION OF TEST DEVELOPER/RATER 11

6.1. 11

7. MAINTAINING RECORDS 11

ANNEX A LANGUAGE TASKS OF VTS OPERATORS 13

ANNEX B EXAMPLE EVALUATION CRITERIA 22

ANNEX C EXAMPLE TEST QUESTIONS 37

ANNEX D Example of Annex title (Head 1) style 44

List of Tables

Table 1 Example of table with row headers 5

Table 2 Example of table with column headers 5

List of Figures

Figure 1 Example of wrapping in line with text 4

Figure 2 Example of wrapped square 5

Figure 3 Example of how to achieve right justified equation number 7

# IntroDUCTION

1.1. The Scope of VTS Voice Communication

Precise, effective, and clear maritime communication is essential for ensuring navigational safety in the contemporary international maritime industry. This industry is characterized by its remarkable diversity, with crew members coming from a vast array of cultural and linguistic backgrounds. In this context, prioritizing accurate procedures and employing unambiguous, effective standard communication phraseology, wherever applicable, between Vessel Traffic Services (VTS) and ships is crucial. This practice underscores the imperative role of clear and precise communication in overcoming language barriers and cultural differences, thereby safeguarding not only the crew but also the marine environment. The importance of such standardization, extending beyond routine communications like sea navigation, port approaches, and anchoring procedures to encompass emergency situations as well, becomes even more vital in high-stress scenarios where communication is often subject to significant time constraints or psychological stress, underscoring the necessity for clarity and effectiveness in standardized communication.

1.2. Relationship to Key documents:

 IALA G1089 Provision of a VTS

 IALA G1132 VTS Voice Communications and Phraseology

 IALA G1141 Operational Procedures for Delivering VTS

 IMO A.918(22) Standard Maritime Communication Phrases

 IMO A.954(23) Proper Use of VHF Channels at Sea

 ITU publication Radio Regulations Volume 1 (2020) Chapter VII. [6] Operational Procedures: Reference to and ITU Radio Regulations.

# DOCUMENT PURPOSE

The purpose of this guideline is to provide authorities, training institutions and other interested parties with the tools and procedures necessary to develop a framework for the assessment of VTS personnel’s competency in their use of standard message structures and phrases in VTS communication, in accordance with IMO SMCP and IALA G 1132.

The IALA VTS Committee has been tasked with

# Developing a Competency Test

Loose (simple + another simple (clear purpose first / clear shot of the document / direction) + one more simple + ) or tight?

Key considerations include:

* **The Length of the Test** (minutes): Recommended to be a maximum of 30 minutes
* **Number of Questions:** A total of 10 questions that increase in difficulty and complexity
* **Question Difficulty:** Gradual progression from a low level (N.1) to a high level (N.10), shifting from adhering to standardized phraseology to allowing a certain degree of plain language. (computer adaptive tresting? or standard CBT? (i.e., ten questions increasing in difficulty?) AI assisted? AI might be able to remove the issue of rater selection and training?
* **Test methods:** Online or face to face? Problem is not everyone can do onlibne? Does the test have to be the same across the world? Are we producing a framework rather than a “standard” test? Both approaches have advantages and disadvantages which we need to analyse/consider. Longterm might be to move from framework ro standard test?
* **Test Topics:** Compilation of routine/standard and emergency communication tasks (developing situation / plain language) performed by VTSOs. Special focus on safety issues in developing situations as detailed in IMO A.918(22) and IALA G1141 and IALA G1132. Competent authority / VTS provider to give priority to standard phraseology, butoperational requirements needs may override this.
* **Evaluation Criteria:** Evaluation based on standard operating procedures, phraseology, a certain level of plain language, interpretation (see IALA G 1132), grammar, vocabulary, listening and speaking.
* **Rating Scale:** Comprises of six levels. While the IMO Model course suggests seven levels including 'beginner', 'false beginner', 'elementary', 'lower intermediate', 'intermediate', 'upper intermediate', and 'advanced'. The two initial levels ('beginner' and 'false beginner') can be merged into a single 'beginner' level.
* **Composition of Test Developer/Raters:** The panel should include experts from various fields, including VTS, navigation, language testing, English linguistics, and AI.
* **Qualification of Test Developer/Raters:**
* **Validity Period of the Examination (Expiration Date)** – assessment / testing framework / complicated → // help VTS providers for assessment / confidency, understanding VTS communication. / simple / practical
* **Testing Environment: Sound-proof Facility**
* **The Storage and Security of Test Data**
* **A procedure for Endorsing Licences to Indicate the Holders’ Language Proficiency Level**
* **Legal Implications Arising from the Test**

## TEst Duration

 The length of the test (minutes)

 Number of questions: 10 questions

## TEST TOPICS

 Test Topics: Compilation of routine/standard and emergency communication tasks performed by VTSOs. Special focus on safety issues in developing situations as detailed in IMO A.918(22) and IALA G1141 and IALA G1132.

 Question Difficulty: Gradual progression from a low level (N.1) to a high level (N.10), shifting from adhering to standardized phraseology to allowing a certain degree of plain language.

Annex XX describes the day-to-day communications of VTS operators. These events represent both routine and non-routine control situations that every VTS operator should be competent to handle.

## TESTING ENVIRONMENT

 Test methods: online or simulation-based

### Testing modes

* **Test mode (CBT)**: The test should be CBT-based, allowing for instant data collection and electronic storage.

3.2.2.1. Direct Testing

Direct testing involves live, person-to-person interactions, either face-to-face or telephonically, between the test-taker and an interlocutor who may also serve as an examiner or rater. Assessments can be in real-time or recorded for later evaluation. Methods include face-to-face interviews, role-plays, and conversation-like interviews based on set prompts. This mode provides a more natural, communicative testing environment with the flexibility of tailoring prompts on-the-fly, thus offering an infinite supply of unique test scenarios. Such real-time adaptability reduces the chances of rehearsed responses. However, this format is more resource-intensive, requires strict standardization to prevent biases, and can be affected by inadvertent variations due to human interactions, such as differences in speech clarity or speed.

3.2.2.2. Semi-Direct Testing

In semi-direct testing, test-takers respond to pre-recorded and standardized prompts, with their responses recorded for later evaluation. This mode typically takes place in audio or computer lab settings. The standardized nature of the prompts ensures fairness across test-takers and allows for simultaneous testing of multiple candidates. Additionally, the use of an automated system reduces human resource requirements. However, the inflexibility of pre-recorded prompts can limit the evaluation scope, making it challenging to assess the full range of abilities, particularly in the "interactions" category. Role-plays and simulations may also feel more restricted and focus mainly on routine language use.

# Establish Evaluation Criteria

Evaluation based on standard operating procedures, phraseology, a certain level of plain language, interpretation, grammar, vocabulary, listening and speaking.

- Criteria for Scoring: Evaluation based on listening, speaking, interpretation, grammar, vocabulary, and phraseology.

The criteria to evaluate the assess competency with VTS communications are based on the following performance skills: pronunciation, structure, vocabulary, fluency, comprehension, and interactions.

* **Pronunciation** <add summary text to how this criteria may be established – left some text from the ICAO material is below>
* **Structure**
* **Vocabulary**
* **Fluency**
* **Interpretation**
* **Interactions**

3.2.7. Detailed Evaluation Criteria

The ICAO Language Proficiency Rating Scale is distinctively tailored to address spoken language, specifically in the context of aeronautical radiotelephony. Its primary focus is on the functionality and clarity of oral communication within the aviation sphere, rather than on high grammatical accuracy or native-like pronunciation. Crucially, the overall proficiency rating granted to an individual corresponds to their weakest score in any of the six designated linguistic performance skills: pronunciation, structure, vocabulary, fluency, comprehension, and interactions.

* **Pronunciation (phonological competence)**: The six-tier pronunciation descriptors apply to both native and non-native speakers. Native English speakers with a strong regional dialect may only reach Elementary Level 2, whereas non-native speakers with distinct accents could achieve Expert Level 6, provided their pronunciation does not hinder understanding.

Pronunciation, stress, rhythm, and intonation, though possibly influenced by the first language or regional variation, almost never interfere with ease of understanding.

Pronunciation, stress, rhythm, and intonation, though influenced by the first language or regional variation, rarely interfere with ease of understanding.

Pronunciation, stress, rhythm, and intonation are influenced by the first language or regional variation but only sometimes interfere with ease of understanding.

