



IALA VTS TRAINING WORKSHOP

7 – 11 September 2009

Warnemünde, Germany

Final Report

Executive Summary

The workshop was held at the Technologiepark Warnemünde GmbH, Konferenzzentrum and was attended by 52 delegates from 17 countries.

The workshop began with a series of presentations before the delegates broke into working groups to address the review and updating of IALA Recommendation V-103 on the Standards for Training and Certification of VTS Personnel and the associated model courses, V-103/1-4.

There was an enthusiastic approach to the work undertaken and the delegates expressed their appreciation of the ability to exchange views and information with each other, made possible by a good balance of experience and backgrounds.

The workshop included a technical tour, a visit to the University of Wismar's Maritime Simulation centre, Warnemünde, and social programme (see ANNEX E).

The workshop identified 14 conclusions and 12 recommendations (see ANNEX H).

The workshop produced revised model courses V103-1/4, which were forwarded to IALA for final editing and formatting.

Work on the revision of Recommendation V-103 was begun and the result forwarded to VTS30 for finalising by Working Group 3 of the VTS Committee.

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1 INTRODUCTION

The IALA VTS Training Workshop was held from 7 - 11 September 2009 in Warnemünde, Germany, at the Konferenzzentrum of the Technologiepark Warnemünde GmbH. It was attended by fifty two delegates from seventeen countries. A list of participants is at ANNEX A.

The aim of the workshop was to review and updating of IALA Recommendation V-103 on the Standards for Training and Certification of VTS Personnel and the associated model courses, V-103/1-4.

Day One – Opening of the Workshop and Introduction

2 SESSION 1 – OPENING OF THE WORKSHOP

The opening was chaired by Neil Trainor, Australian Maritime Safety Administration (AMSA). He briefly welcomed the delegates

2.1 Opening remarks

Neil Trainor welcomed everyone to the workshop, gave the background to why the workshop had been organised and acknowledged the breadth of expertise within the workshop, which he felt sure would lead to a successful conclusion. He then introduced Mr Christian Forst.

2.2 Welcome by the Federal Waterways and Shipping Directorates North & Northwest, Germany

Christian Forst, Head of Traffic Technologies of the Federal Waterways and Shipping Directorates North & Northwest, Germany, gave the following welcome address.

Good afternoon ladies and gentlemen and on behalf of the Federal Waterways and Shipping Administration I would like to give a warm welcome to all delegates of the IALA workshop on VTS Training; we feel very honoured to host this workshop.

I hope that all of you share my point of view that Warnemünde is an attractive spot for holding this workshop. Warnemünde was founded more than 800 years ago and is part of the City of Rostock, which is an old Hanse port. It has a long maritime tradition and has long been recognised as a seaside resort. You will find lovely small streets, with pubs and restaurants, as well as a wonderful beach.

Today, Rostock-Warnemünde is the number 2 port among German Baltic sea ports. More than 27 Million tons of cargo was handled in 2008. The heart of the sea port is the ferry port with its terminals for combined cargo, for forest products and roll-on / roll-off cargo.

Rostock has been number one in passenger traffic between Scandinavia, Russia and the Baltic countries and Germany for many years now. Rostock's cruise port, here in Warnemünde, is amongst Germany's preferred ports for cruise tourism; in 2009 we expect more than 120 cruise ships. In addition, you will find a Navy base, shipyards and all maritime infrastructure necessary to operate a successful and still developing port.

The German Federal Waterways and Shipping Administration operates a VTS centre, a VTS simulator and an aids to navigation depot here in Warnemünde. The responsible District office is located in the city of Stralsund, which is about 80 Km East of here. The VTS simulator, established in 1998, is a joint venture with the Maritime Simulation Centre of the Wismar University. This comprises the VTS simulator, a ship handling simulator and a ship engine simulator and offers the possibility for combining nautical and technical ship handling training, alongside the provision of shore-based VTS services. About 90% of the capacity of the VTS simulator is dedicated to training courses for our VTS operators.

During the past 10 years, about 700 participants attended the different training courses. In addition, VTS operators, for example from port authorities were trained. Continuous training of personnel is one of the key factors for any successful organisation and this is particularly true for VTS operators; not only by supporting a safe and efficient flow of traffic but a VTS is often the first point of contact for a vessel approaching national waters. It is clear that any vessel contacting any VTS world-wide should be able to expect a certain level of service. This calls for VTS operators to be continuously trained to commonly agreed standards.

IALA took on board the development of Recommendations and accompanying Guidelines on standards for training and certification of VTS personnel and training establishments. This is a most important task for IALA and of considerable benefit for the both IALA's members and the world-wide shipping community. The continuously changing maritime environment and new technologies require a regular review and update of the IALA documents to meet all present and future challenges. The German administration very much supports these efforts and I am looking forward, very much, to the results of the workshop.

In thanking all of you for accepting the invitation to attend the workshop, I very much hope that you will find Warnemünde the perfect place for a productive meeting, as well as for socialising in the evenings. Before handing over to the Secretary-General of IALA, I must thank the local organising committee for preparing the workshop; colleagues from the District office on Stralsund, the Department of Maritime Simulation and the IALA Secretariat. Thank you very much.

2.3 Welcome by IALA

Torsten Kruise, Secretary-General of IALA, thanked the Federal Waterways and Shipping Directorates North & Northwest, Germany and the Hochschule Wismar for their support in planning and preparing for the workshop. He then provided a brief history on the role of IALA in VTS training and the success of the current guidelines to date in establishing the need and framework for VTSO Training. However, he suggested that there is now a need to revise and update these guidelines.

He then expressed concern that, despite the success of the guidelines to date, not all VTS's have embraced them to the fullest extent and that IALA needs to work at this and encourage authorities to embrace the guidelines. Using examples of recent incidents/developments (USCG and the Cosco Busan incident, Japan CG and the recent collision in Osaka and the use VTS with slot time and planning by Turkey in the Bosphorus) Torsten Kruise stressed the need to be proactive to effectively manage the impact of:

- emerging technologies and concepts (VTM & e-Navigation) on VTS and existing Guidelines and Recommendations;
- the increasing use of VTS throughout the world as a mechanism for administrations to minimise incidents or increase efficiency (for example, slot time and planning being employed by Turkey);
- the increasing role and responsibility of VTS associated with increasing use of advise and instruction; and
- when incidents do occur, the emerging questions being asked of VTS following incidents (e.g. Why have a VTS, what is their role, purpose)

In conclusion, Torsten Kruise highlighted the:

- need to ensure the training of competent VTSOs and the need for certification and accreditation;
- likely increase in the use of tools such as slot time and planning by VTS as a risk mitigation tool and to enhance efficiency;
- significant number of authorities that have not embraced the importance of certification and accreditation and the option for IALA to set-up a unit within IALA to undertake certification;

- need to look forward (10-15 years) and the increasing likelihood that within this timeframe VTSOs will be required to have mandatory training and IALA will need to progress this with the IMO in a manner possibly along the lines of STCW.

Torsten Kruuse ended by advising the delegates that the week would prove challenging but that despite the hard work that lay ahead, he wished everyone a successful and enjoyable week.

2.4 Health and Safety and Administration Brief

Mike Hadley, Technical Co-ordination Manager, IALA, provided information on health and safety matters and made various administrative announcements. He advised that a USB memory stick, containing all the workshop material, including presentations, would be provided to delegates on Friday 11 September. A draft report would be posted on the Workshop part of the IALA FTP server by 14 September and delegates would then have 14 days in which to make any comment, before the report was finalised and forwarded to the IALA Council.

3 SESSION 2 - PRESENTATIONS

This session was chaired by Neil Trainor (AMSA).

