

Input paper for the following Committee(s): check as appropriate

- ARM  PAP  ENG  
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Purpose of paper:

- Input  
 Information

Agenda item <sup>2</sup> 10.1  
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Author(s) / Submitter(s) China Maritime Safety Administration

## Proposal for Revision of G1027 on Simulation in VTS Training

### 1 SUMMARY

The VTS Simulation, a key component of VTS personnel training, provides an interactive environment for trainees. Through the simulation training, trainees can practice their skills and abilities, master the operation of VTS equipment and the workflow of the VTS center in which they will be working, and respond to developing unsafe and emergency situation. Considering that except for the corresponding revisions made in 2022 due to the revision of the IMO A.857(20), the G1027 guidance was last revised in 2005, it is necessary to revise it accordingly, as both VTS and training technology have changed considerably in the past eighteen years.

#### 1.1 Purpose of the document

The purpose of this document is to provide proposals for the VTS Committee when revising the guidance for G1027 SIMULATION IN VTS TRAINING.

#### 1.2 Related documents

- G1027 Simulation in VTS Training 2022 Edition 1.2  
G1156 Recruitment, Training and Certification of VTS Personnel  
VTS53-12.1.2 New VTS Task Register 2023-2027  
R0103 Training and Certification of VTS Personnel  
C0103-1 VTS Operators Training  
C0103-2 VTS Supervisor Training  
C0103-3 VTS On-the-job Training (OJT)  
C0103-5 VTS Recurrent, Refresher and Adaptation Training

### 2 BACKGROUND

- 2.1 IALA's VTS Committee Work Programme 2023-2027 incorporates a new task (Task 3.8.6) for the revision of G1027 on Simulation in VTS training, which is scheduled to be completed by VTS55.

<sup>1</sup> Input document number, to be assigned by the Committee Secretary  
<sup>2</sup> Leave open if uncertain

2.2 G1027 should be revised as a supplement to C0103 model courses that are currently undergoing revision.

### 3 DISCUSSION

- The diversity of simulations should be considered when carrying out the revision. There are many types of simulation training, such as desktop simulation, standalone or online simulation, etc. However, the focus of each type is different, while the revised model courses have a more detailed division of training for VTS personnel. It is recommended that in the revised guidance, the scope of application of various types of simulation training, as well as the minimum functional requirements of the VTS simulator, including a description of the virtual scenarios that should be generated by the simulator during the training process be further refined, so that trainees can acquire appropriate knowledge and skills.
- The integrated training of operating various types of simulators should be considered in the revision. The original guidance mentions full-mission simulators, but it is not clear how to combine operation of different types of simulators during training. For example, making full use of the combination of ship manoeuvring simulator and VTS simulator can effectively foster the situational awareness of VTS personnel who need to accurately identify unsafe situation of ships.
- The revision should consider the use of digital technologies in the VTS field. In the future, digital technology may have a revolutionary impact on the VTS operation, such as VDES\ARM, etc., as detailed in "TASK 1.9.4 Proceed with the 'living document' on 'Future VTS', including emerging technologies and Human Element". Both ship reporting and VTS services delivery would likely be carried out in a digital way.
- The new guidance provides templates of simulation training plan, task sheet for trainee and corresponding log sheets so that training institutions and VTS centers can refer to when implementing the training. Annexes A and B of this document provide templates of "simulation training plan" and "simulation training log sheet" for the task group's reference.
- China Maritime Safety Administration has trained a total of 1,342 VTS operators and 550 VTS supervisors in the past five years and has organized a total of nine capacity building trainings and seminars for VTS personnel in Asia with a total of 162 trainees, accumulating a lot of practical simulation training experience, hoping to play an active role in the revision of the guidance.

### 4 REFERENCES

- [1] Vessel Traffic Services Manual (Edition 7)
- [2] IMO Resolutions A.1158(32) GUIDELINES FOR VESSEL TRAFFIC SERVICES

### 5 ACTION REQUESTED OF THE COMMITTEE

The Committee is requested to consider the contents of this document and take appropriate action.

**ANNEX A**

*** simulation training plan		
items	description	
Name of training module	<i>For example: nautical knowledge, ship maneuvering and collision avoidance</i>	
Training objects	<i>VTS operators</i>	
Training mission	<i>Under the guidance of the instructor, the trainee completes the following training tasks: a) Maneuvering the ship in all circumstances for normal navigation b) Communication with VTS via VHF equipment</i>	
Training objectives	<i>a) Awareness of the factors affecting ship maneuvering and stability through simulation training b) Knowledge of the ship's navigational aids c) Key points of COLREGS 1972.....</i>	
Recommended hours	<i>3-5 hours</i>	
Training environment and conditions	<i>a) Training waters b) Ship's type c) Role of trainee d) Initial state of the ship e) Meteorological condition f) Condition of fairway</i>	
Training progress	preparation	<i>a) Instructors prepare the simulator and gives a general introduction of the training to the trainees. b) Trainees complete role assignments. c) Preparation for and discussion of a voyage plan. d) Trainees familiarize themselves with the equipment. e) Report to the instructors' station when trainees are ready.</i>
	implementation	<i>Instructors conduct the training exercise: .....</i>
	debriefing	<i>Instructor's evaluation based on the trainee's performance</i>
	feedback	
	assessment	

**ANNEX B**

***Simulation training log sheet	
Name : <i>Jeff</i>	Department : <i>***VTS center</i>
Name of training module : <i>nautical knowledge, ship maneuvering and collision avoidance</i>	
Date :	Location : <i>*** training organization</i>
Start time : <i>0900AM</i>	End time : <i>0950AM</i>
Role of trainee : <i>deck officer</i>	
Training concepts :	
Summary of trainees :	
Evaluation and Suggestions for Improvement :	