* Structure (grammatical competence): Grammatical structures are informed by task-relevant language functions which involve the accurate use of syntactic structures and language features like tenses and modality. Proper use of grammar and syntax is vital for conveying meanings. Grammar errors are broadly classified as global (affecting meaning) and local (not affecting meaning).

Both basic and complex grammatical structures and sentence patterns are consistently well controlled.

Basic grammatical structures and sentence patterns are consistently well controlled.

Complex structures are attempted but with errors which sometimes interfere with meaning.

Basic grammatical structures and sentence patterns are used creatively and are usually well controlled.

Errors may occur, particularly in unusual or unexpected circumstances, but rarely interfere with meaning.

* Vocabulary (lexical competence): Vocabulary involves both individual words and multi-word expressions. Proficiency is evident in the accuracy and speed with which one recalls and uses vocabulary.

Vocabulary range and accuracy are sufficient to communicate effectively on a wide

variety of familiar and unfamiliar topics.

Vocabulary is idiomatic, nuanced, and sensitive to register.

Vocabulary range and accuracy are sufficient to communicate effectively on common, concrete,

and work-related topics.

Paraphrases consistently and successfully.

Vocabulary range and accuracy are usually sufficient to communicate effectively on common, concrete, and work-related topics.

Can often paraphrase successfully when lacking vocabulary in unusual or unexpected circumstances.

* Fluency: Centers on producing unrehearsed speech at an appropriate pace. As proficiency increases, non-functional hesitations and fillers reduce. Fluency variations become evident in longer interactions, influenced by the predictability of prior inputs.

Able to speak at length with a natural, effortless flow. Varies speech flow for stylistic effect, e.g. to emphasize a point. Uses appropriate discourse markers and connectors spontaneously.

Able to speak at length with relative ease on familiar topics but may not vary speech flow as a stylistic device.

Can make use of appropriate discourse markers or connectors.

Produces stretches of language at an appropriate tempo.

There may be occasional loss of fluency on transition from rehearsed or formulaic speech to

spontaneous interaction, but this does not prevent effective communication.

Can make limited use of discourse markers or connectors.

Fillers are not distracting.

* Comprehension: Refers to the ability to recognize and understand speech. Proficiency aids in understanding complex discourse, unexpected topics, unfamiliar accents, and challenging listening conditions. This skill centers on listening and understanding. In aviation, pilots depend on air traffic controllers for precise information, vital for safety. Both controllers and pilots must be prepared for unforeseen situations and clear communication, especially during aviation complications. Though comprehension is one of six skills in the Rating Scale, it accounts for 50% of the workload in verbal interactions.

Comprehension is consistently accurate in nearly all contexts and includes comprehension of linguistic and cultural subtleties.

Comprehension is accurate on common, concrete, and workrelated topics and mostly accurate when the speaker is confronted with a linguistic or situational complication or an unexpected turn of events.

Is able to comprehend a range of speech varieties (dialect and/or accent) or registers.

Comprehension is mostly accurate on common, concrete, and work- related topics when the accent or variety used is sufficiently intelligible for an international community of users.

When the speaker is confronted with a linguistic or situational complication or an unexpected turn of events, comprehension may be slower or require clarification strategies.

* Interaction: Interaction focuses on the ability to have spontaneous dialogues and achieve communication goals. This is characterized by the speed and appropriateness of responses, conversational initiatives, responsiveness to interlocutor feedback, and addressing misunderstandings.

Interacts with ease in nearly all situations. Is sensitive to verbal and non-verbal cues and responds to them appropriately.

Responses are immediate, appropriate, and informative.

Manages the speaker/ listener relationship effectively.

Responses are usually immediate, appropriate, and informative.

Initiates and maintains exchanges even when dealing with an unexpected turn of

events.

Deals adequately with apparent misunderstandings by checking, confirming, or clarifying.

⦁ Detailed evaluation criteria: Should align with the IALA Guideline 1132 to maintain consistency across IALA documentation and worldwide implementation. Major elements to be considered in the evaluation criteria are mentioned but are not limited to the following:

**[Table 1] Evaluation Criteria based on IALA Guideline 1132**

|  |  |
| --- | --- |
| **Evaluation Factors** | **Details** |
| Standard VTS Procedures | - Message structures (p.9)  - Message markers (p.10) |
| Standard Phraseology | - Phonetic alphabet (p.12)  - Phonetic numbers (p.12)  - Position, bearings, course, distance, speed, time, geographical names (p.13-14)  - Standard phrases (p.20-31) |
| Plain language | - General rules for construction and content of messages (p.9)  - Ambiguous terminology (p.16) |
| Delivery techniques | - Tone and volume (p.14)  - Emphasis on keywords (p.15)  - Word grouping and pausing (p.15) |
| Interpretation and monitoring | - Questioning techniques (p.15-16)  - Response (p.16)  - Corrections (p.17)  - Repetition (p.17)  - How to interpret a message (p.17) |

## ??? RATING SCALES

Comprises of six levels. While the IMO Model course suggests seven levels including 'beginner', 'false beginner', 'elementary', 'lower intermediate', 'intermediate', 'upper intermediate', and 'advanced'. The two initial levels ('beginner' and 'false beginner') can be merged into a single 'beginner' level.

## ??? Language Evaluation

# Assessment Processes

## Assessors

⦁ **Minimum standards for language testing administration**: Requirements include a soundproof recording room, technical support, security measures, invigilation, and oversight.

## ???ONGOING PERIODIC ASSESSMENTS rather than - Expiration DATE?

assessment / testing framework / complicated -> // help VTS providers for assessment / proficiency, understanding VTS communication. / simple / practical

**Expiration date**: The validity of language testing should be for a duration that considers the complete career lifecycle of VTSOs, with a maximum limit of 5 years.

Periodic assessments play a pivotal role in ensuring ongoing compliance with language proficiency requirements. Given this context, it's vital to also consider the washback effect in language testing and the implications it carries for both training methodologies and the behavior of test-takers.

The "washback effect" pertains to the influence a test exerts on both training programs and test-takers' behavior, which means that the design and content of a language test can greatly affect the teaching and learning methods leading up to the assessment. Properly designed tests should encourage high-quality training focused on genuine proficiency improvement and ensure pilots and air traffic controllers to possess the necessary language proficiency for safe operationsrather than mere rote learning or test-focused preparation. A well-structured aviation language test should positive washback, driving training and learning towards achieving genuine language proficiency (i.e., ICAO's Operational Level 4) and inspiring learners to engage in proficiency-based language activities rather than narrow, test-specific preparations. In essence, while test familiarization is valuable, it should never replace genuine language proficiency training. True proficiency training should holistically address all six skills in the ICAO Rating Scale and extend beyond just test preparation, ensuring test-takers can efficiently operate, especially in high-stress scenarios.

# ????? QUALIFICATION OF TEST DEVELOPER/RATER

## 

 Composition of Test Developer/Raters: The panel should include experts from various fields, including VTS, navigation, language testing, English linguistics, and AI.

# MAINTAINING RECORDS

Assessment results should be recorded and retained as evidence to indicate the competency levels that have been attained. Consideration should be given to protecting personnel records and ensuring those records are accessed only by authorized persons. In particular:

* what data is collected, how and where it is stored;
* who has access to the data; and
* how long the data is stored for.