3.1 History and Current Status of V103 (Captain Terry Hughes, Trinity House)

In his presentation, Terry Hughes outlined the historical development of VTS, illustrating the growing recognition that it had received at IMO and the considerable influence that IALA had had in this process, in particular on VTS training. He emphasised the need to continue developing the IALA VTS training model courses, not least in the context of the spread of VTS centres and the imminent advent of Vessel Traffic Management and e-Navigation. He also stressed the need for both certification of instructors and students and the associated accreditation of training institutes. He ended with a call to maintain the IALA V-103 standards.

The presentation is at ANNEX B.

3.2 Pre-workshop Questionnaire (Captain Terry Hughes, Trinity House)

With acknowledgement to Tom Dehmel of HSW, who had largely developed the workshop's pre-questionnaire, and to Kerrie Abercrombie of AMSA, who analysed the results, Terry Hughes illustrated the significant points emerging from the analysis of the initial 39 responses. He then encouraged the workshop to consider the report when deliberating in their separate working groups.

A further four responses were received during the workshop and they have been included in the report, which is part of the output from the workshop.

The presentation given by Terry Hughes is at ANNEX C.

3.3 Expected Outputs from the Workshop (Monica Sundklev, Swedish Transport Agency)

Monica Sundklev introduced herself saying that she worked as a nautical advisor at the newly established Swedish Transport Agency. Her background is from the Swedish Navy but she has also worked for some time for the Swedish Maritime Administration. She currently represents the Competent Authority regarding VTS in Sweden and has been participating at IALA's VTS Committee meetings since 2002 and is now the Vice-Chair of Working Group 3 - Personnel and Training, of which Terry Hughes is Chairman.

Monica Sundklev then made the following remarks.

3.3.1 What outputs are expected?

This workshop aims to provide a forum for delegates from Competent Authorities, VTS Authorities and VTS Training organisations to exchange information on the developments in VTS training. Training was one of the topics highlighted at the VTS2008 Symposium in Bergen, Norway.

We are all here for a reason and we wouldn't be here if we didn't believe that VTS training is an important subject. We also have our own expectations on the outputs from this workshop.

If those expectations will be fulfilled only you can answer that question. But – if we all have more or less the same view on the importance of VTS Training and its documentation from a global perspective, then the outputs might be what we expected.

The VTS Operator is today being considered as a competent and responsible operator working in an even more demanding environment, often with other tasks that may be part of Vessel Traffic Management (VTM) and Maritime Operational Service (MOS). Surely the VTSO should have requirements that he or she is being well trained so that the job can be performed in a safe and efficient way. The VTS Authority being the employer of the VTSO should also be assured that their operators work according to set standards and that they are acting in a professional way. This is being achieved by letting the VTSOs pass a basic course and follow up on the competence and performance at the VTS Centre. The Competent Authority, that I represent, should also have requirements on minimal levels of training since the VTSOs are acting within a dedicated area, set by the Competent Authority, due to navigational, environmental and other circumstances. For the Training organisations, they are the ones that interpret all the requirements and standards into a course and make it as real as possible for any situation that might occur in a VTS area.

This workshop will mainly focus on reviewing and updating existing IALA documentation, as appropriate, such as the IALA Recommendation V-103 on Standards for Training and Certification of VTS personnel and especially the model courses V-103/1 VTS Operator Basic Training, V-103/2 VTS Supervisor Advancement Training and V-103/3 VTS On-the-Job-Training as well as V-103/4 On-the-Job-Training Instructor course. I would like to give my appreciation to all of you who actually contributed to the existing VTS training documentation. I believe that you made a very big step forward regarding VTS Training in the world and I also believe that without that work, VTS activities wouldn't be as widely spread as they are today. Thank you for your great effort!

There is more IALA documentation on VTS training but for now let's take one step at a time.

3.3.2 How should the work be done?

For the documentation revision there will be three working groups. Each working group will be "responsible" for at least one model course. This will be presented later, in more detail by Terry Hughes.

A small group of representatives from IALA VTS Committee and the steering committee of this workshop will review IALA Recommendation V-103.

Within the revision of the documentation it is important to remember the subtitle of the workshop that is "A consistent approach to VTS Training". One of the important words of this week that should be considered is therefore consistency. There should be consistency in using the same language and expressions, consistency in requirements between different model courses so that there will be a natural step from the VTSO course V-103/1 to On the Job Training course V-103/3 and then the following VTS Supervisor course V-103/2 and the On-the-Job-Training Instructor course V-103/4. There is no need in putting any effort in the formatting of the documents since IALA secretariat will look over them thoroughly. The essential thing is the content and that's where you play an important role in developing these documents.

During the revision which will be led by VTS experts there are some questions that you might have in mind:

- what has changed or being developed since the document was written?
- how has the technique been progressing?
- are there any inconsistencies?
- what are the results from the questionnaire?

There is a lot of hard work to be done during this coming week - after all it is a workshop. Hopefully there will also be fruitful discussions and cooperation among the delegates both on and off "working hours". The discussions may be complicated and there may be new issues or

perspectives that you haven't encountered before. However, with all your experience in VTS training I am confident that the revised documents will be outstanding outcomes.

Thank you and good luck!

4 SESSION 3 – WORKING GROUP SELECTION

The session was chaired by Terry Hughes (Trinity House).

Terry Hughes asked, by a show of hands, anticipated membership of Working Groups. The balance being much as expected, the delegates went to their working group rooms and commenced work, beginning with identifying strategies for progressing their respective documents. A list of participants by Working Group is at ANNEX D.

During this session a group photograph was taken.

END OF DAY

Day Two – Working Groups in Session

5 SESSIONS 4 TO 6– WORKING GROUPS

During the morning and most of an extremely warm afternoon, the working groups continued reviewing and revising their allotted documentation.

6 SESSION 7 – GUIDED TOUR OF THE HOCHSCHULE WARNEMÜNDE SIMULATION CENTRE

Mr Tom Dehmel escorted the workshop delegates to the Maritime Simulation Centre Warnemünde (MSCW) at the Department of Maritime Studies of Hochschule Wismar. They were welcomed by Prof. Karsten Wehner (head of department) and Prof. Knud Benedict. A guided tour of the MSCW, consisting of the shiphandling simulator, ship's engine simulator and VTS simulator, followed.

The Working group Chairs met with the Steering Group at the conclusion of the tour to review progress and facility communication between the working groups.

END OF DAY

Day Three – Working Groups in Session

7 SESSION 8 TO 11 – WORKING GROUPS

The working groups continued reviewing their allotted documents and began formulating revisions.

At the end of the day the Steering Group and Working Group Chairs again met to review progress and maintain commonality of approach. It was considered that, at this stage, the workshop was 'on track'.

END OF DAY

Day Four – Working Groups in Session & Technical Tour

8 SESSIONS 12 & 13 – WORKING GROUPS

During the morning, the working groups completed the revision of documents.

9 SESSIONS 14 & 15 – TECHNICAL TOURS

To begin the afternoon and set the scene for the technical tours, there was a presentation by Ute Hammersdorfer, from the Waterways and Shipping Office, Stralsund.

Following the presentation the workshop delegates split into three groups so that they could visit each of:

- 1 Waterways and Shipping Administration vessel 'Arkona';
- 2 Warnemünde VTS Centre;
- 3 Warnemünde Old lighthouse.

Ute Hammersdorfer's presentation is included separately with the outputs from the workshop.

END OF DAY

Day Five – Report of Working Groups and closing of the workshop

10 SESSION 16 – WORKING GROUP REPORTS

This session was chaired by Neil Trainor, AMSA.

10.1 Report of Working Group 1 – Model Course V103/1

The report was introduced by Poul Vibsig Pedersen (SIMAC).

I need to start by thanking the participants from working group 1.

