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| IALA Guideline |

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VTS English Communication Competency Testing (Working Title)

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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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# IntroDUCTION

The use of standard messaging structure and phrases when interacting with participating ships is essential for Vessel Traffic Services (VTS) to ensure clear, concise, and unambiguous communications and minimize potential misunderstanding of the intent of messages and reduce the time required for effective communication.

Ensuring the competency of VTS personnel in the use of standard messaging structure and phrases is essential to for a VTS to:

* Identify the strengths and areas where VTS personnel may need to improve;
* Monitor the progress and growth of VTS personnel by providing appropriate feedback and support;
* Evaluate the effectiveness of training programs (e.g. model courses, OJT at the VTS).

Noting the diversity of linguistic backgrounds and cultural experiences worldwide, this guideline has been prepared to facilitate global harmonization in the delivery of VTS messages and their intent.

# DOCUMENT PURPOSE

The purpose of this guideline is to provide a framework to assess the English competency of VTS personnel in the use of standard messaging structure and phrases to:

* Facilitate clear, concise, and unambiguous VTS communications that are timely and effective.
* Minimize misunderstanding of the intent of messages and reduce the time required for effective VTS communication.

The Guideline will assist:

* VTS providers to monitor that VTS personnel continue to conform with the practices for VTS communications as outlined in IMO SMCP and IALA G1132. This framework may be incorporated into periodic performance assessments, On-the-Job and recurrent training programmes as a means to assess competency with standard message structure and phrases.
* VTS training organizations to assess the competency of how students use standard messaging structure and phrases in the delivery of model courses.

This Guideline is associated with *IALA Recommendation R1012 VTS Communications* is a normative provision of *IALA Standard S1040 Vessel Traffic Services* and shall be observed if compliance with this Standard is claimed. To demonstrate compliance with the Recommendation the practices described in the Guideline should be taken into account.

## Relationship to Key Documents:

This Guidance should be read in conjunction with:

* IALA Recommendation R1012 VTS Communications
* IALA G1132 VTS Voice Communications and Phraseology
* IALA G1141 Operational Procedures for Delivering VTS
* IALA G1089 Provision of a VTS
* IMO A.918(22) Standard Maritime Communication Phrases (SMCP)
* IMO A.954(23) Proper Use of VHF Channels at Sea
* ITU publication Radio Regulations Volume 1 (2020) Chapter VII - Distress and Safety Communications.
* National procedures or documents on the use of VTS Communications

# BENEFITS OF ASSESSING COMPETENCY IN VTS english COMMUNICATIONS

The benefits of assessing competency of VTS interactions and communications include:

1. Enable individuals to improve their communication skills

The competency assessment offers a comprehensive evaluation of an individual's ability to provide VTS by identifying their current level of proficiency and allowing individuals to focus on specific areas that require improvement, such as message structures, standardized vocabulary and phrases in verbal communication. This targeted approach helps individuals gain confidence and competence in using VTS communications effectively.

It also provides valuable insights into their strengths and weaknesses, enabling them to understand where they excel and where they can enhance their skills. This awareness empowers individuals to make informed decisions about where they may need to improve.

1. Improve interactions between VTS, ships and allied services

Effective communication is essential for the coordination of VTS operations. Improved VTS communication helps to reduce misinterpretation and assists in establishing better relationship and coordination between VTS, ships and allied services.

1. Reduce workplace errors and risk

Miscommunication risks can be minimized by ensuring that VTS personnel have the necessary skills to communicate accurately and effectively to interact with vessel traffic and respond to developing situations within a VTS area.

# elements of quality competency test

An effective competency assessment must be valid in terms of accurately measuring what it is intended to, reliable by providing consistent results, and fair to all VTS personnel. The key elements of a quality test should ensure that:

* Validity

The test content needs to accurately measure whether a VTS operator has the skills they need to effectively communicate. Specifically, the test should include tasks that reflect real-world scenarios. A valid test ensures that the results are meaningful and relevant to the practical requirements of the individual.

* Reliability

A reliable test should consistently produce similar results for an individual irrespective if they complete a test once or multiple times. Consistency in scoring and administration is crucial for establishing the credibility of the test.

Reliability needs to be considered in three different ways:

1. *The test*

Tests should be standardized. This does not imply that all VTS personnel will face identical questions, but rather that the questions should be adequately comparable in type and difficulty. All individuals should be allotted the same amount of time to complete the test.

In this manner, the results of individuals can be compared with confidence, and a high score will reliably indicate a high level of competency in VTS interaction and communications.

1. *How it is assessed*

Answers should be graded in an identical manner using the same standards, ensuring that any errors are addressed consistently for every individual. This ensures that the results are fair and accurate.

Further, comparing the language abilities of different VTS personnel or tracking an individual’s proficiency over time will assist with refining model courses, or tailoring OJT training programs.

1. *How it is given*

The conditions under which a test is given will play an important role in the outcomes, and this factor is often overlooked. Certain environments naturally provide more distractions, making it more difficult for some individuals to perform well in the test.

* Fairness

Fairness is a fundamental quality of any well-designed test. A fair test ensures that all individuals, regardless of their background, have an equal opportunity to demonstrate their communication skills.

* Real-world relevance

The real-world relevance ensures that the test assesses the actual language demands encountered in VTS operations and are directly applicable to situations a VTS personnel may encounter. When looking at the relevance of a test and how it is administered the following questions need to be considered:

* Does the test effectively assess competency of VTS interactions and communications?
* Does the test allow the scores of VTS personnel to be compared?
* Is the test easy to administer and manage?
* Is the test cost-efficient and practical to implement?

# EVALUATION FRAMEWORK

## Rating Scale

The VTS Communication proficiency rating scale has been tailored to assess the competency of VTS personnel in the use of standard messaging structure and phrases. Level 1 is designed for beginners, where they may only have a foundational understanding of VTS, while Level 6 indicates a high level of proficiency in VTS communications.

This rating scale focuses on VTS English Communications and provides a detailed evaluation of an individual's capacity to effectively communicate within the VTS operational setting.

It is expected that a qualified VTS operator should achieve at least a Level X rating on the scale to be considered competent in VTS Communications.

The following descriptions provide a broad definition of the levels of proficiency in VTS communications.

|  |  |
| --- | --- |
| Rating Scale | Description |
| Level 1  (Basic) | May be able to string together a very basic message using standard messaging structure and phrases but has extreme difficulty being understood. Fails to effectively interpret a message.  May string together very basic messages using standard messaging structure and phrases, but with extreme difficulty in being understood. Often misinterprets messages and fails to clarify critical information. |
| Level 2  (Developing) | Able to use some standard messaging structure and phrases but without sustained fluency and with many errors. Has a limited understanding of spoken English and struggles to interpret a message and respond accordingly overall.  Begins to apply standard message structures and phrases with many errors and lacks sustained fluency. Struggles with complex interpretations and frequently requires clarifications. Overall, has a limited understanding of spoken English and struggles to interpret messages and respond accordingly. |
| Level 3  (Eligible) | Can communicate satisfactorily using standard messaging structure and phrases. Able to understand when communications are at a measured pace with some rephrasing and repetition. Able to effectively interpret a message and respond accordingly but is likely to fail under pressure.  Uses standard messaging structure and phrases satisfactorily. Understands communications with measured pace, rephrasing, and repetition. Demonstrates adequate listening skills and able to interpret messages effectively and respond accordingly, though may struggle under pressure. |
| Level 4  (Operational) | At ease communicating using standard messaging structure and phrases. Makes some mistakes but is usually able to correct major errors which prevents them from being understood. Able to understand the essence of the message but may misunderstand details.  Effectively uses standard messaging structure and phrases with occasional minor mistakes. Achieves reliable communication outcomes by applying communication techniques for clarity and effective delivery. Corrects major errors to maintain understanding of message essence, despite occasional detail misunderstandings. |
| Level 5  (Proficient) | Confident to use standard messaging structure and phrases accurately and fluently in all but the most demanding situations. Makes some minor mistakes but these do not generally prevent them from being understood. May occasionally have problems with interpreting a message and further clarity is sought.  Confidently uses standard messaging structure and phrases accurately and fluently in all but the most demanding situations. Makes occasional minor mistakes that do not hinder understanding. May occasionally require clarification when interpreting messages, which can usually be resolved with some assistance. |
| Level 6  (Expert) | All VTS communications and interactions accurately and fluently use standard messaging structure and phrases. Able to effectively interpret a message and respond accordingly.  Fluently uses standard messaging structure and phrases in all VTS communications and interactions. Ensures optimal clarity and effectiveness by adapting communication tools effortlessly. Effectively interprets messages and responds accordingly. |

