



REPORT ON IALA WORKSHOP ON HARMONIZING VTS VOICE COMMUNICATION

Busan, Republic of Korea, 19 to 22 February 2019

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Report of the IALA Workshop On Harmonization of VTS Voice Communication Executive Summary



An IALA workshop on the harmonization of VTS voice communication was hosted by the Korea Institute of Maritime and Fisheries in Busan, Korea from 19 to 22 February 2019.

The workshop theme was supported by a comprehensive programme of presentations, working group sessions and a technical tour on day two. Output work was reviewed and highlights were agreed on day four. Attendees enjoyed a welcome reception on day one and a workshop dinner on day three.

Topics covered included language and phraseology and training and competency assessment. Participants attended an informative technical tour of Busan port by boat and a visit to Yeongdo maritime cluster that included the VTS training organisation of Korea Institute of Maritime and Fisheries Technology.

The workshop conclusions were:

- It is vital that VTS phraseology and voice communication are standardised in order to deliver a harmonized service to mariners worldwide.
- There is a need to revise the VTS section of IMO SMCP.
- To ensure consistent communication and use of standardised phraseology, mutual training of both mariners and VTS personnel should be encouraged.
- The use of various training tools, such as software applications, is considered useful to assist VTS personnel for continual professional development in VTS phraseology.
- Training of language and VTS voice communication differs widely amongst training organizations which may lead to inconsistent delivery of VTS.
- To ensure all parties involved understand VTS voice communications, IALA should consider requesting input on phraseology from other relevant maritime organizations.

The output documents were forwarded to the VTS Committee 46th session (VTS46) for further development and completion.

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IALA WORKSHOP ON HARMONIZATION OF VTS VOICE COMMUNICATION

1. INTRODUCTION

An IALA workshop on Harmonising VTS voice communication was hosted by the Korea Institute of Maritime and Fisheries (KIMFT) from 19 to 22 February 2019



A list of participants is at ANNEX B.

2. CONCLUSIONS

Following a discussion, the workshop agreed to the following conclusions:

- It is vital that VTS phraseology and voice communication are standardised in order to deliver a harmonized service to mariners worldwide.
- There is a need to revise the VTS section of IMO SMCP.
- To ensure consistent communication and use of standardised phraseology, mutual training of both mariners and VTS personnel should be encouraged.
- The use of various training tools, such as software applications, is considered useful to assist VTS personnel for continual professional development in VTS phraseology.
- Training of language and VTS voice communication differs widely amongst training organizations which may lead to inconsistent delivery of VTS.
- To ensure all parties involved understand VTS voice communications, IALA should consider requesting input on phraseology from other relevant maritime organizations.

OPENING OF THE WORKSHOP AND TECHNICAL SESSIONS

3. SESSION 1 – OPENING OF THE WORKSHOP

Chaired by Monica Sundklev, Swedish Transport Agency, Sweden, and Chairman of the IALA VTS Committee.

3.1 Welcome from IALA by Francis Zachariae, IALA Secretary General

IALA Secretary General Francis Zachariae expressed his pleasure to be in Korea and welcomed participants to the workshop on harmonizing VTS voice communication. He acknowledged that Korea is a strong supporter of IALA, both as a President, a Council member, and as an active participant in all four IALA Committees while also being a truly driving force in the VTS Committee.

He continued that to host the VTS Committee and this workshop was a timely initiative in view of the growing maritime significance of the region and the important role it plays in global shipping. As a country surrounded by the sea, Korea is highly dependent on its marine resources for the livelihood of its people and on shipping as a major contributor to its national economy.

Korea has taken a lead in many areas within the Maritime sector, perhaps in the latest years especially in e-Navigation – and it was acknowledged that e-Navigation and VTS go hand in hand. The Korean influence on the ENUW International Conference some weeks ago on board the ferry from Copenhagen to Oslo was clear to see accompanied with enormous investment in the SMART shipping project that will change the maritime operations in Korea and the rest of the world over the next few years.

Mr Zachariae went on, VTS will be the front office of e-Navigation. The VTS center will be the heart or the brain of the harbour or busy water way. Some of the busiest harbors and dangerous waterways of the world.

He thanked the hosts, the Korean Coastguard and the Korea Institute of Maritime and Fisheries technology and the participants for joining us.

The benefits of so many different interest groups in an international context and with a cooperative spirit was acknowledged and was all the more significant if we consider that promoting Vessel Traffic Services serves the common interest and common goal of streamlining standards and harmonizing practices. This can only be good for the principal users of VTS: the mariners, as represented by the multi-national and multi-cultural crews working in the service of ocean transportation. Seafarers need a harmonized approach to VTS standards and practices.