Due to the number of participants we had to divide into 3 sub-groups covering different items and so normal chairmanship was impossible. Thank you for never stopping to work so eagerly on, so as to give your input to a better Model Course.

The first day we had the opportunity to introduce ourselves, background, experience etc.

We divided the work dealing with IALA V 103-1 (Part A & 8 modules) between the 3 sub-groups. We also had a discussion as to why & how we were going to continue the work.

Tuesday the sub groups worked steadily along with their task.

All the time there was a good chemistry within the groups, and the participants had long and fruitful debates.

Wednesday work carried on and we were assigned with an additional task: Compare your work with the "VTS Operator Competence Chart". Here we definitely "hit the wall".

The VTS Operator Competence Chart is written in the IMO/STCW fashion and the Model Course in quite another fashion. After some debate and consultations we started all over again adding for instance "action verbs" to "Learning Objectives" in Model Course.

The first review finished Wednesday and the second review went along Wednesday or Thursday morning depending upon sub group.

Part A and all 8 modules have been revised twice.

Sub-working groups having finished their document revision, two continued with revision of VTS Operator Competence Chart and preparing sub-working group reports. Please see below.

Thank you to all participants, IALA & Warnemünde for an interesting workshop.

10.1.1 Sub- working group 1

The sub-working group reviewed and revised:

- 1 Module 1 (Language);
- 2 Module 5 (Communication Co-ordination);
- 3 Module 7 (Personal Attributes).

The modules were reviewed for currency and some adjustments were made to the references.

The group determined that formatting and arrangement of V103/1 version 1.1 is inconsistent with established training documentation, i.e. Learning Objectives need a clear actionable statement and

should be followed by enabling objectives containing action verbs. This must be completed throughout all IALA training documents.

Particular changes we would like to recommend that may affect all the modules of V103:

- delete references: IMO Standard Marine Navigational Vocabulary (SMNV), R19, and Seaspeak Training Manual, R25, were replaced by IMO Standard Marine Communications Phrases, R20;
- delete the term 'marine reporting'; it is not defined and does not seem to be any different to ship reporting;
- further work is needed in the following areas:
 - in reviewing the accuracy of the references both their continued existence and whether their page numbers match with the latest edition;
 - tables need to be numbered;
 - headings not consistent. For instance, all section 3's in V103/1 are titled 'subject areas' but then in their associated section 4's are titled 'learning objectives';
 - recommend throughout V103 that "generative English" be changed to 'English';
 - when the enabling objectives are further developed for Module 1, Language, enabling objectives for native language should also be included;
 - deletion of table 1 – VTS Operator Competence Chart. Columns 3 and 4 of this chart should be incorporated with the enabling objectives once they are complete;
 - recommend VTS Committee align the introductions across all modules and improve the content. For instance, the qualification of instructors is covered at the beginning of 103/1 and does not need to be addressed in any module introduction;
 - recommend insert IMO and IALA reports on E-navigation as references.
 - recommend IALA VTS Committee create a work item for the next session to develop lists of situations and their associated responses using SMCP in VTS areas.
- the intention of SMCP is to avoid misunderstandings. What do we need in the VTS? You could be very proficient in English, but is that really necessary? The following text should be deleted from Module 1, Language, page 30 of 78 and incorporated in an annex.

In the United States of America the Teaching of English as a Foreign Language (TOEFL) test is used and in the United Kingdom the International English Language Testing System (IELTS) is used. Other countries also have similar testing systems.

...

Has partial command of the language, coping with overall meaning in most situations, though is likely to make many mistakes. Is not able to use complex language.

10.1.2 Sub- working 2

The sub-group reviewed and revised:

- 1 Module 2 (Traffic management);
- 2 Module 8 (Emergency situation).

We first looked at both and compared them to the subject outline and made changes to the recommended competence levels as agreed to by the group. Next we compared the subject outline to the learning objectives in the detailed teaching syllabus and made additions and modifications which are noted in red.

As requested we then compared the detailed teaching syllabus to the Table1 – VTS Operator Competence Chart for modules 2 and 8. On completion it was determined by another group that “Learning Objectives” were not sufficiently detailed in the modules. We then proceeded to review modules 2 and 8 and insert “Learning Objectives” as necessary which are also noted in red.

There was great co-operation and input by all members of the group. The experiences and expertise of the members contributed to the overall success of the group.

10.1.3 Sub- working group 3

The sub-working group reviewed and revised:

- 1 Module 3 (Equipment);
- 2 Module 4 (Nautical Knowledge);
- 3 Module 6 (VHF Radio) of the V-103/1 (2005).

The group reviewed the three modules and the associated parts of the VTS Operator Competence Chart of V-103. Thereafter, discussed and revised the content with an aim to meet with the current and predicted changes over the next 10 years.

Specifically, the group decided to:-

- 1 Review and change subject areas and other associated items to reflect the current situations and make them fit for purpose;
- 2 Add a new module to V-103/1 for simulated exercise and move all references to requirements on simulated exercise to this new module;
- 3 Re-phrase the headings under Learning Objective of the Detailed Teaching Syllabus of each module by adding action verbs to reflect the expected competence;
- 4 Suggest to remove the Recommended Hours for each Subject Area from the Subject Outline of each module and to provide only a recommended total hours for each module;
- 5 Suggest moving nautical related subject items (radar principle; radar operation and ARPA principle) from Module 3 to Module 4. The reason is that trainees with recognized nautical background should not be required to be re-trained on them;
- 6 We further suggest that consideration to be given by IALA to use e-learning to achieve the theoretical parts of V103;
- 7 It should be taken into consideration that a unified computer based examination system should be established;
- 8 Due to lack of time it was not possible to review and change the Reference and Teaching Aid areas in the Detailed Teaching Syllabus. Also the section in V-103/1 covering Teaching Aids (2.8), Equipment required for each trainee (2.9) and References (2.10) requires revision. It is suggested that this be done at another time.

Overall, the workshop was successful, provided learning experience and cheerful event for the participants of our sub-working group.

Best wishes and Success to IALA.

10.2 Report of Working Group 2 – V103/2

The report was introduced by Bob Shaw (South Tyneside College) and was supported by a presentation, which is at ANNEX F.

Bob Shaw said that there had been a page by page review of the document, which prompted intense discussion. Going into the detail, he began with an overview of the work done and then followed with details concerning:

- 1 Table 2 – VTS Supervisor Competence Chart;
- 2 Course outline;

- 3 Individual modules;
- 4 Future work.

The WG had been concerned about the References which may be superseded and out of date and which they had therefore removed to an Annex.

The Levels of Competence were left untouched as were the Competence Charts, which were considered to remain in the Recommendation V-103.

Extensive work had been done in the Course Outline and special mention was made that additional nautical knowledge should more or less be replaced by Advanced Traffic Management. The hours of duration were considered to be a guide and were therefore not changed. Approved/accredited Prior Learning was also discussed. Bob Shaw then explained proposals from the WG regarding different headlines and the content attached to them, which are now more in line with the academic teaching. Training Manuals were proposed to be developed where more details regarding all VTS training could be stated.

Bob Shaw concluded with some complimentary remarks about the arrangements for the workshop, the technical tours, Warnemünde and the weather.

10.3 Report of Working Group 3 – V103/3 & V103/4

The report was introduced by Kevin Gregory (Port of London Authority (PLA)) and was supported by a presentation, which is at ANNEX G.

Kevin Gregory said that for model course V103/3, the entire document had been reviewed, after which a modular approach was taken to aligning the course with the core modules of model courses V103/1 and V103/2. Additional guidance was given to VTS authorities to enable the development of training policy.

- 1 It is recommended that a training programme is always clearly stated.
- 2 SMART training as a concept was introduced: (see acronym definition in presentation slides).
- 3 A new section was proposed to deal with continual professional development, which would mean that a VTSO should always be trained regularly.