## Evaluation Criteria

The evaluation criteria for VTS English communication competency testing are based on the framework outlined in IALA G1132, these include:

* Message Compilation
* Message Delivery
* Message Interpretation
* Standard Phraseology

Annex A provides reference level descriptors of how this rating scale may be used to assess competency against these four evaluation criteria elements.

### Message Compilation

This is the process of assembling and structuring information into a clear, coherent, and effective message that is intended for transmission taking into account the operational context and communication procedures. The following considerations should be taken into account.

* **Message structure:** the framework to convey information or instructions unambiguously using a standard format and content structure. Further there are some general rules for constructing and composing VHF messages to emphasize brevity, clarity, and precision.
* **Message markers:** IMO Resolution A.918(22) defines eight message markers in the SMCP, seven of which (i.e., information, advice, warning, instruction, question, answer, request) are frequently used in VTS operations for precise communication to ensure messages are understood as intended.
* **Phonetic alphabet and numbers:** The utilization of the phonetic alphabet and numbers enhances clarity by avoiding misunderstanding and preventing potential confusion in the delivery of specific words or letters over in radio communications.
* **Standard use of maritime terminology:** The correct application of maritime terminology - encompassing positions, bearings, courses, distances, speeds, times, geographical names, and abbreviations - essential for clear and effective communication.

### Message Delivery

These criteria ensure that VTS communications are professional, clear, concise, consistent, and accurate. The following considerations should be taken into account:

* **Preparation when using VHF:** The proper use of VHF equipment is essential to ensure that transmissions are successful and the message's initial content is not lost.
* **Tone and volume:** Demonstration of calm confidence, professionalism, and respectfulness in tone. The voice volume should be moderated to normal conversation levels to avoid distortion from shouting and prevent inaudibility from soft speech
* **Emphasis on keywords:** Highlighting of key words in a message by pronouncing them with a slightly elevated tone and longer duration to ensure they are distinctly accentuated.
* **Speech rate:** The application of a speech rate of about 120 words per minute (WPM) recommended for routine communication, whereas a slower rate of 100 WPM advised for emergencies or when dealing with developing unsafe situations.
* **Word grouping and pausing:** The utilization of word grouping (the division of sentences into smaller groups or phrases) and the insertion of brief pauses between each word group both for enhancing listeners' understanding of the message and for facilitating speakers' preparation for delivery, ultimately contributing to mutual intelligibility
* **Questioning Techniques:** The effective application of questioning techniques (i.e., closed questions, open questions, and funnel questions) to gather and disseminate information based on real-time situations within the VTS area.
* **Avoidance of ambiguous language:** The avoidance of unambiguous terminology and the use of local terminology can lead to confusion and misunderstandings
* **Confirmation/Clarification of message:** The effective application of standard communication protocols involves various actions such as confirmation, correction, reinforcement, and request within maritime exchanges. This includes:
* "Yes" or "no" followed by the appropriate phrase: responding affirmatively or negatively
* "Received": Acknowledging receipt of the message
* "Stand by": Indicating temporary unavailability of the requested information
* "Correction" followed by the corrected part of the message: Correcting errors in messages
* ”Repeat" followed by the corresponding part of the message: Emphasizing important parts of the messages
* "Say again": When messages are not properly heard
* **Distress and safety communication:** The ability to apply operational procedures to provide accurate, effective communications in response to distress and safety situations, regardless of the pressure..

### Message Interpretation

Message interpretation focuses on how VTS personnel use various communication strategies ~~and decoding procedures~~ to accurately understand and interpret messages. This process aims to enhance mutual understanding and effective communication by taking into account:

* **Effective listening skills:** Observations should be made on aspects of attentive listening, clarity of information, and accurate interpretation of the information provided. Individuals should pay close attention to the speaker's message by:
* engaging in appropriate communication to clarify information,
* identifying key issues and confirm accuracy
* identifying the most appropriate communication procedures to respond to the situation. For example, if the situation demands an instruction then they should be able to respond with the appropriate message marker and standard phrases.
* **Closed-loop communication (Read-back):** The active use of closed-loop communication (read-back) technique in which the sender delivers a message and the receiver repeats the received message, or an appropriate part thereof, back to the sender to confirm correct reception, to avoid misunderstandings

### Standard Phraseology

Individuals should be familiar with standard phraseology and be able to immediate recall phrases consistent with:

* IMO Resolution A.918(22) - the IMO Standard Marine Communication Phrases
* Part C of IALA Guideline G1132 on VTS Voice Communications and Phraseology

Competency testing should consider the following core areas associated with the provision of VTS, which may include:

* General Communications (e.g. Radio Checks, VTS Operational Status, Requesting Reports, Call Requests, Use of Other VHF Channels, Reporting of Ship Identification and Particulars, Speed, Engine)
* Provision of Information (e.g. Traffic Information, Weather Information, Tidal/Hydrological Information, Information Broadcasts)
* Management of Ship Traffic (e.g. Navigating in the VTS Area, Berthing, Proceeding from or to an Alongside Berth or Anchorage, Anchor Operations, Pilotage)
* Responding to Developing Unsafe Situation
* Applying the SMCP appropriate for the specific situation.

Annex B identifies some of the communication and interaction language activities that VTS operators regularly complete which may assist in development of test questions.

It is acknowledged that situations may arise where no standard phrases have been identified. Although plain language[[1]](#footnote-1) or locally adopted phrases may be used in these circumstances, as per the general guidance described in IALA G1132 on VTS Voice Communications and Phraseology, it is advisable to design the test in a manner that minimizes the use of plain language or locally adopted phrases.

# Test DEVELOPERS and Assessors

(KA) Suggest the contents of this proposed sections below (eg 5.3.1. QUALIFICATION and 5.3.2. TRAINING REQUIREMENTS) may be replaced with something similar to the following:

Authorities should determine the qualifications and experience required to design and develop the test, and assess competency. *IALA Guideline G1156 Recruitment, Training and Certification of VTS Personnel* provides guidance on the qualifications for instructors and assessors.

Authorities may consider engaging specialist resources to ensure that a test is properly designed such as individuals with backgrounds in VTS, navigation, language testing, English linguistics, and data analysis using Artificial Intelligence, which are critical for maintaining the reliability and validity of the language assessments.

In particular the skills and knowledge of the following professionals may be useful to assist in the design and development of competency tests:

* Language testing expertise involves designing and developing tests to ensure reliability and validity. This requires knowledge of best practices in test development and adherence to high standards throughout.