1. LANGUAGE TASKS OF VTS OPERATORS

Routine Communication activities

|  |  |  |
| --- | --- | --- |
| No | **Situations** | **Details** |
| 1 | Pre-arrival information | * Receive pre-arrival information from vessel and request any additional information * Issue arrival instructions * Query allied services (e.g. agents) on outstanding information * Route information * ETA * Vessel Identity (Name, IMO number, Call Sign, MMSI) * Vessel dimensions as relevant * Vessel draft * Air draft * Hazardous, dangerous or polluting goods details * ISPS security level * Information about any vessel defects or deficiencies * Other specified details   **Further,**   * communication requirements for participating ships; * reporting requirements for pre-arrival information; * non-compliance with reporting requirements; and * information exchange with allied services |
| 2 | Vessels entering VTS area | * Receive entry report from Master * Confirm any vessel defects or deficiencies, such as navigation or manoeuvring equipment failure * Inform of relevant traffic and navigational information * Inform of pilotage requirements * Receive notification of pilot onboard * Establishing communications and verifying vessel identity, position and intention. * Information exchange, such as: * Reporting requirements * Provide relevant traffic information * Provide navigational / fairway information * Vessel defects or deficiencies, such as navigation or maneuvering equipment failure * Updating information with allied services |
| 3 | Vessels movements within VTS area | * Inform of relevant information such as traffic situation, environmental conditions, navigational conditions, traffic separation, overtaking restrictions, warnings and restrictions concerning the movement of traffic, maritime safety information * …… * Reporting formalities * Provision or exchange (AIS, VDES or other means) of relevant information to participating ships at regular intervals, on request or as deemed necessary by the VTS, including: * environmental conditions; * traffic situation; * navigational conditions; * traffic separations; * overtaking restrictions; * warnings and restrictions concerning the movement of traffic in the area; and * Maritime Safety Information. * Special provisions for vessels carrying hazardous, dangerous or polluting cargo * Compliance with pilotage requirements * Non-compliance with the requirements and procedures in the VTS area * Monitor and if possible, communicate with vessels not required to participate in the VTS * Information exchange/update on allied services |
| 4 | Monitoring and management of vessel traffic | * Inform vessel of relevant traffic and navigational information * Query vessel on their intentions (eg deviation from standard route etc) * ….. * Forward planning of vessel movements * Organizing vessels underway * Organizing space allocation * Establishing a system of voyage or passage plans * Ensuring compliance with the regulatory provisions |
| 5 | Permission to proceed from or to an alongside berth or anchorage | * Requirements for a vessel to request permission to proceed when it is ready to depart * Provision of relevant traffic information to the departing vessel prior to departure * Standard and formal message for approval from the VTS for a vessel to proceed * Standard and formal message for refusal from the VTS for a vessel to proceed |
| 6 | Responding to developing unsafe situations | * A vessel unsure of its route or position * A vessel deviating from the route * A vessel requiring guidance to an anchoring position * A vessel that has defects or deficiencies, such as navigation or maneuvering equipment failure * Meteorological conditions (e.g., low visibility, strong winds) * A vessel at risk of grounding or collision * Emergency response or support to emergency services * A vessel deviating from passage plan * Assistance to a vessel to support the unexpected incapacity of a key member of the bridge team |
| 7 | Vessels at anchor | * Anchorage assignment * Communication requirements * Reporting requirement for vessels prior to leaving the anchorage * Non-compliance with the requirements and procedures for the VTS area * Information exchange/update on allied services |
| 8 | Vessels at berth | * Reporting requirements for vessels on arrival at berth * Non-compliance with reporting requirements * Security requirements including security level * Special requirements to maintain a communication watch * Need for restrictions for other vessels passing the berth (e.g., during bunkering or crane operations) * Reporting requirements for vessels prior to leaving the berth * Information exchange/update on allied services |
| 9 | Vessels departing the VTS area | * Reporting requirements for vessels prior to departing the area * Non-compliance with reporting requirements * Handover requirements with adjacent or next VTS |
| 10 | Transition between adjacent VTS area | * Transfer of vessel information such as identification, cargo, destination and ETA * Process for communication procedures * Process to ensure vessel monitoring |
| 11 | Adverse environmental conditions | * Restriction or prohibition on vessel movements * Additional reporting requirements * Additional separation between vessels * Additional requirements (e.g., mandatory tug service, pilot, etc.) |
| 12 | Environmental protections | * mitigate risks such as ship collisions with cetaceans and disturbance of marine mammals in nursery areas; * mitigate the effect of ship wash on the shores in the vicinity of low-lying communities; and * support the protection of Particularly Sensitive Sea Areas (PSSAs) or locally declared environmentally sensitive areas.   It may be appropriate to develop processes and procedures to:   * broadcast relevant information on times and locations; * interact with individual vessels in the vicinity of marine mammals; * keep protected areas clear of traffic; * advise speed restrictions where marine mammals have been sighted, or to reduce ship wash on the shores; * re-route traffic away from sightings; and * collect information to identify potential interaction hotspots to assist in planning future mitigation measures. |
| ~~13~~ | ~~Digital Maritime Services~~ | * ~~the use of AIS messages to provide information on weather, virtual AtoN or the exchange of route information between vessels and VTS.~~ |
| 14 | Interaction with allied services | * Pilots * Tugs and tug operators * Icebreakers and icebreaker operators * The organizers of marine events * Shipping agents * Government agencies, including law enforcement agencies |

**Emergency Communication**

|  |  |  |
| --- | --- | --- |
| No | **Situations** | **Details** |
| 1 | Collision, Capsizing, Sinking, Grounding, Fire Onboard, Man Overboard | * Alert MRCC; * Inform and co-operate with relevant emergency Services; * Inform relevant regulatory authority/ice; * Act on local call-out procedures; * Support on-Scene coordination; * Consider back-up VTS personnel; * Promulgate or relay information concerning situations with vessels in VTS ares; * Restrict traffic in the area; * Alert allied services and other support units; and * Ensure that a proper log is maintained |
| 2 | Pollution | * Alert relevant environmental authority and/or service(s); * Alert relevant response authority and/or service(s); * Inform and co-operate with relevant regulatory authority/ice(s); * Access scale of incident a call-in specialist support, as appropriate; * Promulgate information concerning incident to vessels in VTS area; and * Restrict traffic movement in the area |
| 3 | Places of Refuge | Places of refuge processes and procedures should be developed, depending on national requirements and the particular arrangements arising out of the implementation of IMO Resolution A.949(23) Guidelines on places of refuge for ships in need of Assistance |
| 4 | Medical Emergency | * Inform MRCC; * Inform coast radio stations; * Consider special manoeuvring requirements and * Relay information from responsible health authority to arriving vessels suspected of being infected with a contagious disease that requires special care e.g., quarantine. |
| 5 | Vessel Not Under Command (NUC) | * Promulgate information concerning incident to vessels in the VTS areas; * Obtain detailed information about onboard situation; * Maintain communication with vessels; * Assess vessel’s proximity to danger (danger to vessel itself and other traffic); and * Alert allied services and other support units, if appropriate |
| 6 | Security Incident | In the event of a security incident, processes and procedures should be established. Procedures should reflect any involvement of the VTS with the Port Facility Security Plan (PFSP) as per the International Ship and Port facility Security Code (ISPS) |
| 7 | Protest Action | * Alert Responsible authority; * Act on local call-out procedures, including but not limited to VTS manager; and * Promulgate information concerning incident to vessels in the VTS areas. |
| 8 | Natural Disaster | * Promulgate information to vessels in the VTS area; * Act on local call-out procedures; and * Inform MRCC |

Extract from Manual on the Implementation of ICAO Language Proficiency Requirements (2004) – this may help further develop the table above.

**PART IV: LANGUAGE TASKS OF AIR TRAFFIC CONTROLLERS**

**1. MANAGE AIR TRAFFIC SEQUENCES**

• Discuss traffic management action with pilot.

• Query pilot for reason and extent of deviation.

• Issue appropriate control instructions to control deviation.

• Inform others of airspace restrictions imposed or of release of airspace.

• Sequence departures into existing traffic.

• Query others regarding deviation.

• Issue instructions to recover from ground traffic deviation.

• Receive pilot request for take-off.

• Issue appropriate departure information.

• Issue instructions to the pilot to taxi into position and hold.

• Issue amended clearance.

• Issue supplementary information concerning airport operations (e.g. runway conditions, RVR).

• Issue take-off clearance/cancellation.

• Receive pilot request for landing instructions.

• Issue clearance for aircraft to land or clearance for option.

• Receive notice of aircraft executing landing/option.

• Receive initial radio communication from pilot.

• Verify pilot has current arrival information.

• Issue arrival/departure instructions.

• Issue advisory in regard to non-controlled object in airspace or movement area.

• Inform other aircraft of airspace or movement area intrusion by non-controlled object.

• Request response from pilot or operator of non-controlled object.

• Request assistance from other sources to establish contact with non-controlled object.

• Issue instructions restricting aircraft activity in affected airspace or movement area.

• Receive request for temporary use of airspace or movement area.

• Issue go-around.

• Receive notice of missed approach/go around/touch-and-go/stop-and-go.

• Receive acknowledgment of takeoff.

• Receive pilot notification of aborted takeoff.

• Inform other aircraft of airspace status change.