For model course V103/4, it was reviewed and reformatted to enable the provision of a standardised tool, to enable the practical delivery of V103/3 On the Job Training.

This course is considered to be very important as it concerns Train the Trainer. The WG proposed two routes to becoming an Instructor – one being recruited from VTSOs and the other from VTS Supervisors. The WG also proposed that it should be possible to separate the course into two halves where the part dealing with education would be able to be held at another place – if the educational experience could not be given at the VTS. The VTS-specific part was however proposed to be held within the relevant VTS organisation.

The chairman thanked all the participants for an excellent work during the week.

10.4 Recommendation V-103

This report was made by Captain Terry Hughes.

Terry Hughes thanked all the WG for their hard work during the week, which had resulted in the production of a lot of documentation. He explained that whilst the WG had been ‘in session’ a small drafting group from the Steering Committee had been reviewing Recommendation V-103. He emphasised that one main focus was to clearly express that the VTS Operator is only licensed to act as a VTSO after the successful completion of the VTS Operator Course and the OJT Course. He also pointed out the fact that training was one of the most important issues when it comes to VTS. However, it had not been possible to complete the review and so would be further worked on at VTS30, when it would also be possible to take into account the outcomes of the Workshop.

The chairman mentioned that the accreditation process will be developed and that IALA are willing to help in that process. Possibly there may be a special IALA accreditation team to act for IALA member states in the future. Terry Hughes also mentioned the importance for the relevant authority appointing a VTS to make clear when it should be a VTS and not a SRS or any other port service.

Terry Hughes the raised another issue that had been much discussed during the workshop and this was the need for further workshops. There seemed to be a common understanding that a future workshop regarding both simulation training and the train-the-trainer concept was needed. Simulator equipment is quite expensive and Terry Hughes therefore proposed that the manufacturers could also contribute by developing stand-alone-computer training that would be able to be used at VTS centres and so be continuously available for the training of VTSOs.

11 SESSION 16 – CLOSING OF THE WORKSHOP

This session was chaired by Neil Trainor.

11.1 Review of Workshop Conclusions and Recommendations

Draft conclusions and recommendations were reviewed and then agreed by the workshop delegates. There were 14 Conclusions and 11 Recommendations (see ANNEX H).

11.2 Status of Output Documents

Terry Hughes said that, subject to final editing, which would take place at VTS30, the four Model Course documents were ready to go to Council for approval. The revision of Recommendation V-103, started at the workshop, would be completed at VTS30 and, subject to VTS Committee approval, would also be forwarded to Council.

11.3 Closing of the Workshop

11.3.1 Remarks by Mr Ralf Wesseling, Head of Department of Shipping, WSV North & Northwest, of the German Federal Waterways and Shipping Administration.

Dear Mr. Secretary General,

Dear Mr. Chairman,

Dear Ladies and Gentlemen,

It is a great pleasure for me to represent Germany's Federal Waterways and Shipping Administration as one of your hosts here in Warnemünde. Also I welcome the opportunity to address my closing words to the VTS-experts of IALA, which came from all around the world to participate at this IALA-VTS-Training-Workshop. You are to be congratulated; both on the importance of the themes that have been selected for the workshop and for the chosen venue here in Warnemünde – one of the Baltic Sea's most traditional as well as dynamic coastal region, that – at least to my mind - never fails to excite its visitors.

By resuming this week's results, I think we can proudly look back on a fruitful and successful workshop. In an atmosphere of growing global trades, increasing demands of ports and waterways and upgraded requirements of environmental protection the need for navigational safety and efficient traffic becomes more and more enforced in every region of the world. As Vessel Traffic Services are one of the major tools to prevent dangers to shipping as well as the most important interface between shipping and the responsible shore side authorities, there is an immediate context between the level of education and training in relation to the quality of service being provided by a VTS. It is well-known, that only well-educated and effectively trained VTS-personnel on a high international standard can assure sustained success to meet the demands of navigational safety. Also it is expected by the shipping community that training-levels of VTS personnel are similar to those standards imposed on shipboard personnel and that VTS personnel have to be aware of the needs on board.

Now, this is just the point where I am emphasizing, of course, IALA's part in the VTS-world. With its recommendation "V-103", IALA has settled a globally accepted framework to develop training and education measures for VTS-personnel in a coordinated and structured manner. Additionally I would like to stress IALA's anticipatory activities. I would like to mention its integrating role - bringing together the authority's requirements with the industrial member's technical performance - or IALA's working on Aids to Navigation matters, the latter one is appreciated very much in Germany.

As I review this week's results achieved in the working groups and the outcome of this workshop in whole, I am fully convinced that we have improved this developing process once more, that we have contributed to a better performance of VTS and that we came again one step closer to one of our general aims, i.e. to maintain and improve navigational safety. All workshop participants deserve great credit for their efforts to improve on this mature IALA recommendation and its sub-documents.

Furthermore I assume that we are now entering a crucial stage in the updating procedure of this recommendation. While new technologies like e-navigation are entering the VTS-world, we should take a close look at these developments from a broader perspective. There is a clear need to determine what kind of integral role those developments can play in a modern VTS together with an up-to-date educated personnel. Let's see how we can design solutions from which all (the shipping community as well as the responsible authorities) will benefit.

Besides I hope, that the German Federal Waterways and Shipping Administration was your convenient host this week. Even if there was by far not enough time to view all aspects not only of this beautiful Baltic coast landscape but also and especially of our VTS-measures, we assume that your visits to our key structural components like the local VTS-Centre or MV Arkona could provide a small overview of the measures that are carried out over here.

Finally let me express my thanks to the Warnemünde organisation staff and to all IALA secretary members for organising this workshop in a brilliant manner.

As I am looking forward to the next IALA-VTS-Workshop and its results let me wish it and you every success. Also I would like to thank all participants for being here. I wish you all a good and safe journey home. Maybe we could contribute to make you remember this workshop for a longer period of time.

Mr. Secretary General,

Mr. Chairman,

Ladies and Gentlemen,

Thank you very much on behalf of the German Federal Waterways and Shipping Administration!

11.3.2 Remarks by IALA

Torsten Kruise said that it had been a great pleasure to see delegates so fully engaged and he congratulated them what they had achieved. He remarked that we live in a changing world, with the freedom of the open sea coming to an end and control of ships tending towards that experienced by aviators. This indicated a need for trained VTS operators; a need that will grow as the anticipated mandatory training approaches. With accidents happening in VTS areas, operators must know how to react and, if necessary, be proactive.

Turning to Mr Wesseling, Torsten Kruise thanked the German administration for hosting the workshop, providing an environment conducive to work and even managed the weather.

Acknowledging the helpful and cheerful support provided by the WSV and HSW staff, Torsten gave small tokens of appreciation to Ms Ute Hammersdorf, Mr Max Dolberg and Mr Tom Dehmel. He then acknowledged the efforts of the Steering group members and the Working group Chairmen with other small tokens of appreciation.

Finally the Secretary-General thanked the delegates for their participation and hard work, saying that he hoped they had all benefited from the week. He then congratulated everyone on

completing the objectives of the workshop and wished them a safe return home, although he expected to see some delegates at VTS30 the following week.

11.4 Closure

Neil Trainor concluded proceedings by thanking everyone for their participation and hard work and he too wished everyone a safe journey home. He then declared the workshop closed.

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ANNEX B. PRESENTATION BY TERRY HUGHES - HISTORY & CURRENT STATUS OF V103



A presentation slide with a light blue background and a wavy top border. The title 'VTS Training' is in red. A 'IALA AISM' logo is in the top right corner. The slide contains the following bullet points:

- My journey ...
- 1982 developed and commenced VTS training for ...
 - London, Harwich, Medway
 - Extended to other UK ports and ...
 - Ireland, Finland, Australia, Sweden, Hong Kong and Saudi Arabia
- Participants included VTSOs and Pilots

A small number '2' is in the bottom right corner.