~~Qualifications of language testing experts may include Applied Linguistics or TESOL with experience in developing and conducting language tests.~~

* English linguistic expertise includes theoretical and applied linguistics knowledge, alongside understanding of language learning and teaching principles. This ensures tests are pedagogically sound and accurately measure language proficiency, incorporating internationally recognized VHF communication protocols like IMO SMCP and IALA Standards.

~~Qualifications of linguistic specialists may include language training at an accredited university or language school, or Applied Linguistics or TESOL.~~

* Data analysis to focus on collecting, managing, and analyzing test data to ensure fairness and objectivity. Analysts use data to identify patterns and biases, aiming to enhance test reliability and support accurate assessments, contributing to ongoing test process improvement.

~~Qualifications of AI specialists may include a degree in the area of Data Science, Machine Learning, Natural Language Processing, Statistics, Computer Science, or related fields including practical experience with data analysis.~~

**5.3.1. Qualification**

The qualification framework for test designers/developers/raters aims to ensure that professionals involved in the creation and development of VTS English Competency Testing possess the necessary skills and knowledge. Authorities may consider engaging specialist resources to ensure that a test is properly designed such as individuals with backgrounds in VTS, navigation, language testing, English linguistics, and data analysis using Artificial Intelligence, which are critical for maintaining the reliability and validity of the language assessments.

The competency authorities should ensure that competency tests are developed and assessed by appropriately qualified personnel. Annex C provides a series of qualification qualifications of expert (from minimum to the heist) in each of the following fields.

* **VTS expertise** requires individuals to have substantial experience as VTS operators and supervisors, qualified according to IALA Standards, Recommendations, Guidelines, and Model Courses, or in positions related to VTS. They must possess practical knowledge of international conventions related to maritime laws, as well as up-to-date maritime traffic procedures and practices, ensuring that their operational insights contribute to the relevance and effectiveness of the language tests.
* **Language testing expertise** focuses on the proficiency in designing and developing language tests, which is acquired through education, training, or professional experience. Individuals in this area must have a practical understanding of the principles of best practice in language test development. Their primary goal is to maintain the reliability and validity of the tests by adhering to high standards throughout the test design and implementation process.
* **English linguistic expertise** requires an in-depth understanding of both theoretical and applied linguistics principles, alongside practical knowledge of language learning and teaching. This expertise ensures that the language tests are pedagogically sound and accurately measure language proficiency. Individuals must have a comprehensive knowledge of linguistic theories, practical language teaching methods, and internationally recognized VHF communication protocols, such as IMO SMCP and IALA Recommendations and Guidelines, to ensure that the tests are designed and implemented in an internationally harmonized manner. The primary objective is to guarantee that the tests are educationally valid and accurately assess the language skills of the candidates.
* **Data analysis using AI expertise** involves the systematic collection, management, and analysis of test data to ensure fairness and objectivity in oral exams. Individuals in this area must be proficient in data management systems and analytical tools to evaluate performance data effectively. Their primary goal is to enhance the reliability of the tests by identifying patterns and potential biases, thus supporting accurate and fair assessments. By leveraging data from individual tests, data analysts contribute to the continuous improvement of the testing process and provide insights that help maintain high standards of evaluation.

**5.3.2. training requirements**

The training requirements for test designers and developers are essential to ensure that all team members are equipped with the principles, practices, and latest knowledge and skills in VTS language testing. The training program is divided into initial and recurrent training, conducted at least once each year, to stay updated with the latest standards and practices, maintain high standards, and adapt to evolving best practices. The scope of training can be expanded to include, but is not limited to:

* **Fundamental Principles and Practices:** Test designers and developers must complete comprehensive training on the fundamental principles and practices of VTS language testing. This includes understanding the theoretical foundations of language assessment, familiarization with relevant international maritime conventions, and practical application of testing methodologies.
* **VHF Communication Protocols:** Training on internationally recognized VHF communication protocols, such as IMO SMCP and IALA Recommendations and Guidelines, to ensure that tests are aligned with international standards.
* **Test Design and Development:** Instruction on the best practices for designing and developing language tests, including item design, test formatting, and validation processes.
* **Operational Context:** Education on the operational aspects of VTS, including current maritime traffic procedures and practices, to ensure that tests are relevant and practical.
* **Technological Tools:** Training on the use of technological tools and software for test development and data analysis, ensuring efficiency and accuracy in the testing process.
* **Feedback and Improvement:** Regular sessions for reviewing feedback from previous tests and making necessary improvements to the testing process. This includes analyzing test results, identifying areas for enhancement, and implementing changes to maintain high standards.
* **Compliance Training:** Ensuring all team members are up-to-date with compliance requirements and ethical standards related to VTS language testing. This includes understanding the legal and regulatory aspects of the testing process.

By adhering to these comprehensive training requirements, test designers and developers can maintain a high level of competency, ensuring that VTS English Competency Testing is reliable, valid, and fair. The VTS language competency test providers must take a comprehensive approach to training that supports continuous improvement and adaptation to the evolving needs of the VTS communication.

# Development of a competency test

Standardized tests are designed to measure an individual’s knowledge, skills, and abilities in a consistent and objective way. Properly designed tests should focus on genuine competency improvement and ensure VTS personnel have the necessary language skills for VTS operations where they can efficiently operate, especially in high-stress scenarios.

These tests should measure how VTS personnel interact and communicate when performing a specific task or activity in a real-world situation. It also provides a means to set learning objectives to achieve genuine proficiency in the use of standard message structure and phraseology, rather than merely relying on memorization or test-focused preparation.

## Defining Learning and Assessement Objectives

<Suggest that we develop some paragraphs on how to define the learning objective, expected performance and assessment outcomes. This appears to be the first Step in identifying what the outcomes you want from the test, how and what will be tested.

Both Netherlands and Jillian raised this in their comments>

## Testing Methods

The structure of the test and assessment methods may vary depending on the operational requirements and assessment tools available to the VTS provider or training organization. Testing methods may include face-to-face interactions, online environments, or some hybrid combination.

### One-on-One interactions

Direct testing involves one-on-one interactions between the individual and the assessor. Assessments are normally conducted in real-time, however they may be recorded for later evaluation. Methods include one-on-one interviews, role-plays, and conversation-like interviews based on set prompts.

One-on-One testing provides a more natural, communicative testing environment with the flexibility to tailor test scenarios on-the-fly which 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.

### ? Group based interactions

<eg scenario based exercise involving multiple user such as VTS, pilots, tugs etc>

### Online environments

Online testing allows for instant data collection and storage of test results.

#### Semi-Direct Testing

In semi-direct testing, individuals 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 individuals and allows for simultaneous testing of multiple VTS operators.

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.

#### ?? Are there other common types of Online environments which are used or should be described?? AI? Multiple choice??

## Test Questions

The questions should test for competency in VTS voice communication elements such as message compilation, delivery, and interpretation, as well as the use of standard phrases in VTS operations as outlined in IALA G1132. Furthermore, the questions should comprise both routine and emergency communication tasks based on the operational requirements of the VTS. To assist in the development of test questions Annex B provides some of the common language tasks VTS operators frequently undertake.

Depending on the learning objectives, it is recommended that the number of questions be limited to no more than ten. The questions should increase in difficulty and complexity, with a gradual progression from a low level (N.1) to a high level (N.10).

## Test Duration

The length of the test should be kept to a maximum of 30 minutes as a means to maintain an individual’s focus and …<Is there any other reasons?>….

Competency testing may be integrated and form part of other assessment processes, for example:

* VTS Providers may establish dedicated tests or incorporate tests into other performance assessments or training activities.
* Training organizations may integrate the testing into their assessment processes during the delivery of their model course.