**2. CONTROL AIRCRAFT OR VEHICLE GROUND MOVEMENT**

• Issue instructions to hold at gate.

• Advise pilot of ground delay.

• Inform pilot of estimated departure clearance time.

• Receive and disseminate cancellation of traffic management restrictions(s).

• Receive pilot request for pushback/powerback instructions.

• Receive pilot request for taxi instructions.

• Issue airport condition information.

• Receive pilot or vehicle operator request for movement in or through movement area.

• Issue instructions to hold short of taxiway/runway.

• Deny ground movement request.

• Issue instructions to divert traffic around closed movement area.

**3. ROUTE OR FLIGHT PLAN**

• Issue clearance and instructions to pilot.

• Query pilot regarding compliance or conformance with clearance.

• Issue clearance through other stations for relay to pilot.

• Approve or deny clearance request.

• Detect a pilot or aircraft problem (e.g. hypoxia).

• Conduct radio or radar search for overdue aircraft.

• Receive pilot notice of declared emergency and determine assistance needed.

• Receive pilot notice of aircraft having a problem (e.g. overdue, loss of radio contact).

• Forward contingency/emergency/special condition information to other stations.

• Receive flight plan from pilot.

• Receive verbally forwarded flight plan.

• Query others about flight plan or flight plan amendment.

• Receive requested flight plan changes.

• Receive request to cancel IFR.

• Terminate radio communication with aircraft.

• Receive arrival message.

• Issue change of frequency to pilot.

• Issue altimeter setting on initial contact as appropriate.

• Verify aircraft altitude with pilot.

• Inform pilot that radar contact is lost or established.

• Terminate radar service.

• Assign beacon code.

• Request necessary flight plan information from pilot.

• Receive notice of special condition or emergency.

• Inform pilot or vehicle operator of abnormal aircraft or vehicle condition.

• Declare emergency and invoke contingency plan.

• Issue taxi instructions to special condition or emergency aircraft.

• Inform others of special operation.

• Issue change to SSR beacon code assignment.

• Suggest clearance alternatives to pilot.

• Issue instructions to pilot for identification turn or transponder response.

• Perceive presence of special condition or emergency by tone of voice.

• Discuss flight plan/flight plan amendment.

• Inform controller or requester of an inability to comply with flight plan/flight plan amendment request.

• Inform pilot of radar position.

• Receive request to file flight plan from in-flight pilot.

• Receive flight plan request and information from recorded phone message.

• Verify flight plan with pilot.

• Receive request to activate flight plan.

• Query pilot on flight plan closure.

• Advise pilot of clearance status.

• Receive acknowledgment or rejection of clearance from pilot.

• Evaluate and inform pilot of alternate routes on the basis of weather, aeronautical information, pilot preference, and pilot/aircraft limitations.

• Receive pilot requests for airport advisories.

• Relay the requested advisories to the pilot.

• Relay airport status to pilot.

• Relay traffic information/weather conditions to pilot.

**4. PERFORM SITUATION MONITORING**

• Record airport environmental (e.g. ice on runway) and system equipment status message.

• Request pilot report on NAVAID status.

• Inform pilot of alternate instructions necessary for flight following service.

• Receive/deny request for flight following.

• Receive/request pilot or operator position report.

• Search for and verify aircraft or vehicle location.

• Verify pilot has current ATIS or inform pilot of current ATIS.

• Inform/request pilot to file/re-file flight plan.

**5. RESOLVE AIRCRAFT CONFLICT SITUATIONS**

• Receive notice of potential or actual conflict.

• Issue traffic advisory or safety alert in regard to aircraft conflict/aircraft proximity.

• Inform pilot or operator when clear of traffic or non-controlled object.

• Issue advisory in regard to restricted airspace proximity.

• Issue advisory or safety alert in regard to route/low altitude situation.

• Request/receive pilot notice of traffic in sight.

• Issue advisory in regard to airspace/movement area violation.

• Issue approval or instructions for ground movement.

**6. ASSESS WEATHER IMPACT**

• Receive/request weather information from other aircraft.

• Issue weather advisory or update to other aircraft.

• Formulate weather broadcast.

• Record scheduled weather report or advisory in specified format.

• Broadcast scheduled and unscheduled weather report or advisory on prescribed radio frequencies.

• Receive request for pilot briefing.

• Brief pilot on weather data in specified format.

• Inform/verify pilot has received information on hazardous weather.

• Provide pilot with other requested information.

• Notify pilot VFR not recommended if conditions warrant.

• Advise pilot of flight watch capability.

• Advise pilot of ATC delays.

• Inform pilot of frequency and station for filing pilot weather reports.

• Prompt pilot for additional data.

• Maintain clear and uniform speech pattern while broadcasting.

**7. RESPOND TO EMERGENCIES AND CONDUCT EMERGENCY PROCEDURES**

• Communications.

• Receive pilot request for emergency services.

• Request information from pilot on nature of emergency situation.

• Inform pilot to squawk 7700 if emergency declared.

• Request aircraft contact appropriate ATC unit and inform pilot to return to frequency if unable to

contact ATC unit.

• Take appropriate action to resolve emergency situation.

• Request aircraft information to determine altitude, heading, and airspeed of lost aircraft.

• Advise if altitude or heading change is needed and maintain VFR.

• Advise to adjust gyro with magnetic compass.

• Inform pilot of aircraft position.

• Receive pilot request for guidance to airport.

• Issue course instructions and advisories to pilot.

• Advise pilot of airport information.

• Prompt pilot for in-flight information.

• Verify pilot is on a flight plan.

• Advise pilot of minimum flight altitude (MFA).

• Inform pilot of lost communications procedures.

8. MANAGE SECTOR OR POSITION RESOURCES

• Forward deletion of previous substitute routing.

• Forward NAVAID status to others.

• Forward notice of communication status.

• Forward new frequency assignment to pilot or another controller.

• Receive notice of alternate communication path.

• Issue alternate communication for air or ground transmissions.

• Query whether others are receiving pilot’s transmissions.

• Receive request to manipulate airport or taxiway lighting system.

• Deny request to manipulate airport lighting system.