Regarding voice communication Mr Zachariae stated that the beauty of harmonization is that it eliminates ambiguity. It leaves no room for confusion over what is expected. Confusion constitutes a risk to both safety and efficiency, and that is why harmonization is so important. Global harmonization is therefore also the principal aim of IALA. Effective VTS voice communications directly contributes to navigational safety and efficiency; conversely, ineffective communication and misunderstandings may contribute to near misses and accidents. Effective communication is therefore an essential part of a VTSO's duties.

Regarding the duties of the personnel we must of course never forget the all-important human element. Incidents and accidents continue to happen all too often, and human factors management can play a significant role in maximizing the performance of a VTS.

The Secretary General asserted that VTS' role has been proven to be cost effective in terms of contributing to the safety of navigation, efficiency of vessel traffic and protection of the marine environment. The role of VTS is expanding and this brings with it a greater impact of VTS on e-Navigation and vice versa. The uses of the sea become more varied and this brings with it greater complexity. The manoeuvrable space for shipping is being challenged by this expanding utilization and larger ships and the need for more pro-active management of vessel traffic in the areas concerned is therefore likely to increase as well, further driving the interaction between ships and shore authorities. The role of VTS, far from becoming reduced as a result of this emerging trend, becomes more central and the capabilities offered by e-Navigation and its Maritime Services will offer new opportunities for supporting this enhanced, central role of VTS. Furthermore, there is

increasing awareness, public perception of, and expectation for VTS. This places an enhanced degree of accountability on maritime administrations and their management of VTS.

He once again thanked the host – the Korean Coast Guard and the Korea Institute of Maritime and Fisheries Technology and concluded his welcome address to wish you all participants a fruitful, successful and enjoyable workshop and a very pleasant stay in Busan.

3.2 Welcome from KIMFT by Dong-Jae Lee, KIMFT President

Mr Dong-Jae Lee extended a warm welcome to all attending the workshop held in the beautiful city, Busan.

He stated that VTS serves as an indispensable system for securing the safety and efficiency of vessel traffic, while also ensuring maritime safety by providing protection for the environment and coastline facilities from possible risks. Thus the functions and significance of VTS is ever expanding.

In regard to conducting vessel control activities, voice communication is the most important method between a vessel and a control center. therefore, the safe and flawless implementation of voice communication is fundamental for safe traffic and efficient port management.

Furthermore, in-line with IMO's high level strategies, positive discussions and productive facilitations on these themes paves the road in its significance and far reaching results on the implementation and structure of e-navigation.

In particular, communication procedures and the standardization of utilized texts, along with items on training and evaluation, are indeed compelling and important issues.

The background to KIMFT as a governmental institution under Ministry of Oceans and Fisheries that provides maritime education and training, certification, along with research and development for the past 50 years was introduced.

To conclude he described his great pleasure to welcome all honourable delegates and experts, to the workshop.

3.3 Welcome From Korea Coastguard by Seung-Jin Seo, Korea Coastguard Director General

Director General Seung-Jin Seo welcomed all participants and VTS professionals to the workshop in Busan.

He acknowledged IALAs role in taking the lead in harmonizing vessel traffic services and marine aids to navigation worldwide in order to ensure that the movements of vessels are safe and cost-effective whilst protecting the environment.

Korea, as a maritime nation, also recognizes the importance of VTS, and we are in the middle of expanding our VTS infrastructure. In 1993, VTS was first introduced in Korea in Pohang Port, Korea operates five coastal VTS centres and fifteen harbour VTS centres including Busan and Incheon.

The Director General explained that Korea plans to build six more VTS centres on the coasts of Mokpo and Gunsan, contributing to the prevention of ship collision, sinkings and other accidents, thereby protecting people's lives and fortunes as well as the ocean environment.

He went on to express his pleasure that Korean experts will have a chance to share their studies and have discussion with others and encouraged participants to engage in in-depth discussions laying a solid foundation for future cooperation.

He then wished all a wonderful time in Korea.

3.4 Welcome from Busan Metropolitan City by Director General Byung-Cheol Bae

Byeong-Chul Bae, Director General of Maritime Affairs, Agriculture and Fisheries Bureau in Busan Metropolitan City stated that it was a great honour to welcome everyone visiting the maritime capital Busan to share views and knowledge on VTS communications.

He also extended a special appreciation to the organizers of this event possible being held in Busan. Adding that as a hub port of the northeast Asia, the Busan Metropolitan City continually strives to serve its citizens and to create a happy and harmonious environment. The city continually strives to provide support for seafarer training and cultivate maritime experts, and has also endeavoured to contribute to maritime education and training by promoting cooperation.