## Test Review and Updating

Regular review of tests is essential to verify that learning objectives and assessments meet desired outcomes. It's important to continually identify and integrate improvements into upcoming competency tests. This involves conducting frequent sessions to evaluate feedback from previous tests, analyzing results, pinpointing areas for enhancement, and implementing changes to maintain high standards.

# assessment process

Competency assessments should provide meaningful and relevant feedback as a means to assess the current level of proficiency and allowing individuals to focus on specific areas that require improvement.

It is important that individuals are continually monitored and assessed, and regular reviews undertaken. Any problems that may arise should be addressed so the individual has the opportunity to meet and attain the required levels of competence.

The digital world brings significant advancements in terms of how competency assessments are evaluated through the use of AI, digital language labs, interactive practical exercises and the use of data analytics to analyze performance over time. Depending on the testing method the assessment processes will need to be adopted accordingly.

## Use of Evaluation Criteria

The VTS provider or training organization should identify the level of competence to be attained in the learning objectives and determine the assessment methods to be used. Assessments of competence should reflect the reference level descriptors described in Annex A.

The assessment criteria will vary depending on the test questions and expected outcomes. Annex C provides some examples that may be considered when assessing competency against the various evaluation criteria.

Consideration should also be given to having processes and procedures to address instances where the individual is unable to attain the required competence. For example, VTS providers may undertake additional update training.

## Debrief of Assessment Results

## ? Are there any activities need to be completed as part of the assessment process. Assessment 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 personal 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.

## Other Administration Considerations

<do we need something about considerations when conducting standard tests – or is this too low level ? ….. Requirements include a soundproof recording room, technical support, security measures, invigilation, and oversight.>><minimising distractions etc>

## ~~procedure for endorsing licences to indicate the holders’ language competemcy level~~

# 

## 

## 

1. REFERENCE LEVEL descriptors

| ELEMENTS | Level 1  (Basic) | Level 2  (Developing) | Level 3  (Eligible) | Level 4  (Operational) | Level 5  (Proficient) | Level 6  (Expert) |
| --- | --- | --- | --- | --- | --- | --- |
| **MESSAGE COMPILATION** | | | | | | |
| Message structure  Message Markers | Demonstrates a limited ability in message structure, frequently making errors in formatting and ordering of information, struggling with clarity, and often omitting key elements of standard communication protocols. | Begins to apply standard message structures with some errors in formatting and clarity, yet shows an understanding of the importance of including essential components in communications, adapting message structure for various contexts. | Applies standard message structure with moderate accuracy, effectively conveying routine information and handling complex situations with some errors, demonstrating an understanding of protocols with relative consistency. | Competently uses standard message structure to clearly convey information using standard protocols and effectively adjusts messages to meet specific requirements, rarely making mistakes in routine situations but occasionally facing minor challenges under unusual conditions. | Demonstrates a high degree of skill in message construction, effectively handling a wide range of standard and more complex communication scenarios with clarity and precision, though may face slight challenges in extremely unusual situations. | Demonstrates exceptional skill in message structure, managing all types of communication scenarios, including highly challenging and unusual situations, with strategic approaches that ensure optimal clarity and effectiveness |
| Phonetic Alphabet & Numbers | Shows limited proficiency with message markers, phonetic alphabet, and numbers, with frequent errors and inconsistencies indicating a basic understanding but significant gaps in applying these elements correctly in maritime communications. | Demonstrates basic skills in using message markers, phonetic alphabet, and numbers, where errors are common but there is evidence of understanding fundamental concepts and applying them with guidance. | Utilizes message markers, phonetic alphabet, and numbers with moderate competence, adequately managing routine scenarios but showing occasional errors that indicate a need for further refinement. | Competently uses message markers, phonetic alphabet, and numbers, ensuring a generally correct and effective application in most standard communications, with rare errors that do not significantly affect the overall clarity or outcome of exchanges. | Utilizes all aspects of message markers, phonetic alphabet, and numbers with high accuracy and effectiveness, showing a profound understanding of maritime communication practices | Perfectly utilizes all aspects of message markers, phonetic alphabet, and numbers, setting a standard for excellence in maritime communications |
| Standard use of maritime terminology (Positions, bearings, course, distance, speed, time, geographical names, and abbreviations) | Has only a basic recognition of maritime terminology, frequently misusing or misunderstanding terms related to positions, bearings, course, distance, speed, time, geographical names, and abbreviations, leading to significant communication errors. | Applies basic maritime terminology with partial accuracy, prone to errors in the application of terms but demonstrates basic familiarity with standard navigational and operational terms used in routine communications. | Applies maritime terminology with moderate accuracy, reliably using standard terms in routine communications but facing difficulties with complex terminology or under high-pressure situations. | Demonstrates a good grasp of standard terms and occasionally incorporates more advanced terminology accurately, maintaining clarity in most operational contexts; however, minor inaccuracies may occur under stress. | Skilled in the use of comprehensive maritime terminology, consistently applies standard and advanced terms correctly, enhancing communication clarity and operational precision, and adeptly adapts terminology to various situations. | Possesses authoritative knowledge of maritime terminology, seamlessly integrating advanced navigational and operational terms into communications, enhancing the efficiency and safety of VTS operations. |
| **MESSAGE DELIVERY** | | | | | | |
| Preparation when using VHF | Has a limited understanding of the importance of pauses after activating the PTT button, resulting in clipped or incomplete message beginnings. | Shows awareness of the need for brief pauses but does not consistently apply this practice, occasionally resulting in loss of message content. | Generally remembers to pause after PTT activation, reducing instances of clipped messages. | Consistently uses brief pauses after PTT activation, ensuring clear message starts every time. | Expertly manages PTT activation with pauses tailored to the communication context, preventing any loss of content. | Possesses expert command over preparation when using VHF, ensuring a flawless start to every message with perfect timing. |
| Tone and volume  Speech rate  Word grouping and pausing | Experiences significant inconsistencies in tone and volume, often inappropriate, with a speech rate that is rushed or unclear, struggling with effective word grouping and pausing, which adversely impacts message clarity. | Manages tone and volume with limited consistency; speech rate shows initial stabilization; begins to incorporate basic word grouping and pausing techniques. | Maintains generally appropriate tone and volume and manages speech rate effectively in routine situations, using word grouping and pausing to enhance the overall clarity of the message. | Controls tone and volume effectively, adapts speech rate to meet specific communication needs, and uses word grouping and pausing strategically to support listener understanding, especially in routine contexts. | Demonstrates high proficiency in managing tone and volume, maintains a balanced speech rate, and masters the techniques of word grouping and pausing, maximizing communicative effectiveness across a broad range of situations. | Exhibits mastery in managing tone and volume, expertly adapts speech rate for all types of communications, and utilizes word grouping and pausing to achieve optimal communication efficiency and clarity. |