1. EXAMPLE EVALUATION CRITERIA

|  |  |  |  |
| --- | --- | --- | --- |
| **Area** | **Criteria** | **Reference** | **Source** |
| Message Structure | Did VTS messages conform to the standardized message structure? | VTS providers prepare standardized operating procedures for communication and should be read in conjunction with IALA Guideline G1141 Operational Procedures for Vessel Traffic Services [5].  Message structure provides the framework to convey information or instructions unambiguously using a standard format and content structure.  Use of standard format and content will help to achieve this purpose  Message structure provides the framework to convey information or instructions unambiguously using a standard format and content structure. | IALA G1132 |
| Structuring the corresponding phrases according to the principle: | IMO SMCP |
| Message Structure | Was transmission limited to a maximum of two message markers and two phrases to prevent recipient overload? | A maximum of two message markers and two phrases should be used in one transmission to avoid an overload on the recipient. | IALA G1132 |
| Message Construction | Was the VTS service message delivered in a timely manner and relevant to the current navigational situation? | Information must be relevant, as accurate as possible and timely.  Facilitate clear, concise, and unambiguous communications that are timely and effective | IALA G1132 |
| IMO Resolution A.1158(32) Guidelines for vessel traffic services [1] states:  “VTS communications should be timely, clear, concise and unambiguous.”. | IMO SMCP |
| Message Construction | Was the correct and accurate phraseology employed in VTS communication? | Attention should be given to the correct use of phraseology where applicable to establish efficient, clear, concise, and unambiguous communications.  The receiver/s not hearing the message correctly. When the standard phrases were adopted, consideration was given to choosing words and phrases that sound distinctly different and therefore cannot be confused under any readability circumstances.  The receiver/s not understanding the message. This may be due to e.g., using phrasal verbs or other words that are not commonly known. The different levels of knowledge of the English language contributes to this as well.  Ambiguity, i.e., the transmitting person may mean one thing and the receiving person may understand something else.  The message having to be repeated, resulting in delay in response and frequency congestion.  Parts of the message being incorrectly acted upon.  The purpose of standard phraseology is to convey information or instructions unambiguously to a specific recipient or recipients. | IALA G1132 |
| Message Construction | Was the IMO SMCP adhered to as closely as possible in relevant situations? | Use of the IMO SMCP should be made as often as possible in preference to other wording of similar meaning; as a minimum requirement, users should adhere as closely as possible to them in relevant situations | IMO SMCP |
| Message Construction | Was essential information shared with ships to enhance their situational awareness to mitigate potential hazards? | Share crucial information with ships to create a common perception of potential dangers, even if this information seems “obvious”. | IALA G1132 |
| Message Construction | Were message markers utilized to clearly convey the purpose of the message when assessed as necessary? | Use Message markers. | IALA G1132 |
| SMCP  In shore-to-ship and ship-to-shore communication or radio communication in general, the following eight Message Markers may be used (also see "Application of Message Markers" given in PART A1/6 "Vessel Traffic Service (VTS) Standard Phrases")  *Application of Message Markers*  In order to especially facilitate shore-to-ship and ship-to-shore communication or when one of the IMO Standard Marine Communication Phrases will not fit the meaning desired, one of the following eight message markers may be used to increase the probability of the purpose of the message being properly understood.  It is at the discretion of the shore personnel or the ship´s officer whether to use one of the message markers and if so which of them to apply depending on the user´s qualified assessment of the situation. If used, the message marker is to be spoken preceding the message or the corresponding part of the message. The IMO VTS Guidelines recommend that in any message directed to a vessel it should be clear whether the message contains information, advice, warning, or instruction and IMO Standard Marine Communication Phrases should be used where practicable.  For further standardized VTS communications, also see other sections of Part A1. For VTS Standard Reporting Procedures, see IMO resolution A.851(20) on General Principles for Ship Reporting Systems and Ship Reporting Requirements, including guidelines for reporting incidents involving dangerous goods, harmful substances and / or marine pollutants.  Note: All of the following phrases must come as the culmination (message content) of a radio message exchange between stations covered by the ITU Radio Regulations, and the relevant calling procedures have to be observed. | IMO SMCP |
| To facilitate shore-to-ship and ship-to-shore communications, message markers should be used to increase the probability of the purpose of the message being properly understood.  Message markers increase the effectiveness and urgency of VHF communications as required and may help emphasize the content of the message or to ensure that the message will be properly understood. Whilst the use of message markers is not obligatory, their general use is good practice and VTS personnel should apply these  depending on the assessment of the situation. Their use is strongly recommended when a degree of stress or urgency exists, when there are language difficulties and when responding to unsafe situations.  There are eight message markers as defined in IMO Resolution A.918(22) Standard Marine Communication Phrases (SMCP) [2]. Seven of them are frequently used by VTS and are explained in more detail below. The message marker should be spoken preceding the message or the corresponding part of the message. | IALA G1132 |
| Message Construction | Was each sentence constructed to use only one phrase for each topic or event? | providing one phrase for one event, | IMO SMCP |
| Each phrase should contain only one topic. | IALA G1132 |
| Message Construction | Was the type of ship specified prior to naming the vessel to enhance identification | Ships should be clearly identified (e.g., by name and call sign) and it may also be beneficial to identify by ship type, for example “container ship Maersk Rotterdam”. In many cases, the message element will be preceded by the identity of the ship about which information is being provided | IALA G1132 |
| Message Construction | Were the communicated positions, whether by coordinates or relative to a mark, clear and unambiguous for the ship? | 5.1.5. POSITIONS  Positions may be passed either in latitude and longitude or relative to a mark. In considering which method is most appropriate, the sender should recognize that the recipient will first have to plot a position passed in latitude and longitude in order to assimilate the information.  When latitude and longitude are used, these shall be expressed in degrees and minutes (and decimals of a minute if necessary), north or south of the Equator, and East or West of zero degrees longitude.  When the position is related to a mark, the mark should be a defined charted object. | IALA G1132 |
| Positions  11.1 When latitude and longitude are used, these shall be expressed in degrees and minutes (and decimals of a minute if necessary), North or South of the Equator and East or West of Greenwich.  11.2 When the position is related to a mark, the mark shall be a well-defined charted object. The bearing shall be in the 360 degrees notation from true north and shall be that of the position FROM the mark. | IMO SMCP |
| Message Construction | Were bearings clearly communicated using either the 360-degree notation from True North or indicated as from the mark or from the ship? | BEARINGS  The bearing of the mark or ship concerned is the bearing using 360 degree notation from True North unless otherwise stated. Bearings may be either from the mark or from the ship. | IALA G1132 |
| 12 Bearings  The bearing of the mark or vessel concerned is the bearing in the 360 degree notation from north (true north unless otherwise stated), except in the case of relative bearings. Bearings may be either FROM the mark or FROM the vessel. | IMO SMCP |
| Message Construction | Was the ship's course clearly communicated using the 360-degree notation from True North? | COURSE  As a general term, “Course” refers to the intended direction of movement of a ship through the water. Unless it is intended to use this term in a general sense, one of the specific descriptors below should normally be used by VTS and expressed in 360-degree notation from True North unless otherwise stated. A mariner will not normally use a decimal course | IALA G1132 |
| 13 Courses  Always to be expressed in 360 degree notation from north (true north unless otherwise stated). Whether this is to TO or FROM a mark can be stated. | IMO SMCP |
| Message Construction | Was the distance specified as either in nautical miles or cables? | DISTANCES  To be expressed in nautical miles or cables (tenths of a nautical mile), the unit is always to be stated | IALA G1132 |
| Distances  To be expressed in nautical miles or cables (tenths of a mile), the unit always to be stated. | IMO SMCP |
| Message Construction | Was the speed consistently expressed 'speed through the water' in knots, otherwise 'ground speed' explicitly stated? | 5.1.9. SPEED  To be expressed in knots (nautical mile per hour).  ‘Speed’ refers to speed through the water. If speed over the ground is intended, then this should be stated as ‘Speed over the Ground’ (SOG).  IALA  15 Speed  To be expressed in knots:  15.1 without further notation, meaning speed through the water; or, | IALA G1132 |
| 15.2.1.1 "ground speed", meaning speed over the ground. | IMO SMCP |
| Message Construction | Was time expressed either in the 24-hour UTC format, or local time format in the designated ports/harbours? | 5.1.10. TIME  Time should be given in local time in a 24 hour format. Mariners do not usually add the suffix “hours”. | IALA G1132 |
| 16 Times  Times should be expressed in the 24 hour UTC notation; if local time will be used in ports or harbours it should clearly be stated. | IMO SMCP |
| Message Construction | Were the geographical names consistent with those on navigational charts and publications? | 5.1.11. GEOGRAPHICAL NAMES  Place names should be those that are on navigational charts and publications.  Where this is not available then latitude and longitude should be used. | IALA G1132 |
| 17 Geographical names  Place names used should be those on the chart or in Sailing Directions in use.  Should these not be understood, latitude and longitude should be given. | IMO SMCP |
| Message Construction | Was the abbreviations used sufficiently recognized to all recipients avoiding the need for follow-up confirmations? | 5.1.12. ABBREVIATIONS  Abbreviations will often save time in speech. Many abbreviations are so commonly used in normal speech they are more familiar than the original, unabbreviated form (i.e., radar). Abbreviations in radio transmissions may be used provided that:  • they are quicker and easier to use than the full word (e.g., ETA/ETD in place of Estimated Time of Arrival/Estimated Time of Departure);  • they are sufficiently well known to avoid any confusion and subsequent confirmatory transmissions; and  • if there is any confusion, the full term is readily substituted. | IALA G1132 |
| Message Construction | Were the modal verbs 'may', 'might', 'should', 'could' avoided and 'can' only used in an unambiguous form in communications? | Ambiguous words  Some words in English have meanings depending on the context in which they appear. Misunderstandings frequently occur, especially in VTS communications, and have produced accidents. Such words are:  18.1 The conditionals "may", "might", "should" and "could"  May  ..........Do not say: "May I enter the fairway?"  ..........Say: "QUESTION. Do I have permission to enter the fairway?"  ..........Do not say: "You may enter the fairway."  ..........Say: "ANSWER. You have permission to enter the fairway."  Might  ..........Do not say: "I might enter the fairway."  ..........Say: "INTENTION. I will enter the fairway."  Should  ..........Do not say: "You should anchor in anchorage B 3."  ..........Say: "ADVICE. Anchor in anchorage B 3."  Could  ..........Do not say: "You could be running into danger."  ..........Say: "WARNING. You are running into danger."  18.2 The word "can"  The word "can" describes either the possibility or the capability of doing something. In the IMO SMCP the situations where phrases using the word "can" appear make it clear whether a possibility is referred to. In an ambiguous context, however, say, for example: "QUESTION. Do I have permission to use the shallow draft fairway at this time?" Do not say: "Can I use the shallow draft fairway at this time?" if you are asking for a permission. (The same applies to the word "may"). | IMO SMCP |
| Interpretation | Does the receiver's understanding of the message match the sender's intended meaning? | intended meaning of the sender and the perceived meaning of the receiver is the same | IALA G1132 |
| Interpretation | Did the receiver effectively employ the read-back technique to confirm and clarify the content of the message? | Standard message structure and phraseology reduce the risk that a message will be misunderstood and aids the read-back process so that any error is quickly detected.  04 Responses  4.1 When the answer to a question is in the affirmative, say:  "Yes .... " followed by the appropriate phrase in full.  4.2 When the answer to a question is in the negative, say:  "No ..." followed by the appropriate phrase in full.  4.5 When an INSTRUCTION (e.g. by a VTS Station, naval vessel or other fully authorized personnel ) or an ADVICE is given, respond if in the affirmative:  "I will/can ... " - followed by the instruction or advice in full;  and, if in the negative, respond:  "I will not/cannot ... " - followed by the instruction or advice in full. | IMO SMCP |
| Differing cultural experiences and backgrounds may result in different responses to situations. A lack of awareness of these differences could increase the possibility of errors and misunderstandings.  Use closed loop (or Read-back) techniques when information may be misunderstood such as the number of persons on-board or information that would benefit others using the VTS area, instructions or advice. | IALA G1132 |