He hoped that this gathering would serve as a catapult in developing maritime safety through the establishment of systems for VTS and for education and training geared towards the rapidly changing maritime environment in the upcoming era of autonomous ships.

He concluded by taking this opportunity to share in my hopes that this gathering may serve as an opportunity to aid in various measures regarding VTS and aids to navigation to be presented so that international maritime education and training may further advance in the coming years.

3.5 Background Speech by Monica Sundklev

Monica Sundklev, Chair of the VTS Committee, welcomed all to the IALA Workshop on Harmonizing the Delivery of VTS Voice Communication. She expressed her own and IALA's gratitude to Korea Institute of Maritime and Fisheries Technology and the Korea Coast Guard for hosting this workshop as well as the VTS Committee meeting the following week.

In 2012 the IALA VTS Symposium in Istanbul recognised the compelling need to produce documents relating to VTS communication in order to facilitate clear and unambiguous transfer of information. At the VTS Symposium 2016 in Kuala Lumpur, the Secretary General of IMO, emphasized VTS communication as a crucial important factor of maritime safety in his key note speech. Finally, at the most recent IALA Conference, which also was held in the Republic of Korea, but in Incheon in May-June 2018, one of the conclusions was that effective and unambiguous VTS communications will require common phraseology, procedures and technology for voice communications.

IALA has been working hard in recent years to develop Recommendations and Guidelines in order to deliver VTS in a consistent and harmonize manner globally, including in VTS communications as an effective VTS VHF communication which directly contributes to navigational safety and efficiency.

The aim is the development of international standards for VTS language that ensure effective communication, including harmonized structure and phraseology, which are suitable for both native and non-native English speakers. In order to reach international harmonization and global understanding of the delivery of VTS services, the revision of IMO Resolution A.857(20) Guidelines on Vessel Traffic Services, plays a vital role and IALAs is the key player who is leading the work through the VTS Committee.

She went on to acknowledge that ineffective communication and misunderstandings continues to lead to near misses and accidents and therefore clear and effective communication is an essential part of the duties of a VTS Operator in order to mitigate risk.

Exactly two years ago, IALA in association with the Ministry of Transportation, Indonesia, hosted a workshop on Common Phraseology and Procedures for VTS Communications in Bali, Indonesia. The workshop was well attended by 60 delegates from 13 countries 2 Sister organizations and generated nine conclusions.

The conclusions from Bali that may be of relevance to this workshop are the following:

- Standard Marine Communication Phrases (SMCP) should be modernized to reflect current operations and technology in order to remain aligned with VTS services.
- The human factors implications for verbal communication and phraseology in VTS include individual, team, technological, cultural and VTS-related design issues.
- It is recognised that humans sometimes make errors when communicating. In VTS operations there is a need to manage and minimise the consequence of these errors.

The result of the workshop at Bali ended up in an IALA Recommendation R1012 VTS Communications and in a Guideline G1132 VTS VHF Voice Communication which were approved by IALA Council in December 2017.

This workshop will develop and share communication experiences and best practices which later will result in the development of a globally accepted standard for VTS phraseology and terminology.

4. SESSION 2 – PRESENTATIONS BY EXPERT SPEAKERS

The session was chaired by Monica Sundklev, Swedish Transport Agency and Chair of the IALA VTS Committee.

4.1 Workshop Aims and Objectives

The presentation was made by Monica Sundklev, Swedish Transport Agency and Chair of the VTS Committee.

4.1.1 Presentation abstract

In December 2017 IALA Guideline G1132 on VTS VHF Voice Communication was approved by IALA Council. Although this guideline was very well received and contained a lot about communication, the guideline does not include the phrases used in VTS communication. After the workshop in Bali there has been several requests that IALA should continue to work with developing these phrases and it has also been a common opinion of the VTS Committee that a specific workshop would facilitate guidance on VTS phraseology.

Therefore, this workshop was planned to assist in the development of IALA documentation and associated material addressing the delivery of VTS voice communication with a view to improve its effectiveness in both routine communication and in developing situations.