| Questioning techniques  Avoidance of ambiguous language  Confirmation/Clarification of message (Responses, corrections, repetitions, etc.) | Uses questioning techniques minimally, frequently employs ambiguous language, and struggles with confirming or clarifying messages, often necessitating repetitions. | Utilizes basic questioning techniques, occasionally employs ambiguous language, and attempts message confirmation and clarification, though occasionally successful. | Applies questioning techniques effectively, reduces the use of ambiguous language, and generally achieves accurate message confirmation and clarification, though sometimes lacking precision. | Skilled in employing a variety of questioning techniques, effectively avoids ambiguous language, and is proficient in confirming and clarifying messages with seldom need for repetition. | Expertly employs advanced questioning techniques, completely avoids ambiguous language, and handles message confirmation and clarification with high precision, requiring minimal follow-up. | Masters questioning techniques and seamlessly avoids ambiguous language, while expertly managing message confirmation and clarification. |
| Distress and safety communications | Shows little to no understanding of operational procedures for distress and safety communications, frequently making critical errors and unable to apply protocols such as MAYDAY, PAN PAN, and SECURITÉ calls effectively. | Shows basic knowledge of distress and safety communication procedures, occasionally applying protocols correctly but prone to errors and needing guidance when responding to emergency communications. | Applies distress and safety communication procedures with moderate accuracy, reliably managing routine distress calls but occasionally facing difficulties under high-pressure situations, needing further refinement. | Competently uses distress and safety communication procedures, ensuring correct and effective application in most standard emergency scenarios, with rare errors that do not significantly affect the overall outcome of communications. | Demonstrates a high degree of skill in managing distress and safety communications, effectively handling a wide range of emergency scenarios with clarity and precision, showing a profound understanding of operational procedures and protocols. | Exhibits mastery in applying operational procedures for distress and safety communications, expertly managing all types of emergency scenarios, including highly challenging and unusual situations, ensuring optimal clarity and effectiveness in all communications. |
| **MESSAGE INTERPRETATION** | | | | | | |
| Effective listening skills | Struggles to maintain focus during communications, largely misinterprets information, and rarely engages in feedback to clarify misunderstandings, needing substantial improvement in active listening and interpretation skills. | Displays basic ability to listen attentively, though may miss details and shows inconsistency in understanding more complex dialogues, and occasionally engages in clarifying information. | Maintains good listening habits, accurately understands most communications, and occasionally asks questions to confirm understanding, maintaining focus with minimal distractions. | Effectively listens and accurately interprets messages, actively asking relevant questions to clarify any uncertainties and demonstrating consistent focus and attentiveness in both routine and moderately complex situations. | Demonstrates advanced listening skills by consistently interpreting complex information correctly and actively engages with the speaker to probe deeper, ensuring a thorough understanding and minimal miscommunication in both routine and complex situations. | Masters the art of listening with steadfast focus, fully comprehends and processes information without distractions, and provides instant, accurate responses to ensure all communicated information is seamlessly integrated into operational actions |
| Closed loop communications (read-back) | Lacks the ability to implement closed-loop communication techniques, necessitates repeats and extensive corrections due to omitted read-backs, and requires significant guidance to achieve any level of message confirmation and understanding. | Applies closed-loop communication with limited effectiveness, achieves correct read-backs after several attempts, and frequently struggles with timely confirmations, necessitating repeated messages to ensure understanding. | Implements closed-loop communication effectively, usually achieving correct read-backs but sometimes requiring multiple clarifications to ensure accurate message confirmation and comprehensive understanding. | Adeptly utilizes closed-loop communication, consistently ensures accurate read-backs, swiftly resolves misunderstandings when they occur, and reliably confirms that all messages are comprehended and acknowledged by involved parties. | Excels in closed-loop communications, consistently ensuring accurate read-backs, swiftly corrects any discrepancies, and guarantees that all critical messages are comprehended and acknowledged by involved parties. | Demonstrates mastery in closed-loop communication, flawlessly conducts message relays, confirms read-backs immediately and accurately, and rapidly addresses any discrepancies to maintain the utmost clarity and accuracy in critical communications. |
| **STANDARD PHRASEOLOGY** |  |  |  |  |  |  |
| SMCP  IALA G 1132: Part C | Largely misapplies or misunderstands standard phraseology, leading to incorrect and often unclear usage predominantly in routine contexts. | Shows basic ability to use standard phraseology in routine situations, often struggling with accuracy and clarity, especially in less familiar contexts | Correctly applies standard phraseology in routine contexts and occasionally in developing scenarios, with errors that do not significantly impact overall clarity. | Effectively uses standard phraseology in routine and developing situations, generally applying it correctly and with clarity. | Utilizes standard phraseology with high accuracy and clarity, consistently applying it correctly in almost all applicable situations. | Applies standard phraseology flawlessly across all applicable situations, including routine, developing, and emergency scenarios, ensuring that every use is correct, clear, and optimally tailored to context. |
| Non-standard phrases / plain language\* | Struggles to use plain language effectively, often resulting in unclear or ambiguous communications, and rarely applies standard phraseology correctly, resulting in ineffective communication when standard phraseology is not applicable. | Attempts to use plain language for clarity and effectiveness when standard phraseology is not applicable, integrating phrases from standard phraseology as much as possible, but faces challenges in maintaining clarity due to its inapplicability. | When standard phraseology is not applicable, uses plain language to ensure clear and straightforward communication, incorporating words and phrases from standard phraseology where possible, but sometimes experiences occasional ambiguities. | When standard phraseology is not applicable, adeptly uses plain language to maintain clear and coherent communication, skillfully integrates phrases from standard phraseology to enhance clarity, and consistently achieves unambiguous communication | When standard phraseology is not applicable, proficiently employs plain language to achieve clear and precise communication, seamlessly integrates phrases from standard phraseology to enhance understanding, and maintains consistently unambiguous communication across various scenarios. | Masters the use of plain language to ensure exceptionally clear and effective communication when standard phraseology is not applicable, expertly incorporates phrases from standard phraseology to optimize clarity, and guarantees completely unambiguous communication in all scenarios. |