VTS Training

- **My Goal ...**
 - To obtain a specific qualification for VTSOs
- **How ...**
 - Write articles about VTS and make presentations at all levels of industry including to Government

3



VTS Training

- **Timeline ...**
 - Nov'68 - IMCO Resolution A.158 (ES.IV) - Recommendation on Port Advisory Services (1/2 page)
 - Nov'85 - IMO Resolution A.578(14) - Guidelines for Vessel Traffic Services (one short paragraph on VTSO training)

4

VTS Training



- **Timeline ...**

- **STCW95 - invited IMO to consider provisions covering training and certification for VTS personnel ...**
- **Jun '96 - 8th VTS Symposium - Rotterdam - need for development of international standards for VTS and use of simulation techniques extremely important ...**
- **Sept '96 - Ad Hoc Committee formed as part of the IALA VTS Committee ...**

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VTS Training



- **Timeline ...**

- **Nov '97 - IMO adopted Resolution A.857(20) - Guidelines for Vessel Traffic Services
(Complete Annex - 10 pages - on VTSO training)**
- **Jun '98 - Recommendation V103 on Standards for Training and Certification of VTS Personnel**
- **Jun '99 - Model Course V103/1 published**

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VTS Training



- **Timeline ...**

- Sept'98 - IALA submitted work programme on Standards for Training and Certification of VTS personnel to IMO (MSC)
- May'99 - International seminar at Trinity House London on the Co-ordination of VTS Standards
- Various workshops held in Canada (Feb'99 and Feb'00), Spain (Feb'01), UK (Feb'02), and Netherlands (Feb'03) - to assist in development of Model Courses, Simulation and Accreditation

7

VTS Training



- **Timeline ...**

- May'00 - IMO MSC Circ 952 recommends V103 training for VTS personnel - V103/1,2,3
- Jul'02 - SOLAS V R12 - recognition of VTS
- Dec'02 - IMO MSC Circ 1065 recommends V103 training for VTS personnel - V103/1,2,3,4

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VTS Training

- What now ?
- Accreditation of VTS training - IALA V103 standard
- Standardised V103 training internationally
- Inter-country recognition of IALA V103 training
- Mandatory VTS training to IALA V103 standard

9

VTS Training

- Inter-country recognition and reciprocity



10

VTS Training

- **Goals for this Workshop ...**
 - Exchange VTS training expertise
 - Review and update as appropriate V103 Recommendation
 - Review and update as appropriate V103 Model Courses

11

VTS Training

- **Points to consider ...?**
 - Future role of VTS within VTM
 - Future role of VTSO - more demanding
 - Increased port security - surveillance
 - Is there a need for new Model Courses?

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VTS Training

- Today ...
 - VTS centres are increasing throughout the world
 - Who is carrying out the training and where?
 - What about accreditation?