The purpose of the workshop is to facilitate the exchange of best practices, ideas and knowledge amongst a wide range of VTS professionals, linguists and those from other sectors to:

- Facilitate informed discussion and mutual understanding of the issues associated with VTS communication, both within and between, native and non-native English speakers.
- Contribute to the development of international standards for VTS Language to ensure effective communication, including structure and phraseology.
- Contribute to the formulation and development of IALA documentation related to VTS communication, such as:
 - o Recommendation R0103 (V-103) and its associated Model Courses, with specific reference to the modules dealing with communication
 - o Guideline G1132 – VTS VHF Voice Communication
 - o Recommendation V-127 – Operational Procedures for Vessel Traffic Services
 - o Guideline 1089 – Provision of Vessel Traffic Services (INS, TOS and NAS)

Monica Sundklev went on to add that both culture and mother tongue play important roles in effective communication. English is the common language within the maritime domain and for example SOLAS chapter V regulation 14.4 states that English shall be used on the bridge as the working language for bridge-to-shore safety communications as well as for communications on board between the pilot and bridge watchkeeping personnel, unless those directly involved in the communication speak a common language other than English. As VTS is a part of the ship-to-shore communication, English should be used in most cases where international shipping exists.

There is no doubt that harmonized phrases and expressions are crucial in order to ensure that the message is being correctly interpreted and with the overall goal to improve the safety and efficiency of vessel traffic and to protect the environment. And there is a need to standardize the language used within VTS communication.

We all know that when it comes to transferring information from A to B, communication should be performed so that the receiver understands the message correctly, that is, it must be precise, simple and unambiguous in order to avoid confusion and error.

VTS voice communication isn't different from any other communication but if there were a lack of it or misleading communication, the effects may, in the worst case scenario, be fatal. Let's avoid that!

The best way of doing that is to train the VTS operators as well as all relevant mariners and stakeholders with internationally standardized phrases and communication procedures.

4.2 Introduction to Workshop Topics

The presentation was made by Trond Ski, Norwegian Coastal Administration and Chair of WG1 of the IALA VTS Committee.

4.2.1 Presentation abstract

Trond Ski, Chair of the operational working group of the IALA VTS committee introduced the different subjects and topics of the workshop. He highlighted the importance of voice communication within the world of VTS. Not the sensors or the high tech surveillance systems of a VTS is visible for a mariner on board the bridge of a vessel. For a mariner, a VTS is a voice on the VHF radio. The situational awareness, competence and knowledge of a VTS needs to be delivered to the mariner by voice. This makes VHF voice communication one of the most vital parts of VTS.

Trond Ski highlighted the challenges related to the use of a common language. He stated that even though "bad" english is said to be the most spoken language on the planet, it would be impossible to communicate without a common language. Trond noted that the second edition of the Oxford English Dictionary contains full entries for nearly 172 000 words in current use. Learning every word in the english language may pose a challenge to people who have english as they native language. It certainly poses a challenge to people who have english as their second. For a VTS operator or a mariner, who are learning english as part of their professional training, learning all english words is of course impossible. The use of harmonized phrases is an essential method of reducing the number of words in use.

Trond Ski stated that we will not achieve world-wide harmonization of VTS Voice communication by creating phrases alone. World-wide implementation will require IALA to give guidance on communication training and communication competency assessment. He concluded his introduction by encouraging all workshop participants to take an active part in discussions and highlighted the importance of the workshop output for the ongoing work in the IALA VTS committee.

4.3 Introduction to WG1 Topics on Language and Phraseology

The presentation was made by Professor Seunghee Choi, KIMFT and Chair of WG1 of the IALA Workshop on Harmonization of VTS Voice Communications

4.3.1 Presentation abstract

Professor Choi welcomed all participants to Busan. She introduced the background to conclusions made at various IALA events identifying the need for VTS communication procedures. Since then IALA have developed a Recommendation and a Guideline on general communication rules and how VTS personnel can compile and deliver messages. Many different fields have been researched including linguistics and ICAO.

Research into the methodology of how the human mind compiles and delivers a messages, linguistics and other industries was presented.

Scenarios that are common for VTS Operators were then introduced, including a detailed examination of VTS voice recordings from Ulsan Port VTS. Professor Choi stated that there would be a focus upon scenario based phraseology or 'schemetic message structure'. In order to demonstrate this a scenario involving fishing vessels and an audio recording of VTS communications were used to illustrate the delivery of a schematic message structure and the problems of VTS delivery.

4.4 Introduction to WG2 Topics on Language and Phraseology

The presentation was made by Dr Lilian Bieber, National Nautical VTS Training Organisation and Chair of WG2 of the IALA Workshop on Harmonization of VTS Voice Communications.

4.4.1 Presentation abstract

Dr Bieber explained that Working Group 2 is about training which is an extremely important topic. IALA had begun to harmonize communication worldwide and this was an opportunity to rethink first principles used in the past. This was done in the VTS Committee operations working group but training should go hand in hand and must now be considered.