| Interpretation | Were communicative techniques (e.g., correction, repeat, and say again) actively employed in the message to facilitate precise and unambiguous communication when required? | 5.2.9. CORRECTIONS  When an error is made in a message, say:  “Correction” plus the corrected part of the message.  VTS  Pilot boarding time 1400.  CORRECTION - pilot boarding time 1430.  5.2.10. REPETITION  When communication is difficult, phrases or words may be transmitted twice. If any part of a message is considered sufficiently important, the message should be repeated using the appropriate phrase:  “Repeat” followed by the corresponding part of the message.  VTS The tide is 1.2m – REPEAT – The tide is 1.2m.  When the message is not properly heard, say:  “Say again”. | IALA G1132 |
| 09 Repetition  9.1 If any part of the message is considered sufficiently important to need safeguarding, say:  "Repeat ... " - followed by the corresponding part of the message.  Example: "My draft is 12.6 repeat one-two decimal 6 metres."  "Do not overtake - repeat - do not overtake."  9.2 When a message is not properly heard, say: "Say again (please)." | IMO SMCP |
| Interpretation | Were the appropriate types of questions (i.e., closed, open, and funnel questions) employed? | 5.2.6. QUESTIONING TECHNIQUES  Information flow within a VTS is paramount. A VTS often gathers and disseminates information based on real time situations within the VTS area. In the computer world the term ‘garbage in, garbage out’ is often used. The same applies to VTS communications, if you ask the wrong questions, you will probably get the wrong answer.  To ensure effective questioning the following techniques should be used:  • Closed Questions  • Open Questions  • Funnel Questions | IALA G1132 |
| Interpretation | Were the appropriate responses employed (e.g., 'received' and 'stand by') to the ship's transmission? | In this revised version, "appropriate" is spelled correctly, and I've added quotation marks around 'received' and 'stand by' for clarity. The rest of the question remains effectively constructed. | IALA G1132 |
| Interpretation | Was feedback actively encouraged through the use of questioning for enhancing clarity? | Clarity  The sender and receiver both have a responsibility to ensure that what is said is understood:  • Ask open questions to probe for further detail if required.  • Avoid asking leading questions.  • Avoid coming to conclusions before the sender finishes.  • Be aware of the sender’s choice and application of words.  • Encourage feedback through questioning | IALA G1132 |
| Interpretation | Were the key words chosen by the sender interpreted as intended? | Clarity  The sender and receiver both have a responsibility to ensure that what is said is understood:  • Ask open questions to probe for further detail if required.  • Avoid asking leading questions.  • Avoid coming to conclusions before the sender finishes.  • Be aware of the sender’s choice and application of words.  • Encourage feedback through questioning | IALA G1132 |
| Interpretation | Was feedback actively encouraged through the use of questioning for enhancing clarity? | Clarity  The sender and receiver both have a responsibility to ensure that what is said is understood:  • Ask open questions to probe for further detail if required.  • Avoid asking leading questions.  • Avoid coming to conclusions before the sender finishes.  • Be aware of the sender’s choice and application of words.  • Encourage feedback through questioning | IALA G1132 |
| Interpretation | Was there a procedure in place to confirm the accuracy of the interpretation of the sender’s message, when necessary? | Interpretation  Interpretation not only requires verification of what the sender has said, but also the understanding of the information given.  Steps to ensure understanding are:  • Communicate your interpretation and verify its accuracy.  • Identify the main issues.  • Do not assume what the sender will say, particularly when receiving routine communications. | IALA G1132 |
| Interpretation | Were the main issues in the sender's message successfully identified? | Interpretation  Interpretation not only requires verification of what the sender has said, but also the understanding of the information given.  Steps to ensure understanding are:  • Communicate your interpretation and verify its accuracy.  • Identify the main issues.  • Do not assume what the sender will say, particularly when receiving routine communications. | IALA G1132 |
| Delivery | Were the phonetic alphabet and phonetic numbers correctly spelled out? | Spell out words using the phonetic alphabet (Section 5.1.3) and use phonetic numbers (Section 5.1.4) as required for the names of buoys, stations, call signs etc. | IALA G1132 |
| Delivery | Was the beginning of the transmission not cut off, using the PTT technique? | 5.2.1. PREPARATION WHEN USING VHF  The proper use of VHF equipment is essential if transmissions are to be successful. In particular:  • VTS personnel should consider the volume and positioning of the microphone.  • It is important to listen on the channel before transmitting to ensure there will be no interferences from another station.  • A brief pause is normally required before starting to speak there may be a delay in transmission after pressing the press to transmit (PTT) button. | IALA G1132 |
| Delivery | Was the tone of voice consistently maintained as a polite tone of calm confidence and professionalism throughout the transmissions? | TONE AND VOLUME  The tone of the voice is crucial for mutual understanding. A message should be supported by the tone of voice used.  Research has indicated that how words are expressed is just as important as what words are used.  Transmissions should be sent with a polite tone of calm confidence, and professionalism. VTS personnel must always remain professional even if they receive overly familiar or aggressive transmissions.  The volume of the voice is important. The volume of a transmission should be at a level used for normal conversation. Shouting is unprofessional and causes distortion, whilst speaking too quietly could result in the message not being heard. | IALA G1132 |
| Delivery | Was the volume of the voice kept at a level used for normal conversation, avoiding shouting or being too quiet? | TONE AND VOLUME  The tone of the voice is crucial for mutual understanding. A message should be supported by the tone of voice used.  Research has indicated that how words are expressed is just as important as what words are used.  Transmissions should be sent with a polite tone of calm confidence, and professionalism. VTS personnel must always remain professional even if they receive overly familiar or aggressive transmissions.  The volume of the voice is important. The volume of a transmission should be at a level used for normal conversation. Shouting is unprofessional and causes distortion, whilst speaking too quietly could result in the message not being heard. | IALA G1132 |
| Delivery | "Were the keywords spoken slightly louder and longer than other neighbouring words? | 5.2.3. EMPHASIS ON KEYWORDS  The keyword is the most important part of the message. This should be spoken slightly louder and longer than its neighbouring words to provide emphasis (e.g., WARNING SHALLOW water AHEAD of you). | IALA G1132 |
| Delivery | Was the speech rate appropriate in terms of contexts of situations (100 and 120 respectively for routine and emergency situations) ? | 5.2.4. SPEECH RATE  Speech rate is the speed at which a speaker conveys the message. Key points for speech rate are:  • Modulating speech at a slower rate of around 120 words per minute (WPM) is highly recommended for clear and effective communication.  • In emergency situations and in developing unsafe situations, a slower rate of 100 WPM should be applied so important information can be clearly and accurately delivered under high-pressure and cognitively challenging conditions.  In an international environment where people from different linguistic backgrounds speak with their own accents, intonation and pronunciation, it is crucial to maintain an appropriate rate of speech. This increases the likelihood of comprehension and reduces anxiety. | IALA G1132 |
| Delivery | Was word grouping and pausing appropriately applied? | 5.2.5. WORD GROUPING AND PAUSING  It is generally recognized that the use of four words in a short phrase is best understood by listeners. Therefore, understanding can be enhanced considerably by dividing sentences into smaller groups, or phrases, and by pausing briefly between word groups. VTS personnel can also moderate their speech rates by pausing between each word group.  The effect of word grouping and pausing is important for the following reasons:  • It gives listeners the time to process each pack of information that is delivered.  • It enables speakers to prepare subsequent information for delivery.  • It decreases the use of unnecessary fillers like ‘um, hm, uh, …’, which hinders mutual intelligibility. | IALA G1132 |
| Delivery | Was the use of unnecessary fillers like ‘um’, ‘hm’, ‘uh’, etc., avoided? | 5.2.5. WORD GROUPING AND PAUSING  It is generally recognized that the use of four words in a short phrase is best understood by listeners. Therefore, understanding can be enhanced considerably by dividing sentences into smaller groups, or phrases, and by pausing briefly between word groups. VTS personnel can also moderate their speech rates by pausing between each word group.  The effect of word grouping and pausing is important for the following reasons:  • It gives listeners the time to process each pack of information that is delivered.  • It enables speakers to prepare subsequent information for delivery.  • It decreases the use of unnecessary fillers like ‘um, hm, uh, …’, which hinders mutual intelligibility. | IALA G1132 |
| Delivery | Were the numbers pronounced as separate digits and distinctively? | 10 Numbers  Numbers are to be spoken in separate digits:  "One-five-zero" for 150  "Two decimal five" or  Two point five” for 2.5 | IMO SMCP |
| Emergency Situations | Was plain language utilized effectively to ensure simple, clear, and unambiguous communication, where standard phraseology does not apply? | Standard phrases are identified in Part C for use in operational circumstances where time may be critical or where misunderstandings might compromize safety, however there will be many situations where such urgency does not apply and no standard phrase has been identified. In such circumstances, plain language1 or locally adopted phrases should be used following the general guidance on phraseology below  Avoid unnecessary words (e.g., “what time do you think your ETA is at the pilot station, thank you”, should be: “what is your ETA at the pilot station”)  Keep the subject, verb, and object as near to one another as possible.  Use the active form (such as “INFORMATION. Ship BRAVO is overtaking you” instead of passive “INFORMATION. You are being overtaken by ship BRAVO).  The use of action words (e.g., PROCEED) should come before the condition (e.g., time or location), avoiding synonyms and avoiding contracted forms | IALA G1132 |
| Emergency Situations | Mayday | Mayday  the distress signal MAYDAY, spoken three times;  – the words THIS IS;  – the name of the vessel in distress, spoken three times;  – the call sign or other identification;  – the MMSI (if the initial alert has been sent by DSC);  – the position, given as the latitude and longitude, or if the latitude and longitude are not known or if time is insufficient, in relation to a known geographical location;  – the nature of the distress;  – the kind of assistance required;  – any other useful information. | ITU |
| Emergency Situations | Mayday relay | The distress call relay sent by radiotelephony should be given in the following form:  – the distress signal MAYDAY RELAY, spoken three times;  – ALL STATIONS or coast station name, as appropriate, spoken three times;  – the words THIS IS;  – the name of the relaying station, spoken three times;  – the call sign or other identification of the relaying station;  – the MMSI (if the initial alert has been sent by DSC) of the relaying station  (the vessel not in distress).  - as far as possible, repeat the information7 contained in the original distress alert or distress message. | ITU |
| Emergency Situations | Receipt of Mayday | the distress signal MAYDAY;  – the name followed by the call sign, or the MMSI or other identification of the station sending the distress message;  – the words THIS IS;  – the name and call sign or other identification of the station acknowledging receipt;  – the word RECEIVED; ;'8787878787878787  – the distress signal MAYDAY. | ITU |
| Emergency Situations | SEELONCE MAYDAY | The rescue coordination centre coordinating distress traffic, the unit coordinating search and rescue operations9 or the coast station involved may impose silence on stations which interfere with that traffic. This instruction shall be addressed to all stations or to one station only, according to circumstances. In either case, the following shall be used:  32.47 a) in radiotelephony, the signal SEELONCE MAYDAY, pronounced as the French expression “silence, m'aider”; | ITU |
| Emergency Situations | SEELONCE FEENEE | When distress traffic has ceased on frequencies which have been used for distress traffic, the station controlling the search and rescue operation shall initiate a message for transmission on these frequencies indicating that distress traffic has finished. (WRC-07)32.52 § 32 1) In radiotelephony, the message referred to in No. 32.51 should consist of:  – the distress signal MAYDAY;  – the call “ALL STATIONS”, spoken three times;  – the words THIS IS;  – the name of the station sending that message, spoken three times;  – the call sign or other identification of the station sending the message;  – the time of handing in of the message;  – the MMSI (if the initial alert has been sent by DSC), the name and the call sign of the mobile station which was in distress;  – the words SEELONCE FEENEE pronounced as the French words “silence fini”. (WRC-07) | ITU |
| Emergency Situations | Pan-pan | n radiotelephony, on the selected working frequency, the urgency call and message consists of:  – the urgency signal PAN PAN, spoken three times;  – the name of the called station or “all stations”, spoken three times;  – the words THIS IS;  – the name of the station transmitting the urgency message, spoken three times;  – the call sign or any other identification;  – the MMSI (if the initial announcement has been sent by DSC);  – the text of the urgency message. | ITU |
| Emergency Situations | Cancellation of pan-pan | The urgency cancellation should consist of:  – the urgency signal PAN PAN, spoken three times;  – “all stations”, spoken three times;  – the words THIS IS;  – the name of the station transmitting the urgency message, spoken three times;  – the call sign or any other identification;  – the MMSI (if the initial announcement has been sent by DSC);  – PLEASE CANCEL URGENCY MESSAGE OF time in UTC. | ITU |
| Emergency Situations | Securite | n radiotelephony, on the selected working frequency, the safety call and message should consist of:  – the safety signal SECURITE, spoken three times;  – the name of the called station or “all stations”, spoken three times;  – the words THIS IS;  – the name of the station transmitting the safety message, spoken three times;  – the call sign or any other identification;  – the MMSI (if the initial alert has been sent by DSC);  – the text of the safety message. | ITU |