\*Given that the primary objective of this test is to evaluate the use of message structure and standard phraseology in VTS English Communication, the incorporation of unstandardized plain language in the test design should be strictly minimized and only considered in unavoidable circumstances.

1. CoMMON LANGUAGE TASKS OF VTS OPERATORS

These are some communication and interaction activities that VTS operators regularly complete:

| Situations | Details |
| --- | --- |
| Pre-arrival information | * Receive pre-arrival information from ship * Request any outstanding information from ship / allied services (e.g. agents) to ensure compliance with reporting requirements * Issue arrival instructions * Inform allied services/pilotage providers of ships intended arrival |
| Vessels entering VTS area | * Receive entry report from ship with route or passage plan information * Query if the ship has any defects or deficiencies, such as navigation or manoeuvring equipment failure * Inform of relevant traffic and navigational information * Inform of berthing/anchorage details * Inform of pilotage requirements * Issue instructions not to proceed past pilot boarding grounds without pilot * Receive /acknowledge notification of pilot onboard |
| Monitor and manage vessels in the VTS area | * Inform of relevant traffic and navigational information * Inform ship with other requested information * Receive / acknowledge notification of pilotage movements (e.g. onboard/disembark) * Inform of activities that may interfere with the flow of ship traffic such as nautical activities (e.g. sailing regattas) or marine works in-progress (such as dredging, submarine cable-laying) * Issue permission to conduct special activities (e.g. hot works, lifeboat drills, deck wash) * Issue instructions to organize traffic:   + To prioritize and forward plan the sequence of movements in the VTS area (e.g. departure from berth, ships transporting special cargo)   + To keep clear of special areas, ships, or positions   + When a ship has passed a point of no return   + When establishing ship safety or exclusion zones * Issue instructions to ensure speed limits are observed * Issue instructions to ensure compliance with the regulatory provisions |
| Responding to developing unsafe situations | * Query ship on their intentions (e.g. deviation from standard route etc.) * Assist a ship:   + That has defects or deficiencies, such as navigation or manoeuvring equipment failure.   + With navigational information (e.g. navigating to an anchoring position/ channel/ fairway/ lane, proximity to navigational hazards, providing with range and bearing)   + Unsure of its route or position   + To support the unexpected incapacity of a key member of the bridge team * Issue advice/ warning/ instruction to a ship   + They are deviating from the planned or recommended route towards shallow water, dangerous wrecks or other obstacles not otherwise promulgated   + Are at risk of grounding or collision   + To alter the course, speed   + To close up/drop back on/from another ship   + To keep clear from area/position * Inform of meteorological conditions (e.g., low visibility, strong winds) * Assist in emergency response or support to emergency services |
| Vessels at anchor | * Issue instruction to anchor in a nominated position/specified location * Issue advice/ warning/ instruction not to anchor in a nominated position/specified location * Request ship to report when ship is at anchor, or dropped anchor * Assist ships into anchorage position * Request ship to weigh or heave up anchor at a specified time / report to VTS * Receive permission to proceed request when ship is ready to leave anchorage * Issue permission for a ship to proceed from anchorage * Deny permission for a ship to proceed from anchorage * Request ship to report when the anchor is clear of the water and underway * Inform of relevant traffic and navigational information to the ship prior to departure * Advise ship they are dragging anchor and request to check position of its anchor * Information exchange/update with allied services |
| Vessels at berth | * Inform of reporting requirements and restrictions while at berth * Request ship to report at a specified time before departing * Receive permission to proceed request when ship is ready to depart a berth * Issue permission for a ship to depart a berth * Deny permission for a ship to depart a berth * Request ship to report when ship has singled up, or last line has been let go * Inform of relevant traffic and navigational information to the ship prior to departure * Information exchange/update with allied services |
| Vessels departing the VTS area | * Receive exit report from ship * Inform / remind of reporting requirements with adjacent or next VTS * Receive /acknowledge notification of pilot disembarkation |
| Transition between adjacent VTSs | * Inform adjacent VTS of ship information such as identification, cargo, destination, and ETA |
| Adverse environmental conditions | * Inform / broadcast information on adverse environmental conditions within the VTS area (e.g. poor visibility, strong currents or tidal streams, high winds, ice etc.) * Inform of additional reporting requirements * Issue instructions to organize traffic (e.g. restrict or prohibit ship movements, increase separation between ships) * Issue instructions for additional requirements (e.g. mandatory tug service, pilot, etc.) |
| Environmental protections | * Inform / broadcast relevant information to mitigate risks with ships (e.g. cetaceans or marine mammals in an area, impacts of ship wash) * Issue advice/ warning/ instructions to individual ships in the vicinity of an area * Issue instructions to impose speed restrictions in an area or to reduce ship wash * Request information on sightings (e.g. to identify potential interaction hotspots) |
| Interaction with allied services | * Exchange information with allied services such as:   + Pilots   + Tugs and tug operators   + Icebreakers and icebreaker operators   + The organizers of marine events   + Shipping agents   + Government agencies, including law enforcement agencies |
| Emergency response | * Receive / request information about the emergency * Inform response agencies and allied services of emergency * Assist in emergency response or support response agencies * Coordinate communications between ship, response agencies and allied services * Inform or relay information about the emergency with ships in VTS area * Issue instructions to manage and restrict traffic in the area |

1. Qualification Requirements for VTS English Testing Experts

|  |  |  |  |
| --- | --- | --- | --- |
| Expert Domain | Highest | Moderate | Minimum |
| VTS Operation | * Professional, international VTS operational supervisor experience with train-the-trainer certificate | * Professional, international VTS operational supervisor experience | * Experienced international VTS operator experience |
| Language Test Development | * Ph.D. in Applied Linguistics with specialization in English for Specific Purposes and/or Language Testing; or Master's in Language Testing * 5+ years of experience in test development | * Master's in Applied Linguistics with experience developing and conducting research on second/foreign language tests * 3+ years of experience in test development | * Master's in Applied Linguistics or TESOL * 1+ year of experience in test development |
| Linguistics | * Master's in Applied Linguistics with experience developing and conducting research on second/foreign language tests * Provision of VTS language programme with 5 years of experience and IALA VTS English Language Competency Test Level 5 | * Master's in Applied Linguistics or TESOL * Provision of VTS language programme with 3 years of experience and IALA VTS English Language Competency Test Level 5 | * Language training in an accredited university or language school * Provision of VTS language programme with 3 years of experience and IALA VTS English Language Competency Test Level 5 |
| Data Analysis | * Ph.D. in Data Science, Machine Learning, Natural Language Processing, Statistics, Computer Science, or related fields * 5+ years of experience in data science projects | * Master's degree in Data Science, Machine Learning, Natural Language Processing, Statistics, Computer Science, or related fields * 3+ years of experience in data science projects | * Bachelor's degree in Data Science, Statistics, Computer Science, or related fields * 1+ year of practical experience in the field or participation in data analysis projects |

1. VTS English Language Competency Checkpoints

This table is divided into four main domains as mentioned in section 5.2:

* Domain 1: Message Compilation
* Domain 2: Message Delivery
* Domain 3: Message Interpretation
* Domain 4:Standard Phraseology

Within each domain, specific questions are provided for various sub-domains (e.g., message structure, and general rules for construction and content of message) along with references for each checkpoint. These checkpoints are designed to evaluate the English language competency of VTS operators, ensuring that each area of required proficiency is clearly identified and assessed.