She demonstrated the problems with communication such as cluttered VHF frequencies, complicated traffic patterns and mariners with varying levels of English. The aim, Dr Bieber stated, is for all stakeholders to follow IALA guidance on communications and this means that the concept must be simple.

It was noted that previously non-native English speakers were taught grammar and basic English and that there is currently no teaching methods for SMCP. Contemporary teaching methods were introduced as the way forward particularly because they are competency based that achieve clear, concise, effective and unambiguous communication.

Working Group 2 will examine how to train people in pronunciation, structure, vocabulary and fluency. The key topics in WG2 were:

Assessing Language levels

Learning Strategies

Training Topics

Course Structure

4.5 The Application of Automatic Voice Broadcasting and Recognition in VTS Communication

4.5.1 Presentation Abstract

VTS Operator Lyu Xinli presented the problems he has experienced communicating as a non-native English speaker. He suggested that technology was a solution to many of the barriers to voice communication in particular multi-channel text digital communication by speech recognition technology. The utilisation of this technology could lead to automatic voice messaging to ships, examples of this were provided by playing VTS recordings of two vessels in a close quarter situation with automatically generated voice communications.

4.6 Question and Answer Session

This session was Chaired by Monica Sundklev.

Discussion highlighted that the output from the workshop and the IALA VTS Committee will provide vital input for future revision of IMOs SMCP.

5. TECHNICAL TOUR

Participants visited Busan Port by boat and the Yeongdo Maritime Cluster that included the VTS training facility at the Korea Institute of Maritime and Fisheries Technology. Participants were very impressed with the facilities of the VTS training centre and the expertise of the staff. They found the visit to be very informative and relevant to the work of both the workshop and the IALA VTS Committee.

6. SESSIONS 3 TO 5 - WORKING GROUPS

The workshop broke into two Working Groups (WG):

WG1	Considering Language and Phraseology	Chair: Prof. Seunghee Miriam Choi Rapporteur: Michele Landi
WG2	Considering Training and Competency Assessment	Chair: Dr. Lilian Biber Rapporteur: Jillian Carson-Jackson

6.1 Working Group 1 Report

Working Group 1 was attended by 16 participants from 8 countries with different backgrounds and experience: language specialists, pilots and VTS operators with marine background. The Chair opened the meeting by introducing herself and then asked each member of the group to introduce himself/herself and to explain their individual background and expertise. After that the goals for Working Group 1 were presented and commented:

1. Explore and document key issues that contribute to communication difficulties from the perspective of:
 - non-native English speakers communication with native and non-native speakers, and
 - native English speakers communication with non-native speakers
2. Develop principles for VTS message construction and the development of common phraseology for clear and unambiguous communication;
3. Identify and explore how the harmonized use of English VTS voice communication phrases between ship and shore for native and non-native speakers can be best utilized by international standards.

The participants of Working Group 1 were requested to compile scenario based phrases and in order to achieve a standardized and consistent work among participants a set of ground rules, coming from IALA Guideline 1132, were agreed to be followed:

- Structuring a message
- Use of basic words
- Short and simple sentences
- Communications do not need to be grammar precise
- Each phrase should contain one topic only without using complex structure and avoiding subordinate phrases
- Use of active form rather than passive
- Information must be relevant, as accurate as possible and timely
- Make sentence positive rather than negative
- Use of well-known abbreviation is to be encouraged
- Use of Message Markers
- Use of pro-word before the message marker. Specific words before the message marker (e.g. “weather” before information and ‘collision’ before ‘warning’) may emphasize the contents of the communication.
- In providing position avoid relative bearing and terms such as port or starboard. Moreover place names used should be those on chart.
- When providing traffic information the VTSSO should use geographic locations, and cardinal directions rather than latitude and longitude

- Communication should be addressed to the give-way vessel first, and then the stand-on vessel, but some exemptions were recognised in head on and overtaking situations.
- Use of read back as feedback tool especially when the message markers 'INSTRUCTION, ADVICE (when significant data is provided) or WARNING' are used by the VTSO

After the discussion of the ground rules the group was divided into 5 sub-groups and each was provided with a list of scenarios, a glossary of SMCP (referred to the particular scenario) and some examples.

At the end of the three working days Working Group 1 produced 67 different scenarios utilizing 250 different words and a total of 1418 words.

Thanks to software provided by KIMFT the words most used were analysed so that participants could select common words to construct the phrases, and one of them was "INFORMATION". This may be as a result of the introduction and use of the message markers in VTS communications.