1. EXAMPLE TEST QUESTIONS

SUGGEST don’t DELETE TIL THE OUTLINE IS WORKED OUT OR the STYLES NOT IN USE WILL BE LOST

# Example of HEADING 1 STYLE

This guideline template should be used in conjunction with the *IALA Style Guide*. Utilising the styles provided in the **Styles Gallery** is key to using the document templates. Selecting the appropriate style from the Style Gallery will apply most text (and often layout) formatting required to comply with the *IALA Style Guide.* There should be no need to apply font formatting, numbering or bullets by selecting options from the **Font** or **Paragraph** dialog boxes.

The main text within a document is written in the **Body text** style, which is Calibri and 11 font size. Section titles can be inserted for up to four levels of text and should be created using the **Heading 1**, **Heading 2** etc. styles. Ensure the correct heading styles are selected as there are similar heading styles for the annexe and appendix entries, respectively. The blue colour used in the section headings and table texts is Red Green Blue (RGB) R0, G85, B140. The styles are referenced throughout this template and highlighted in bold.

**Heading 1 separation line style** follows the first carriage return after the first level heading title, and the style **Body text** follows the second carriage return after the separation line (if the line disappears, reposition the cursor at the end of the section heading text and press carriage return).

## Example of Heading 2 style

**Heading 2 separation line** style follows the second carriage return after the second level heading title, and the style **Body text** follows the second carriage return after the separation line.

### Example of Heading 3 style

**Body Text** style follows the first carriage return after the third level heading title; there is no separation line at this level.

#### Figures – Heading 4 style

**Body Text** style follows the first carriage return after the fourth level heading title; there is no separation line at this level.

Footnotes should be used sparingly but can be inserted and are found in **Footnote Reference** style at the bottom of the page[[1]](#footnote-1).



1. Example of wrapping in line with text

Figures should be centred with wrapping **In Line with Text** and labelled by writing the figure titles using the **Figure caption** style below the figure. It is important to note that figures and tables should be labelled in this manner with their respective styles to ensure that the tables in the contents section are updated correctly.