| **Evaluation Criteria** | **Check point** | **References** | **Source** |
| --- | --- | --- | --- |
| **Domain 1: Message Complication** | | | |
| Message structure | Did VTS messages conform to the standardized message structure? | * 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 |
| 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 |
| General rules for construction and content of message | Was each sentence constructed to use only one phrase for each topic or event? | * Provide one phrase for one event, | IMO SMCP |
| * Each phrase should contain only one topic. | IALA G1132 |
| Was plain language utilized effectively to ensure simple, clear, and unambiguous communication, where standard phraseology does not apply? | * Use the active form (such as “INFORMATION. Ship BRAVO is overtaking you” instead of passive “INFORMATION. You are being overtaken by ship BRAVO). |  |
| * 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”) | IALA G1132 |
| * Keep the subject, verb, and object as near to one another as possible. | IALA G1132 |
| * The use of action words (e.g., PROCEED) should come before the condition (e.g., time or location) | IALA G1132 |
| * Avoid synonyms. | IALA G1132 |
| * Avoid contracted forms. | IMO SMCP |
| Message markers | Were message markers utilized to clearly convey the purpose of the message when assessed as necessary? | * Use Message markers. * 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 |
| * 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. | IMO SMCP |
| Ship’s type | 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 |
| Phonetic alphabet and numbers | Was the phonetic alphabet and numbers consistently used to distinguish between similar-sounding letters during radio communications? | * The phonetic alphabet is used to distinguish between letters, which sound similar when transmitted over the radio. They are commonly used when transmitting call signs and in cases where a single letter is used to designate something. * Numbers are to be spoken in separate digits. For example: “ wun fife zeero” for 150. | IMO SMCP |
| IALA G1132 |
| Standard use of maritime terminology | Were positions communicated in either latitude and longitude or relative to a mark, based on the appropriateness of the situation? | * 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. * 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 |
| * 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 |
| Were bearings consistently given using 360-degree notation from True North unless explicitly stated otherwise? | * 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 |
| * 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 |
| Was it clearly specified whether the bearing was from the mark or from the ship in all communications? | * Relative bearings can be expressed in degrees relative to the vessel's head. More frequently this is in relation to the port or starboard bow. | IMO SMCP |
| Was the term "Course" used to refer to the intended direction of movement of a ship through the water? | * As a general term, “Course” refers to the intended direction of movement of a ship through the water. | IALA G1132 |
| Did the VTS use specific descriptors for "Course" and express them in 360-degree notation from True North unless otherwise stated? | * 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 |
| * 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. | IALA G1132 |
| Were distances consistently expressed in nautical miles or cables, with the unit always stated? | * To be expressed in nautical miles or cables (tenths of a nautical mile), the unit is always to be stated. | IMO SMCP |
| IALA G1132 |
| Was speed always expressed in knots, referring to speed through the water unless explicitly stated as ‘Speed over the Ground’ (SOG)? | * To be expressed in knots wthout further notation, meaning speed through the water; or, ground speed", meaning speed over the ground. | IMO SMCP |
| * 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 G1132 |
| Time should be given in local time in a 24-hour format. Mariners do not usually add the suffix “hours”. | * Times should be expressed in the 24 hour hours hours UTC notation; if local time will be used in ports or harbours it should clearly be stated. | IMO SMCP |
| * Time should be given in local time in a 24-hour format. Mariners do not usually add the suffix “hours”. | IALA G1132 |
| Were place names used those found on navigational charts and publications, and when not available, were latitude and longitude used instead? | * 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 |
| * 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 |
| Were abbreviations used in radio transmissions only when they were quicker and easier to use than the full word? | * 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 |
| Were the abbreviations used in radio transmissions sufficiently well known to avoid confusion and reduce the need for confirmatory transmissions? |
| In cases where confusion arose, were full terms readily substituted for the abbreviations to ensure clarity? |
| **Domain 2: Message Delivery** | | | |
| Preparation when using VHF | Was the beginning of the transmission not cut off, using the PTT technique? | 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 |
| Tone and Volume | Were transmissions consistently sent with a polite tone of calm confidence and professionalism? | 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. IALA Guideline G1132 VTS Voice Communications and Phraseology Edition 2.2 urn:mrn:iala:pub:g1132:ed2.2 P 14 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 |
| Did VTS personnel maintain professionalism even when receiving overly familiar or aggressive transmissions? |
| Was the volume of transmissions kept at a level used for normal conversation to avoid distortion and ensure the message was heard clearly? |
| Emphasis on keywords | Were the keywords spoken slightly louder and longer than other neighbouring words? | 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 |
| Spelling out words (e.g., phonetic alphabet, phonetic numbers, ship’s name, call sign, position, bearings, course, distance, speed, time, names of buoys, geographical names) | Were the numbers pronounced as separate digits and distinctively? | 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 |
| 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 |
| Speech rate | Was the speech rate appropriate in terms of contexts of situations (100 and 120 respectively for routine and emergency situations)? | 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 |
| Word grouping and pausing | Was word grouping and pausing appropriately applied? | 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. | IALA G1132 |
| Was the use of unnecessary fillers like ‘um’, ‘hm’, ‘uh’, etc., avoided? | * It decreases the use of unnecessary fillers like ‘um, hm, uh, …’, which hinders mutual intelligibility. | IALA G1132 |
| Avoidance of ambiguous language | Were the modal verbs 'may', 'might', 'should', 'could' avoided and 'can' only used in an unambiguous form in communications? | 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:  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  IALA G1132 |
| Clarifying information accuracy (e.g., verification, corrections, repetitions, seeking feedback) | Were responses to closed questions always followed by the appropriate phrase, using "Yes..." or "No..." as applicable? | **RESPONSES** When the answer to a closed question is in the affirmative or negative, consider the need to repeat the appropriate phrase or add an explanation in the response.  For a response in the affirmative say: “Yes…” followed by the appropriate phrase.  For a response in the negative, say: “No…” followed by the appropriate phrase.  Where a message is received and only acknowledgement of receipt is needed, say “received”. | IMO SMCP |
| When acknowledging receipt of a message, was the term “received” used consistently? | IALA G1132 |
| When information was not immediately available, did the responder advise the caller to “Stand by” and provide a time interval if necessary? | When the information requested is not immediately available, say: "Stand by …" followed by the time interval within which the information will be available. | IMO SMCP |
| If information requested is not immediately available, advise the caller to “Stand by” and consider the need to indicate the time interval within which the information will be available. | IALA G1132 |
| Did the VTS operator correctly respond with "No information" when the requested information could not be obtained? | When the information requested cannot be obtained, say: "No information." | IMO SMCP |
| Was the response "Stand by..." delivered clearly and concisely, with an appropriate time interval provided? | When the information requested is not immediately available, say:  "Stand by …" followed by the time interval within which the information will be available. | IMO SMCP |
| Were errors in messages corrected by stating “Correction” followed by the corrected part of the message? | When a mistake is made in a message, say:  "Mistake ..." followed by the word:  "Correction ... " plus the corrected part of the message.  Example: "My present speed is 14 knots - mistake.  Correction, my present speed is 12, one-two, knots." | IMO SMCP |
| When an error is made in a message, say: “Correction” plus the corrected part of the message.  Pilot boarding time 1400. CORRECTION - pilot boarding time 1430. | IALA G1132 |
| In situations where communication was difficult, were important phrases or words transmitted twice using “Repeat” followed by the corresponding part of the message? | 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." | IMO SMCP |
| 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. | IALA G1132 |
| When a message was not properly heard, was the phrase “Say again” used to request repetition? | When the message is not properly heard, say:  “Say again”. | IMO SMCP  IALA G1132 |
| In situations where the VTS operator needed to indicate their readiness, was the phrase "I am ready to receive your message" or "I am not ready to receive your message" the correct and appropriate response? | In situations where the VTS operator needed to indicate their readiness, was the phrase "I am ready to receive your message" or "I am not ready to receive your message" the correct and appropriate response? | IMO SMCP |
| **Domain 3: Message Interpretation** | | | |
| Effective listening skills | Were interruptions avoided, distractions cleared, and focus maintained on the speaker during the listening process? | **EFFECTIVE LISTENING SKILLS** Communication process Effective listening skills are used to actively understand information provided by the speaker and it can be categorized into the following steps:  **Listening** Listening involves the reception of sounds from the sender by:   * avoiding interruptions; * clearing one's mind of distractions; and * focusing on the speaker. | IALA G1132 |
| Were open questions asked to gather more details, leading questions avoided, and conclusions refrained from being made before the sender finished speaking to ensure 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 |
| Was interpretation communicated and verified for accuracy, the main issues identified, and assumptions avoided when interpreting the sender’s message? | **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 |
| Timely, relevant and accurate provision of information | 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 |
| 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 |
| 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 |
| Was feedback actively encouraged through the use of questioning for enhancing clarity? |
| Appropriate questioning techniques (e.g., closed questions, open questions, funnel questions) | Were the appropriate types of questions (i.e., closed, open, and funnel questions) employed? | 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 |
| Read-back | Did the receiver effectively employ the read-back technique to confirm and clarify the content of the message? | 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 |
| 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 |
| **Domain 4: Standard Phraseology** | | | |
| Phraseology in IMO SMCP | 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 |
| Phraseology in IALA G1132 | 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 |

1. EXAMPLE EVALUATION CRITERIA ASSESSMENT AREAS

These examples:

* Describe some of the key evaluation criteria that may be used when assessing competency.
* Provides guidance to VTS personnel on areas that may be assessed against during competency testing.