Although the IALA glossary (annex B Guideline 1132) suggests the use of words, the group preferred to use other words they thought of in order to simplify the understandable of the phrase (e.g. "Maintain" and "Keep"). The same consideration could be done for some ground rules (pro-words), phrases (e.g. "stand by engine" and "keep engine ready") and even between practice and SMCP (e. g. "rig pilot ladder on your lee side" and "rig the pilot ladder on port/starboard side").

The ground rules drew the attention of the participants because there was sometimes a difference between human perception and formal documentation.

The phrases developed by Working Group 1 can be found on the workshop fileshare and will be input to VTS46.

6.2 Working Group 2 Report

6.2.1 General

The Working Group addressed the identified issues of training and competency assessment for VTS personnel. The group addressed the following topics:

1. Assessing language level for VTSO / confirming initial and recurrent training requirements
2. Developing training strategies
3. Identifying assessment strategies
4. Developing course structure
5. Identifying process for VTS training

The group worked in a facilitated, small group discussion format. Results of the discussions are included in the workshop fileshare. A draft IALA document was developed for consideration at VTS46.

6.2.2 Assessing language level for VTSO

The existing IALA V-103 (R0103) language level of the International English Language Test System (IELTS) band level 5 was reviewed. Examples of the implementation for English training (including equivalent English testing systems such as the Test Of English for International Communication (TOEIC)) were presented and discussed. It was agreed that band level 5 of IELTS remains appropriate. An example of an oral exam for IELTS band level 5 was viewed, and there was confirmation that the oral exam process is appropriate.

In addition, the group reviewed the International Civil Aviation Organization (ICAO) Language Proficiency requirements and agreed that there is opportunity to make use of the focus work of ICAO for VTS English language training. Specifically, the ICAO level 4 – Operator level – was found to be suitable for VTS operations in most cases. Where phraseology is provided, there could be opportunity to accept ICAO level 3 for structure and vocabulary. It was noted that there could be an opportunity to use ICAO level 3 as an initial (starting) level, and then progress through the levels as experience is gained. It was noted that it would be beneficial

to compare the ICAO level 3 and 4 to the IELTS band level 5. The relevant levels, as excerpts from the ICAO document, are provided in workshop fileshare.

To assess the level of VTS English, there could be a requirement for an assessment, similar to that carried out by IELTS assessors.

It was agreed that there is a requirement to have recurrent assessment and training for English language. While some members identified an annual requirement, it was noted that the timing for the recurrent training could be linked with the actual level of English exhibited.

Discussion highlighted the fact that many countries use their mother tongue when communicating with vessels, for example: within port limits; when the pilot is onboard; when communicating with a pilotage exempt master. This could reduce situational awareness for the bridge team (BRM) as well as for all the other ships in the area. Good, standard communication in English within the VTS area could result in more wide spread use of English, resulting in safer transits.

6.2.3 Developing training strategies

Using the six ICAO language training elements (Pronunciation, Structure, Vocabulary, Fluency, Comprehension, and Interactions) a number of training strategies were identified. These strategies were then reviewed against the elements that would be required for standard voice communication training in VTS. The result of the discussions was included in a document for further review at VTS46.

6.2.4 Develop assessment strategies

Based on the training strategies, and elements to be trained, a number of assessment strategies were identified. Results of the discussions are included in the workshop fileshare.

6.2.5 Develop course structure

The document developed for further review at VTS46 proposes a course structure that is based experiential, competence-based learning.

The outcomes of the discussions included in the workshop fileshare could be used to support training for the existing Module 1, V-103/1.

6.2.6 Identifying the process for VTS English training

- Pre-course – including any standardised English language training (TOEIC, IELTS). The candidate would be required to confirm their entry level for the training (IELTS band level 5 or above)
- IELTS, providing an oral assessment element, is widely used and remains an effective tool for assessing language levels.
- Following the training all candidates would undertake an (oral) assessment, based on set criteria. IALA may wish to consider developing and administering an internationally recognised VTS English exam to ensure consistent, harmonised standard of English knowledge.
- Standard VTS voice communication phrases provide a means to harmonize delivery of VTS, but these need to be supported by standard operating procedures.
- The process to training for VTS was discussed. Some aspects were identified during the development of training strategies. VTS English training would include:
 - Initial training – this could be implemented by an English language instructor based on specific scenarios as identified in the development of scenarios. This training would be to reinforce the existing training (IELTS band level 5) and prepare the candidate for the specific VTS English language training. Language labs / simulators; repetition; recorded voice are examples of the strategies that could be used.
 - VTS English language training – based on the scenarios and internationally agreed phraseology, the candidates would be trained by a VTS instructor with sufficient English level.

The language can be reinforced during VTS simulation exercises to address multiple training objectives.