13



VTS Training

**VERY IMPORTANT THAT IALA V103
STANDARDS ARE MAINTAINED**

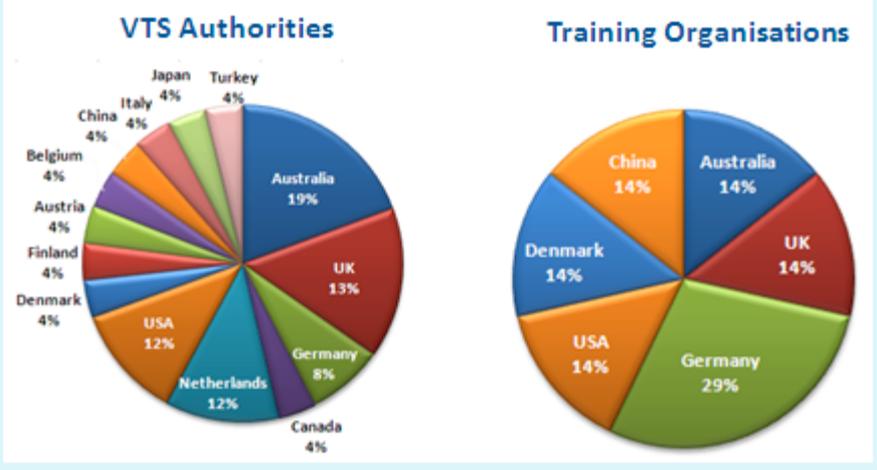
14

ANNEX C. PRESENTATION BY TERRY HUGHES - PRE-WORKSHOP QUESTIONNAIRE



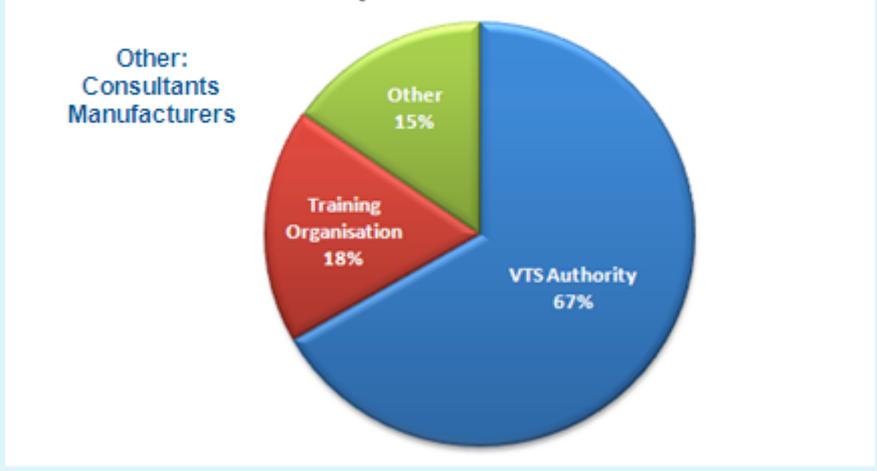
Questionnaire Results

Total International Responses - 39



Questionnaire Results

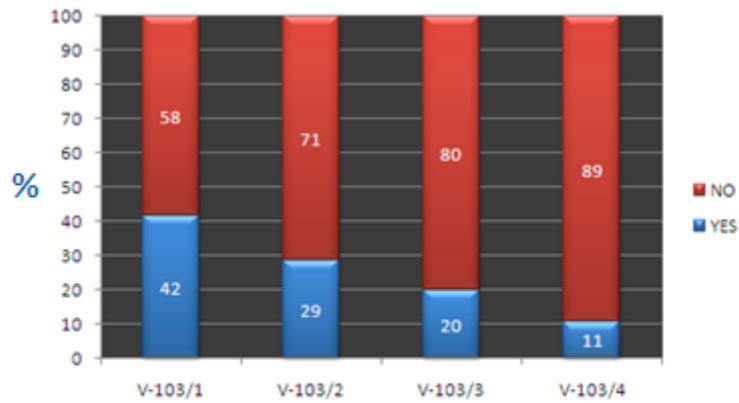
Total International Responses - 39



Questionnaire Results

Accreditation of VTS Training

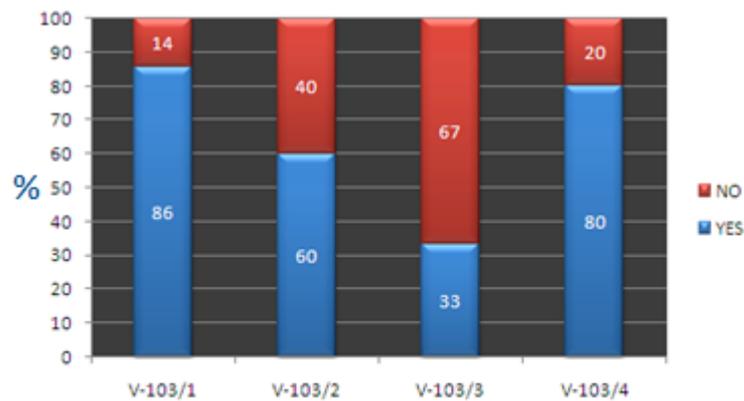
VTS Authorities



Questionnaire Results

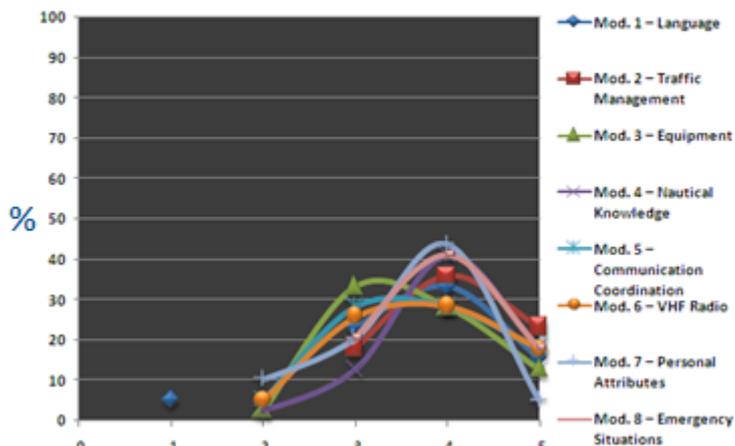
Accreditation of VTS Training

Training Organisations



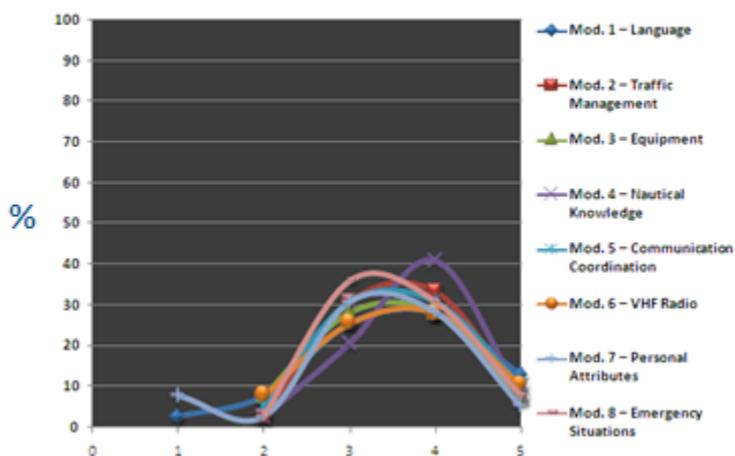
Questionnaire Results

Model Course V-103/1 - Content Useful 1 → 5



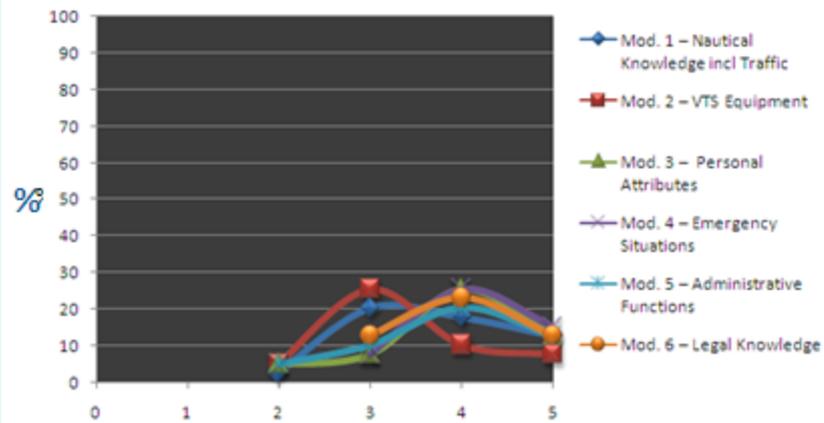
Questionnaire Results

Model Course V-103/1 - Guidance Useful 1 → 5



Questionnaire Results

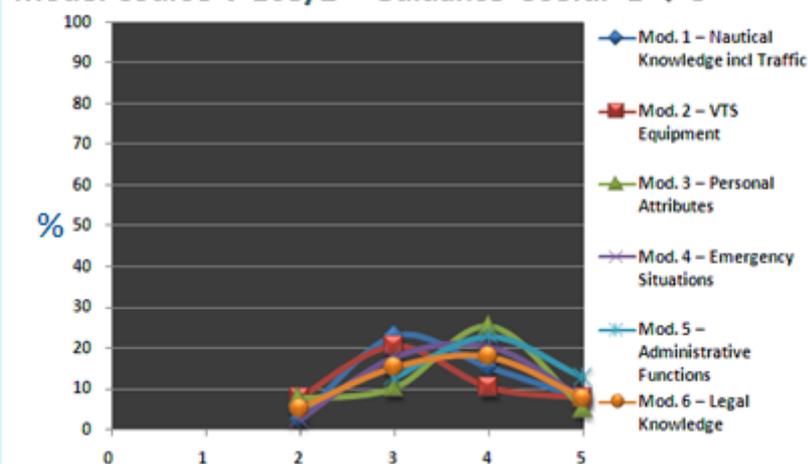
Model Course V-103/2 - Content Useful 1 → 5



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Questionnaire Results

Model Course V-103/2 - Guidance Useful 1 → 5



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Terry Hughes

'Groovy' VTS Guru



ANNEX D. COMPOSITION OF WORKING GROUPS

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Hagmeyer	Joerg	PINTSCH BAMAG
Halttunen	Mika	Finnish Maritime Administration
Humphrey	Scott	USCG
Jang	Eun-Gyu	MLTM
Jeong	Ki-Nam	MLTM
Jaber	Khaled	PINTSCH BAMAG
Nasar Abdul Hadi	Abdul	Marine Department Malaysia
Nielsen	Hans	Great Belt VTS
Peute	Leo	Rijkswaterstaat National Vessel Traffic Management Center
Pieroway	Lana	Canadian Coast Guard
Schuett	Todd	Kongsberg Norcontrol IT

IALA Workshop on VTS Training
A consistent approach to VTS Training



WSV.de

Wasser- und
Schiffahrtsverwaltung
des Bundes



7 - 11 September, 2009

Technologiepark Warnemünde GmbH
Konferenzzentrum
Friedrich-Barnewitz-Str. 5
18119 Rostock-Warnemünde
Germany

Workshop Programme

DAY 1 - MONDAY 7 SEPTEMBER, 2009

<i>Time</i>	<i>Activity</i>	<i>Presenter</i>	<i>Chair</i>
1200 - 1345	Registration / Welcome tea or coffee		
1200 - 1300	Steering Group & Working Group Chairs meeting – IALA Office		
	Session 1 - Opening of the Workshop		Neil Trainor - Vice Chairman IALA VTS Committee
1400 - 1445	Welcome from Federal Waterways and Shipping Directorates North & Northwest, Germany Welcome from IALA Administration (Programme, Health & Safety Brief)	Christian Forst - Head of Traffic Technologies Torsten Kruese - Secretary General Mike Hadley - Technical Co-ordination Manager IALA	
	Session 2 - Presentations		Neil Trainor
1445 - 1615	1 – History & current status of V103 2 – Pre-workshop questionnaire 3 – Expected Outputs from the Workshop	Terry Hughes Terry Hughes / Neil Trainor Monica Sundklev	
1615 - 1645	Workshop Group Photograph		
	Session 3 - Working Groups		Terry Hughes
1645 - 1730	Working Groups - Selection		

1730 – 1900
Welcome reception in Konferenzzentrum, 1st Floor
(Beverages and Finger Buffet will be served)