##### Alternative figure layout – Heading 5 style

Alternatively, figures can be offset with **Square** text wrapping so that the text does not overlap the figure but arranges the paragraph such that it continues onto the next line in an appropriately sized paragraph.

If no figures are included in the guideline, the respective table on the contents page should be deleted.

1. Example of wrapped square

# SECTION 2 – HEading 1 style

Sections should be typed continuously, and generally page breaks or section breaks should not be entered between main sections. It may be necessary sometimes to insert a page break to allow for aesthetic layout e.g., not breaking a list over two pages.

## Section 2.1 – Heading 2 style

Tables should be centred on the page. The table label should be created using the **Table caption** style and the caption should be positioned above the table.

Table text should be **Table heading** style for the column or row headings and **Table text** style for the content. The style **Table inset list** can be used for bulleted content within a table. The default table layout is for left justified and vertically centred table text but this can be amended using the table Layout menu to suit the content.

1. Example of table with row headers

| Table heading | Table text |
| --- | --- |
| Table heading | Table text |
| Table heading | Table text |

Space below the table should be maintained or inserted as necessary for clarity.

1. Example of table with column headers

| Table heading | Table heading | Table heading | Table heading |
| --- | --- | --- | --- |
| Table text | Table text | Table text | Table text |
| Table text | Table text | Table text | Table text |
| Table text | * Table inset list * Table inset list * Table inset list | Table text | Table text |

If no tables are included in the guideline, the respective table on the contents page should be deleted.

# Section 3 – Heading 1 Style

## Section 3.1 – Heading 2 style

The choice of numbered or bullet point lists depends on the context and content of the text and further guidance is given in the “*IALA Style Guide*”. Bullets are preferred unless it is important that the list is numbered e.g., for future reference or for a sequence.

Three levels of list styles are provided and these styles should be used rather than the default Microsoft Word numbering lists:

1. List 1 style example

**List 1 text** style example

* 1. **List a** style example

**List a text** style example

* + 1. **List i** style example

**List i text** style example

Each list style has a corresponding list text style that can be used for example, if the list requires more than one paragraph and the subsequent text needs to be aligned. If more than one list is used throughout the document it may be necessary to right click and select **Restart at 1** for subsequent lists.

## Section 3.2 – Heading 2 style

There are three levels of bullet point styles available:

* **Bullet 1** style

**Bullet 1 text** style

* **Bullet 2** style

**Bullet 2** **text** style

* **Bullet 3** style

**Bullet 3 text** style

Each bullet style has a corresponding bullet text style that can be used for example, if the bullet requires more than one paragraph and the subsequent text needs to be aligned.

## Section 3.3 – Heading 2 style

### Equations

#### Layout

If equations are included in the main body of the text, they should be explicitly referred to in the running text and centred on the page. Equations should be numbered consecutively with a right justified number in brackets e.g. (1) on the same line as the equation.

Any explanatory terms should be indented immediately below the equation starting with the non-capitalised term “where” and each term punctuated with a semi-colon until the penultimate term which should also include a semi-colon and the non-capitalised word “and”. For example:

The modified impulse response function is expressed by Equation (1):

where

*;*

*;*

*; and*

*.*

#### Numbering

The preferred method for including equations in the template documents is the Microsoft Word Equation Editor found in the **Insert** menu. The preferred layout and number reference described above can be achieved by typing #(x) where x is the number required immediately after the equation.



1. Example of how to achieve right justified equation number

For example, typing the formula followed by #(2) (as shown in Figure 3) and then pressing return will result in the following equation centred on the page and number being displayed on the same line to the right:

Note that equations do not automatically renumber using this method. If another equation is inserted between two existing equations the number must be adjusted manually.

Although the Microsoft Word Equation Editor is the preferred way of inserting equations, sometimes it is necessary to insert equations created elsewhere and copy those into the document as pictures. In the example below, the equation is included as a picture, wrapped **In Front of Text**:

“The area of a circle is shown in equation (3):

The picture can be copied directly into the document. To insert the corresponding number manually select **Equation number** paragraph style. The author may need to manually adjust the picture position to ensure it is centred and level with the number, achieving consistency with the automatically generated Microsoft Word Equation Editor layout described above.

# DEFINITIONS

The definitions of terms used in this Guideline can be found in the *International Dictionary of Marine Aids to Navigation* (IALA Dictionary) at <http://www.iala-aism.org/wiki/dictionary> and were checked as correct at the time of going to print. Where conflict arises, the IALA Dictionary should be considered as the authoritative source of definitions used in IALA documents.

# abbreviations

This section should be typed with the **Abbreviations** style. The acronym or initialism is typed and then tab is pressed so that the style inserts the appropriate tabs and paragraph spacings e.g.:

NGO Non-governmental organisation

VTS Vessel Traffic Services

The list should be typed in alphabetical order. The text automatically aligns as an indented paragraph until carriage return is hit and then the next term can be entered.

# references

References are sources directly referred to in the running text and should be given a sequential number, starting at 1. The reference number should be included as close to the referenced text as possible and included as a number within square brackets.

The reference should be listed in the References section in the following syntax using the **Reference** **list** style:

[Author surname,] <space> [initial.] <space> [year] <space> [title.]

For example:

“Hawking also suggests ways that quantum mechanics can be combined with the theory of special relativity [1]. This text builds on his discussion of the instability of black holes described in *A Brief History of Time* [2].”

should be included in the reference list as follows:

1. Hawking, S. (2001) The Universe in a Nutshell.
2. Hawking, S. (1988) A Brief History of Time.

The **Reference list** style will add a number for the reference as soon as you start typing the text and the paragraph will automatically align with the first line of text. Press return to enter a new reference in the list.

# Further reading

Any texts that are recommended to the reader without direct reference in the text should be listed within this section using the same syntax as the reference list. Sources should be listed using the **Further reading** style.

1. Einstein, A. (1905) Relativity: The Special and General Theory of Relativity
2. Idle, E. (1984) The Galaxy Song

# Index

**No index entries found.**

1. Example of appendix Title (Head 1) style

Appendices should be started on a separate page and contain information that is directly relevant to the main body of the text at a certain point, but that would be too large or distracting to include at that particular point. There are four levels of appendix heading styles available in the **Style Gallery.** Care should be taken to select the appropriate heading for the section.

* 1. Example of Appendix Head 2 style

At the end of the **Appendix head 2** style text press carriage return, the following paragraph is **the Heading 1 separation line** style, press carriage return again, and the following line will be in **Body text** style.

* + 1. Example of Appendix head 3 style

The same following formatting applies to the **Appendix Head 3** style i.e., press carriage return, the following paragraph is the **Heading 2 separation line** style, press carriage return again, and you will be back to body text.

* + - 1. Example of Appendix Head 4 style

The Appendix Head 4 style is followed by body text and does not have a separation line. Only the level 1 **Appendix Title** will appear in the TOC.

* + - * 1. Example of Appendix Head 5 style

The **Appendix Head 5 style** is followed by body text and does not have a separation line. Figure and tables should be labelled as a continuation from the main Guideline content.

1. Example of Annex title (Head 1) style

Annexes should include information that can exist in isolation e.g.

* a technical specification for a new piece of equipment;
* the content and structure of a new training module; or
* the detail associated with a new recommendation for an AIS.

Annexes can include appendices if required. There are also four levels of annex heading styles available in the **Style Gallery.** In addition to the **Annex title** (**Head 1)** style there is **Annexe Head 2**, **Annexe Head 3** and **Annexe Head 4**. These follow a similar format to the appendix heading styles. As many annexes can be included as needed and it is advisable to separate them with a page break. Only the level 1 **Annex title** style text will appear in the TOC.

* 1. Example of Annex Head 2 style
     1. Example of Annex Head 3 style
        1. Example of Annex Head 4 style

Annex figures and tables should be labelled with the **Annex Figure Caption** and **Annex Table Caption** styles respectively, rather than the main figure and table caption styles. This ensures the annex can be read logically in isolation and that annex figures and tables are not included in the List of Figures and Tables respectively on the main Guideline contents page.

1. Example of annex table caption
2. Example of annex figure caption
   * + - 1. Example of Annex Head 5 style

1. Footnotes should be used sparingly. [↑](#footnote-ref-1)