7. SESSION 15 – REVIEW OF OUTPUT DOCUMENTATION

Chaired by Dirk Eckhoff, German Waterways, Vice-Chair of IALA VTS Committee.

7.1 Presentation of output documents

Chair and Rapporteur of Working Group 1 Seunghee Choi, KIMFT and Michele Landi, Italian Coastguard presented the findings of the Working Group 1 to the Workshop. These can be found in section 6.1.

The Rapporteur of Working Group 2, Jillian Carson-Jackson, The Nautical Institute presented the findings of Working Group 2 to the Workshop. These can be found in section 6.2.

8. SESSION 16 – HIGHLIGHTS AND CLOSING

The session was chaired by Monica Sundklev, Swedish Maritime Administration and Chair of IALA VTS Committee.

8.1 Highlights

Seven highlights were agreed as listed in the main report above.

8.2 Workshop report

Thomas Southall noted that the workshop documents and photographs would be available on the workshop file sharing server on the VTSVOICECOM page of <http://www.iala-aism.org/file-sharing/>. The draft workshop report was posted on the file share server and the final report will be posted and made permanently available on the IALA website.

8.3 Closing of the workshop

The Chair of the VTS committee, Monica Sundklev, thanked participants for their engagement and output that will be used to inform task 1.3.1 on VTS phraseology. She noted last night's successful and friendly dinner with excellent food and drinks, thanking KIMFT for their excellent service in organising the event and technical tour.

Trond Ski, Norwegian Coastal Administration and Chair of the Operations Working Group VTS Committee explained what would be done next with the output from the workshop. The input was already sent to VTS 46 and the task on communications phraseology would be informed by it.

Looking forward to the VTS Committee the following week the Korean Coastguard introduced VTS 46 and the cultural tour that would take place the weekend in between.

On behalf of IALA, Minsu Jeon acknowledged the fruitful discussions that had taken place and asserted that the VTS community now have a better understanding of the subject. He expressed thanks to KIMFT and the Korea Coastguard.

ANNEX A SOCIAL EVENTS

8.4 Welcome Reception and Dinner

On Tuesday 19 February, delegates enjoyed a dinner reception hosted at the Westin Chosun Hotel to welcome delegates to the workshop. The workshop participants enjoyed music provided by a Korean Fusion band

8.5 Workshop Dinner

On Thursday 21 February, participants enjoyed a dinner hosted in the Irish themed pub O’Kims. The event proved a good chance to exchange views on the workshop and friendship.

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ANNEX C WORKING GROUP PARTICIPANTS

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2	Michele Landi	VTMIS Training Coast Guard Institute, Italy
3	Evan Frendo	Korean Institute Of Maritime And Fisheries Technology, United Kingdom
4	Yeaong Sig Choe	International Maritime Pilot Association, Republic Of Korea
5	Yi Cong Bo	Maritime Safety Agency, China
6	Yang Zang Ban	Maritime Safety Agency, China
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8	Chiwon-Havong	Donghae VTS, REPUBLIC OF KOREA
9	Malin Drejier	Norwegian Coastal Administration, Norway
10	Trond Ski	Norwegian Coastal Administration, Norway
11	Hafizah	Maritime Port Authority Of Singapore, SINGAPORE
12	Saho Komaguchi	TST Corporation, Japan
13	Yushu Horie	TST Corporation, Japan
14	Saori Yamanouchi	Japan Coast Guard, Japan
15	Ji Hee Kim	Jeju VTS – Korena Coast Guard, Republic Of Korea
16	Larry Yim	Korean Institute Of Maritime And Fisheries Technology, USA

Working Group 2 Training and Competency Assessment

	Name	Organisation / Country
1	Abdulaziz Khelifa Alnasr	Ministry of Transport and Communications, Qatar
2	Faha Adi Alhajri	Qatar Coast Guard
3	Peter John Pratley	TST Corporation, Japan
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13	Xu Xipeng	Lian Yungang MSA, China
14	Lyu Xinli	Tang Shan VTS, China

	Name	Organisation / Country
15	Eugene Hong	Maritime Port Authority of Singapore
16	Lilian Biber	NNVO, Netherlands
17	Jillian Carson-Jackson	The Nautical Institute, Australia