Free evening

DAY 2 - TUESDAY 8 SEPTEMBER 2009

<i>Time</i>	<i>Activity</i>	<i>Group Number / Topic</i>	<i>Location / Chair</i>
	Session 4		
0900	Administrative Details (as required)	Mike Hadley	
0900 – 1045	Working Groups in session	Working Group Chairs / Rapporteurs	
1045 – 1115	Break		
	Session 5		
1115 – 1300	Working Groups in session	-	
1300 – 1400	Lunch		
	Session 6 - Working Groups		
1400 – 1515	Working Groups in session	-	
1515 – 1545	Break		
	Session 7 - Guided Tour		
1545 – 1700	VTS / Ship Engine / Ship handling simulation Centre	Tom Dehmel	HFSW

Free Evening

DAY 3 - WEDNESDAY 9 SEPTEMBER 2009

<i>Time</i>	<i>Activity</i>	<i>Group Number / Topic</i>	<i>Location / Chair</i>
	Session 8 - Working Groups		
0900	Administrative Details (as required)	Mike Hadley	
0900 – 1045	Working Groups in session	Working Group Chairs / Rapporteurs	
1045 – 1115	Break		
	Session 9 - Working Groups		
1115 – 1300	Working Groups in session	-	
1300 – 1400	Lunch		
	Session 10 - Working Groups		
1400 – 1515	Working Groups in session	-	
1515 – 1545	Break		
	Session 11 - Working Groups		
1545 – 1700	Working Groups in session	-	

**Workshop Dinner
1930 for 2000
Kurhaus**

Dress Code: Smart Casual

DAY 4 - THURSDAY 10 SEPTEMBER 2009

<u>Time</u>	<u>Activity</u>	<u>Group Number / Topic</u>	<u>Location / Chair</u>
	Session 12 - Working Groups		
0900	Administrative Details (as required)	Mike Hadley	
0900 – 1045	Working Groups in session	Working Group Chairs / Rapporteurs	
1045 – 1115	Break		
	Session 13 - Working Groups		
1115 – 1230	Working Groups in session	-	
1300 – 1400	Lunch		
	Sessions 14 & 15- Technical Tours		
1400 – 1700	<ol style="list-style-type: none"> 1. Presentation by Ute Hammersdorfer 2. Waterways and Shipping Administration vessel 'Arkona' 3. Warnemünde VTS Centre 4. Warnemünde Old lighthouse 	Waterways and Shipping Office, Stralsund	Technical Tours are all within walking distance of the workshop venue.

Free Evening

DAY 5 - FRIDAY 11 SEPTEMBER 2009

<u>Time</u>	<u>Activity</u>	<u>Presenter</u>	<u>Chair</u>
	Session 16 –Working Group Reports		Neil Trainor
0900	Administrative Details (as required)	Mike Hadley	
0900 – 0920	Report from Working Group 1 – V103/1	Paul Vibsig Pedersen	
0920 – 0940	Report from Working Group 2 – V103/2	Bob Shaw	
0940 – 1000	Report from Working Group 3 – V103/3	Kevin Gregory	
1000 – 1020	Review of draft revised V103 Recommendation	Terry Hughes	
1020 – 1045	Break		
	Session 17 – Workshop Conclusion		Neil Trainor
1045 – 11345	Discussion / Q&A	Mike Hadley	
1145 – 1200	Closing of the workshop		Neil Trainor
	Waterways and Shipping Administration	Ralf Wesseling Head of Department of Shipping, WSV North & Northwest	
	IALA	Torsten Kruuse Secretary-General IALA	

End of Workshop

WORKING GROUPS

Working Group 1 – V103/1 Operators

Chair Paul Visbig Pedersen (SIMAC)

Working Group 2 – V103/2 Supervisors

Chair Bob Shaw (South Tyneside College)

Working Group 3 – V103/3 OJT and OJTI

Chair Kevin Gregory (PLA)

ANNEX E. SOCIAL PROGRAMME

- 1 On Monday, 7 September 2009, an evening reception for delegates and partners, hosted by the Port of Rostock, was held on the 1st Floor foyer of the Konferenzzentrum of the Technologiepark Warnemünde GmbH.
- 4 On Wednesday, 9 September 2009, a workshop dinner for delegates and partners, hosted by Atlas Elektronik, was held at the Kurhaus restaurant, Warnemünde.

ANNEX F. PRESENTATION BY BOB SHAW – REPORT OF WORKING GROUP 2

IALA Model Course V103/2

VTS Supervisor
Advancement Training
Edition 1.1 December
2005

Working Group 2

Approach

- Page by page review of document, discussing/agreeing on changes.
- Review of Table 2 VTS Supervisor Competence Chart

Synopsis

- References (2.8) can be superseded and made redundant, therefore be removed to an appendix and updated regularly but not appear in detailed syllabus.
- Tables:
- Levels of Competence is almost a direct quote from Bloom's Taxonomy and therefore not edited.
- Assessment Levels Table is in fact a 5-point scale to indicate progression/ability through the training period and therefore not changed.

Synopsis

- Tables continued:
- Table 2 – VTS Supervisor Competence Chart can remain in the parent document V103 to describe in general terms the knowledge / skill outputs of the model course

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Individual Modules (6)

- Reworded all 'Aims' to become clearly aligned to "Learning Objectives" to be interpreted by a Competent Authority.
- e.g. One Aim of 'Additional Personal Attributes' states:
 - Trainee will recognize when stressful situations are developing, and demonstrate the ability to apply management techniques to minimise the effect of such situations on the efficient operations of a VTS Centre.

Individual Modules

- Changed the 'Learning Objectives' column of each 'Detailed Teaching Syllabus' to read instead 'Subjects'.
- Each Subject was amplified by a number of details to ensure that specific topics or teaching points were covered within the syllabus.
- The group did not attempt to develop each Subject into Enabling Objectives, preferring to leave that to a Competent Authority / Training Institute.

Future Work

- There is a need to develop the material contained in each Guideline for the purpose of creating more detailed Training Manuals.

Facilities & Organisation

- Excellent staff and support
- Informative technical visits
- Facilities and food / refreshments first-rate
- Weather 

**ANNEX G. PRESENTATION BY KEVIN GREGORY – REPORT OF
WORKING GROUP 3**

Working Group 3

Report

V-103/3

What is new?

Purpose

- The purpose of the model course is to provide a consistent approach to the training of VTS Personnel in a specific operational VTS environment. Upon successful completion of the model course VTS Personnel should be a competent to assume operational VTS duties as determined by the VTS Authority.
- The model course will complement the training delivered in model courses V-103/1 and V-103/2 to equip VTS Personnel with the specific knowledge of local VTS operational, geographical and equipment related procedures.

Presentation

- This model course is specific to the VTS Centre and the specific format should be developed to meet the specific requirements of the VTS Authority.
- The model course should consist of distinct components to facilitate the end result of the provision of VTS Personnel that are capable of performing VTS as directed by the VTS Authority.

Presentation

- The model course may be split into several phases:
- Phase 1 – INDUCTION TRAINING – consisting of general introductions to makeup of the policy, procedures and management of the VTS Authority,
- Phase 2 – PRE LIVE VTS OPERATIONS – consisting of focussed training on specific areas such as local procedure, VTS equipment and emergency response,
- Phase 3 – LIVE VTS OPERATIONS – the provision of live VTS under the close supervision (one-on-one basis) of an authorised member of VTS personnel appointed by the VTS Authority.

Presentation

- The specific format of the course developed by the VTS Authority should be flexible and adaptable in nature to reflect:
- The background of the VTS personnel under training including their past experiences and knowledge gained,
- The progress of the individual members of VTS personnel under training to reflect their specific development needs.