| Elements | Example Evaluation Criteria Assessment Areas | References |
| --- | --- | --- |
| **Message Compilation** |  |  |
| Message structure  Message Markers | Was the framework for standard message structure (eg format and content) applied? | G1132, Section 5.1.1 (Message Structure) |
|  | Was transmission limited to a maximum of two message markers and two phrases to prevent recipient overload? |
|  | Was the ship clearly identified (e.g., by name and call sign)? Was it appropriate to identify ship type? |
|  | Were unnecessary words avoided (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”) |
|  | Did action words (e.g., PROCEED) should come before the condition (e.g., time or location) |
|  | Was the information relevant, accurate as possible and delivered in a timely manner? |
|  | Was each sentence constructed to use only one phrase for each topic or event? | G1132, Section 5.1.1 (Message Structure)  SMCP, section XXX |
|  | Were appropriate message markers used to ensure the message was clearly conveyed and the purpose of the message properly understood? | G1132, Section 5.1.2 (Message Markers)  SMCP, section XXXX |
| Phonetic Alphabet & Numbers | Were the phonetic alphabet and phonetic numbers correctly spelled out to distinguish between similar-sounding letters during radio communications? | G1132, Section 5.1.3 (Phonetic Alphabet), Section 5.1.4 (Phonetic Numbers [Numerals]  SMCP, section XXXX |
|  | Were the numbers pronounced distinctively as separate digits? |
| Standard use of maritime terminology (Positions, bearings, course, distance, speed, time, geographical names, and abbreviations) | Were positions communicated in either latitude and longitude or relative to a mark, based on the appropriateness of the situation? | G1132, Section 5.1.5 (Positions)  SMCP, section XXXX |
| Were bearings consistently given using 360-degree notation from True North unless explicitly stated otherwise? | G1132, Section 5.1.6 (Bearings)  SMCP, section XXXX |
| Was it clearly specified whether the relative bearing was from the mark or from the ship in all communications? |
| Was “course” expressed as 360-degree notation from True North? Was this referred to as TO or FROM a mark? | G1132, Section 5.1.7 (Course)  SMCP, section XXXX |
| Were course descriptors appropriately used, e.g.:   * Course Made Good - That course which a ship has made good over ground, as a result of the effect of currents, tidal streams and leeway. * Course to Make Good - That course which a ship is to make good over ground, after allowing for the effect of currents, tidal streams, and leeway. * Track - The path followed between one position and another. * Planned Track- The path to be followed between one position and another. * Heading - The horizontal direction of the vessel's bows at a given moment measured in degrees clockwise from True North. | G1132, Section 5.1.7 (Course) |
| Were distances consistently expressed in nautical miles or cables, with the unit always stated? | G1132, Section 5.1.8 (Distances)  SMCP, section XXX |
| Was speed always expressed in knots? | G1132, Section 5.1.9 (Speed)  SMCP, section XXX |
| Was time given in 24-hour format? Was it clear to to whether it was local time or UTC? | G1132, Section 5.1.10 (Time)  SMCP, section XXX |
| Were place names provided those that are on navigational charts and publications? | G1132, Section 5.1.11 (Geographical Names)  SMCP, section XXX |
| If a place name was not available then was a latitude and longitude used? |
| Were abbreviations used in radio transmissions only when they were quicker and easier to use than the full word? | G1132, Section 5.1.12 (Abbreviations) |
| Were the abbreviations used in radio transmissions sufficiently well known to avoid confusion and reduce the need for confirmatory transmissions? |
| In cases where confusion arose, was the full term readily substituted for the abbreviations to ensure clarity? |
| **Message Delivery** |  |  |
| Preparation when using VHF | Was the beginning of the transmission not cut off, using the PTT technique? | G1132, Section 5.2.1 (Preparation when using VHF) |
| Tone and volume  Speech rate  Word grouping and pausing | Was the tone of voice consistently maintained as a polite tone of calm confidence and professionalism throughout the transmissions? | G1132, Section 5.2.2 (Tone and Volume) |
| Was the volume of the voice kept at a level used for normal conversation, avoiding shouting or being too quiet? |
| Were the keywords spoken slightly louder and longer than other neighbouring words? | G1132, section 5.2.3 (Emphasis on keywords) |
| Was the speech rate appropriate for situations (e.g. 120 wpm for routine situations and 100 wpm emergency situations)? | G1132, section 5.2.4 (Speech rate) |
| Was word grouping and pausing appropriately applied? | G1132, section 5.2.5 (Word Grouping and Pausing) |
| Was the use of unnecessary fillers like ‘um’, ‘hm’, ‘uh’, etc., avoided? |
| Questioning techniques | Were appropriate questioning techniques (e.g. closed, open or funnel) used to obtain the required answers? | G1132, section 5.2.6 (Questioning techniques) |
| Avoidance of ambiguous language | Were the words 'may', 'might', 'should', 'could' , 'can' avoided to minimise misunderstandings? | G1132, section 5.2.7 (Ambiguous Terminology) SMCP, section XXXX |
| Was local terminology avoided? | G1132, section 5.2.7 (Ambiguous Terminology) |
| Confirmation/Clarification of message (Responses, corrections, repetitions, etc.) | Were responses to closed questions always followed by the appropriate phrase, using "Yes..." or "No..." as applicable? | G1132, section 5.28 (Responses)  SMCP, section XXXX |
|  | Where a message is received and only acknowledgement of receipt is needed, say “received”. |
|  | When information was not immediately available, was the caller advised to “Stand by”? If necessary, was a time interval indicated? |
|  | Did the VTS operator correctly respond with "No information" when the requested information could not be obtained? | SMCP, section XXXX |
|  | Were errors in messages corrected by stating “Correction” followed by the corrected part of the message? | G1132, section 5.2.9 (Corrections)  SMCP, section XXXX |
|  | Was “Repeat” followed by the corresponding part of the message used to emphasize parts of a message that may be considered important? | G1132, section 5.2.10 (Repetition)  SMCP, section XXXX |
|  | When a message was not properly heard, was the phrase “Say again” used to request repetition? |
|  | In situations where the VTS operator needed to indicate their readiness, was the phrase "I am ready to receive your message" or "I am not ready to receive your message" the correct and appropriate response? | SMCP, section XXXX |
| Distress and Safety Communications | <to follow>….. |  |
| **Message Interpretation** |  |  |
| Effective listening skills | Were interruptions avoided, distractions cleared, and focus maintained on the speaker during the listening process? | G1132, section 5.3.1.1 (Listening) |
| To ensure clarity, were open questions asked to gather more details, leading questions avoided, and conclusions refrained from being made before the sender finished speaking? | G1132, section 5.3.1.2 (Clarity) |
| Was feedback encouraged through the use of questioning to ensure the message was understood? |
| Were the key words chosen by the sender interpreted as intended? | G1132, section 5.3.1.3 (Interpretation) |
|  | Were the main issues in the sender's message successfully identified? |
|  | Were assumptions avoided when interpreting the sender’s message? |
| Closed loop communications (read-back) | Did the receiver effectively employ the read-back technique to confirm and clarify the content of the message? | G1132, section 5.3.2 (Closed loop communications (read-back))  SMCP, section XXXX |
| **Standard Phraseology** |  |  |
| Standard Phrases | Was consistent phraseology used in VTS communications? | G1132, Part C Standard Phrases  SMCP |
|  | Was the VTS communications relevant to the current situation? |  |
|  | Was the information provided timely, relevant and accurate? |  |
|  | Was essential information shared with ships to enhance their situational awareness to mitigate potential hazards? |  |
| Non-standard Phrases / plain language | Was plain language used effectively to ensure simple, clear, and unambiguous communication, where standard phraseology does not apply? | G1132, section 5.1 (Compiling a message) |

1. Plain language is writing that is clear, concise, well-organized, and follows other best practices appropriate to the subject or field and intended audience. [↑](#footnote-ref-1)