ANNEX D

WORKSHOP PROGRAMME

8.5.1 DAY 1 – Tuesday, 19 February 2019 Workshop on Harmonising VTS Voice Communication

Time	Activity	
0900 – 1045	Steering Committee Meeting with Session Chairs and Rapporteurs	
0900 – 1400	Registration	
1100 – 1200	Session 1 – Opening of the Workshop	Chair: Monica Sundklev
1100 – 1105	Administration and Safety Briefing	Representative of the venue or host
1105 – 1115	Welcome from IALA	IALA Secretary-General, Francis Zachariae,
1115 – 1125	Welcome from the Republic of Korea and opening ceremony	Korea Coast Guard, Director General, Seo Seung-jin
1125 – 1135		KIMFT President, Dong-Jae Lee
1135 – 1145		Busan Metropolitan City, Director General, Byung-Cheol Bae
1145 – 1200	Background speech	VTS Committee Chair, Monica Sundklev
1200 – 1215	Group photo	
1230 – 1330	Lunch	
1330 – 1500	Session 2 – Presentations by expert speakers	Chair: Monica Sundklev
1330 – 1345	Workshop aim and objectives	VTS Committee Chair, Monica Sundklev
1345 – 1400	Introduction workshop topics	VTS Committee WG1 Chair, Trond Ski
1400 – 1430	Introduction WG1 topics on language and phraseology	Workshop WG1 Chair, Seunghee Choi
1430 – 1500	Introduction WG2 topics on training and competency assessment	Workshop WG2 Chair, Lilian Biber
1500 – 1530	Break	
Working Groups		
Session 3 Co-ordinator: Dirk Eckhoff	WG1 – Language and Phraseology Chair: Seunghee Choi Rapporteur: Michele Landi	WG2 – Training and Competency Assessment Chair: Lilian Biber Rapporteur: Jillian Carson-Jackson
1530 – 1600	Presentation and objective setting by WG Chair Topics WG1:	Presentation and objective setting by WG Chair Topics WG2:
1600 – 1700	WG session	WG session
Evening event 1800 – 2030	Welcome Reception Venue: Westin Chosun Busan Hotel (within walking distance) Dress code: Casual	

8.5.2 DAY 2 – Wednesday, 20 February 2019 Workshop on Harmonising VTS Voice Communication

Time	Working Groups	
Session 4 Co-ordinator: Dirk Eckhoff	WG1 – Language and Phraseology Chair: Seunghee Choi Rapporteur: Michele Landi	WG2 – Training and Competency Assessment Chair: Lilian Biber Rapporteur: Jillian Carson-Jackson
0900 – 1030	WG session	WG session
1030 – 1100	Break	
1100 – 1230	WG session cont.	WG session cont.
1230 – 1330	Lunch	
1400 – 1445	WG session cont.	WG session cont.
1445 – 1730	Technical Tour - Busan Port Guided Tour by Boat and Visit Yeongdo Maritime Cluster (VTS Training Organisation, Korea Institute of Maritime and Fisheries Technology). Transport will be provided.	

8.5.3

8.5.4 DAY 3 – Thursday, 21 February 2019 Workshop on Harmonising VTS Voice Communication

Time	Working Groups	
Session 5 Co-ordinator: Dirk Eckhoff	WG1 – Language and Phraseology Chair: Seunghye Choi Rapporteur: Michele Landi	WG2 – Training and Competency Assessment Chair: Lilian Biber Rapporteur: Jillian Carson-Jackson
0900 – 1030	WG session	WG session
1030 – 1100	Break	
1100 – 1230	WG session cont.	WG session cont.
1230 – 1400	Lunch	
1400 – 1530	WG session cont.	WG session cont.
1530 – 1600	Break	
1600 – 1700	Conclusions and report WG1	Conclusions and report WG2
1700 – 1800	Steering Committee, Working Group Chairs and Rapporteurs meet to discuss conclusions workshop	
Evening event 1900 – 2130	Workshop Dinner Venue: Korean Traditional Restaurant (within walking distance) Dress code: Casual	

8.5.5 DAY 4 – Friday, 22 February 2019 Workshop on Harmonising VTS Voice Communication

Time	Activity	
0900 – 1030	Session 6 – Reports from working groups (WG)	Chair: Dirk Eckhoff
0900 – 0930	Presentation results of Working Group 1	WG1 Chair (or rapporteur)
0930 – 1000	Presentation results of Working Group 2	WG2 Chair (or rapporteur)
1000 – 1030	Break	
1030 – 1130	Session 7 - Conclusions and Closing	Chair: Monica Sundklev
1030 – 1045	Workshop review and conclusions	Monica Sundklev / Dirk Eckhoff
1045 - 1100	Way forward for the VTS Committee	Trond Ski
1100 – 1110	Closing remark	Monica Sundklev
1110 - 1120	Introduction VTS46 and week-end technical tour	Korea Coast Guard
1120 – 1130	Closing the workshop	Host country
1200 – 1300	Lunch	



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