VTS Authority Policy

- VTS Authorities are recommended to develop a specific overarching policy to cover the high level principles that are considered in the training of VTS personnel from initial recruitment through to authorisation and continual professional development.
- Such a policy will enable a VTS Authority to demonstrate to the relevant Competent Authority a structured process to the selection, training and development of VTS personnel.

VTS Authority Policy

- The establishment of a training record book/task book/checklists,
- Identify a process for the selection, training and development of suitably qualified VTS personnel to act as on-the-job trainers,
- Specify a process to enable the assessment and authorisation of VTS personnel to enable them to perform operational duties as defined by the VTS Authority,
- The procedure for the provision of adequate human and physical resources to meet the requirements of the model course (including access to VTS equipment for instruction purposes).

Duration

- Size and complexity of the geographic VTS Area,
- Type of VTS offered – INS, TOS, NAS
- The complexity and content of VTS operational procedures,
- The complexity and range of VTS equipment deployed,
- The resources available to deliver the training with reference to both human and physical resources,
- The number of VTS personnel undergoing training,
- The background of the VTS personnel under training including their past experiences and knowledge gained.

Content

- The broad modules that are to be covered in V-103/3 training should consist of, but not be limited to the following modules:
 - Traffic management,
 - Local Knowledge,
 - Personal Attributes,
 - Emergency Situations,
 - Communication Coordination/Language,
 - Equipment.

Training programme

- Clearly stated training plans for each subject area providing:
 - Clear learning objectives/goals,
 - Relate V-103/1 and V-103/2 competencies to local operations,
 - Specific assessment points to verify and ascertain competence in the subject area.

Training programme

- **S** - specific, significant, stretching
- **M** - measurable, meaningful, motivational
- **A** - agreed upon, attainable, achievable, acceptable, action-oriented
- **R** - realistic, relevant, reasonable, rewarding, results-oriented
- **T** - time-based, timely, tangible, trackable

Delivery

- The means of delivery may consist of, but not be limited to:
- Presentations,
- Demonstration,
- Discussion,
- Visits to stakeholders/allied services,
- Vessel trips,
- Delivery of live VTS under close one-on-one supervision.

Continual Professional Development

- VTS Authorities are recommended to develop a programme of continual professional development to ensure that the standard of training achieved within the V-103/3 mode course is achieved once operational duties have been assumed by the member of VTS personnel.

V-103/4

What is new?

Introduction

- Competent Authorities should ensure that in the development of V-103/4 training that one of the following approaches is developed for the certification of V-103/4 train-the-trainer qualified VTS Personnel:
- Develop and accredit a VTS specific course based on the guidelines in V-103/4.
- Appoint a specific third party training course which demonstrates compliance with the minimum requirements of V-103/4.

Purpose

- The course should provide a standardised tool for the practical delivery of V-103/3 on-the job training through the provision of tools to facilitate:

Purpose

- The creation and validation of training programmes,
- The practical delivery of training programmes in a variety of circumstances:
 - Presentation techniques,
 - Demonstration and practice techniques,
 - One-on-one live VTS operations.
- The provision of guidance on the assessment of VTS personnel,
- Development instructional, coaching and mentoring skills.

Modular Approach

- The modular process describes the essential components of a V-103/4 course that must be present to ensure that effective on-the-job training can be delivered within VTS Centres. This approach detailed allows for continuous development of a training process to enable a V-103/3 OJT instructor to meet the individual needs of trainees within VTS Centres.

Module 1

- **DEVELOPMENT of a VTS Centre specific training programme**
- Develop a programme of V-103/3 training to meet the individual needs of the VTS Authority/VTS Centre. This should include the development of measurable learning objectives that meet the requirements of model course V-103/3.

Module 2

- **PREPARATION of a trainee specific programme**
- Select the appropriate elements of the training programme to meet the trainees needs.
- Select appropriately qualified staff to conduct the elements of the V-103/3 training programme and assemble all necessary resources to enable the effective delivery of training.

Module 3

- **DELIVERY of V-103/3 training**
- Deliver training in the form of:
 - Instruction/presentations,
 - One-on-one Coaching,
 - Continuous mentoring.

Module 4

- **EVALUATION/ASSESSMENT/EXAMINATION of trainees**
- Review and conduct appropriate feedback, review and assessment/examination of trainees to ensure compliance with model course V-103/3 objectives.
- Validate the trainee's compliance with the V-103/3 model course and provide feedback to the trainee and VTS Management with regards to the suitability to assume operational duties.

Module 5

- **COMPLETION of V-103/3 training leading to authorisation to operate**
- Review training processes to enable continuous improvement and development of V-103/3 training programmes.

Thank you to

Working Group 3

kevin.gregory@pla.co.uk

ANNEX H. CONCLUSIONS & RECOMMENDATIONS

The following Conclusions and Recommendations are not necessarily listed in any order of importance.

1 CONCLUSIONS

- 1 The review and revision of Recommendation V-103 on the Standards for Training and Certification of VTS Personnel needs to be completed at VTS30 by the Personnel and Training Working Group.
- 2 Subject to reformatting, the revised V103 model courses should be adopted.
- 3 IALA should actively encourage Competent Authorities to ensure that the training of VTS personnel is undertaken by accredited training organisations.
- 4 In order to meet the growing demand for the accreditation of training organisations, IALA should consider the provision of accreditation services for VTS Centres.
- 5 The requirement for mandatory training of VTSOs is considered inevitable.
- 6 IALA members should be able to access a list of accredited Training Courses / organisations.
- 7 The use of the word 'Basic' in the title of V-103/1 and associated documentation detracts from the significance of the training.
- 8 There is a need for additional model courses on:
 - a Navigation Assistance Service (NAS);
 - b VTS Simulation;
 - c Incident response;
 - d The 'training the trainer' concept.
- 9 There is a need for Guidelines on Information Service (INS) and Traffic Organisation Service (TOS).
- 10 It would be beneficial to provide guidance on the emerging use of slot time management to minimise risk and improve efficiency in VTS operations.
- 11 For the benefit of the mariner and shore authorities, there is a need to clarify the difference(s) between a Ship Reporting System, operated as a VTS and also operating as a VTS, and a VTS.
- 12 There is a need to provide guidance on standardised nomenclature when referring to a VTS.
- 13 There is a need to provide guidance on how to assess the need for the type of service a VTS should provide.
- 14 VTS Authorities and training organisations would benefit from the provision of a VTS Training Manual, which would complement the V-103 model courses.

2 RECOMMENDATIONS

- 1 IALA should consider the setting-up of a unit to undertake accreditation of VTS Training Courses.
- 2 IALA should prepare a discussion paper on mandatory training for VTSOs (including certification/accreditation) and encourage member states to support this initiative at IMO.
- 3 IALA should maintain a register (available to members) of accredited Training Courses / organisations.
- 4 The word 'Basic' should be dropped from the title of V-103/1 and associated documentation.
- 5 IALA should develop new model courses for:
 - a Navigation Assistance Service (NAS);
 - b VTS Simulation;
 - c Incident response;
 - d The 'training the trainer' concept.
- 6 IALA should prepare Guidelines for Information Service (INS) and Traffic Organisation Service (TOS).
- 7 IALA should prepare a Guideline on the use of slot time management and its role in planning as a VTS tool to minimise risk and increase efficiency.
- 8 IALA should seek to clarify the difference between a VTS and a Ship Reporting System (SRS) operated by a VTS and operating as a VTS.
- 9 IALA should develop a Recommendation about standard nomenclature when referring to a VTS Centre.
- 10 IALA should develop Recommendation V-119 on the implementation of VTS further, to include an assessment of need for the type of service a VTS should provide.
- 11 IALA should consider developing a VTS Training Manual, to complement the V103 Model Courses.
- 12 IALA should develop its website to include VTS Training.