



IAMU Simulator Exercise Database (SimED)

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IAMU
International Association of Maritime Universities

Ad-hoc Working Group



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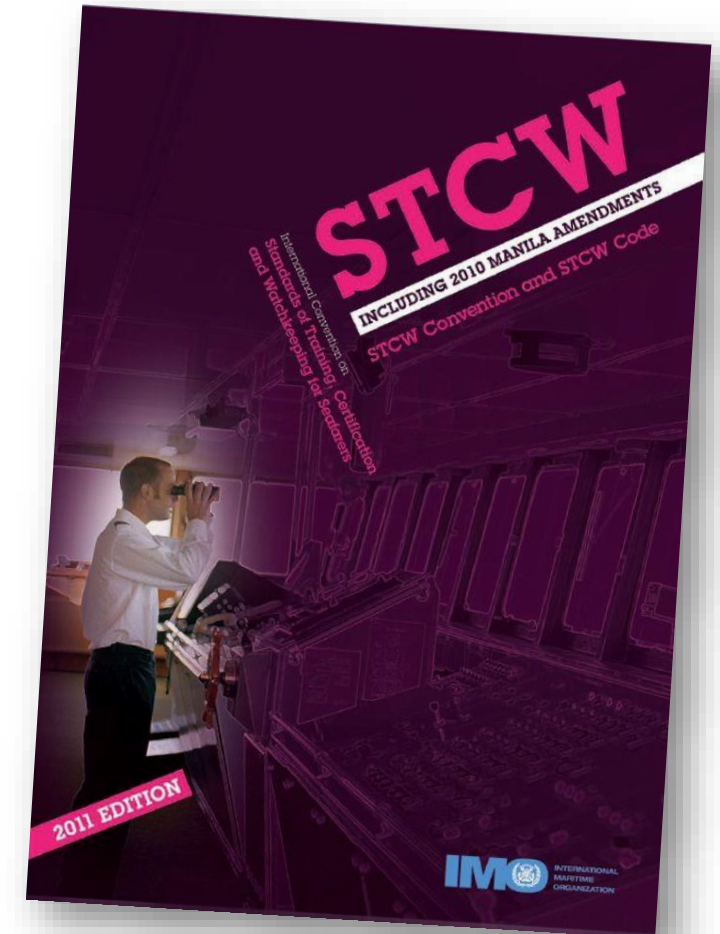
STCW Code, Section A-I/12

Standards governing the use of simulators

Training procedures

7 In conducting mandatory simulator-based training, instructors shall ensure that:

1. trainees are **adequately briefed beforehand** on the exercise objectives and tasks and are given sufficient planning time before the exercise starts;
2. trainees have **adequate familiarization time** on the simulator and with its equipment before any training or assessment exercise commences;
3. **guidance given and exercise stimuli are appropriate** to the selected exercise objectives and tasks and to the level of trainee experience;
4. exercises are **effectively monitored**, supported as appropriate by audio and visual observation of trainee activity and pre- and post-exercise evaluation reports;
5. trainees are **effectively debriefed** to ensure that training objectives have been met and that operational skills demonstrated are of an acceptable standard;
6. the use of **peer assessment** during debriefing is encouraged; and
7. **simulator exercises are designed and tested so as to ensure their suitability for the specified training objectives.**



Simulator exercises

STCW requirements

- designed and tested to ensure their suitability for the specified training objectives
- Briefed beforehand
- Appropriate exercise stimuli
- Effectively debriefed

Experience

- Developing a complex simulator exercise is time consuming
- Other simulator instructors could give valuable input



Why don't we share exercises today?

Credit as developer

Sender

- What's in it for me?

Awards

Part of a community



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Receiver

Peer-review quality process

- How do I know the exercise is of high quality?
- Takes time to "understand" an unknown exercise

Standardized exercise description

- I don't know the developer

Regular meetings

Simulator Instructor Camps

SimED Concept

- Cooperation between MET Institutions by sharing simulator exercises*
- Peer-reviewed quality assurance process
- Structured documentation of exercises*
- Web application for searching and downloading of exercises* and for handling of the review process
- Simulator instructor camps and digital meetings to exchange knowledge and experience



*Could easily be expanded to handle other teaching material such as assignments, presentations, digital lectures, quizzes etc.

What are the Advantages of becoming a SimED member?

1. Access to a wide array of quality assured simulator exercises that improve the quality of seafarer education and training.
2. Sharing exercises saves time that is spent on making new exercises.
3. The simulator exercises at your university can be quality assured by a peer-reviewed process.
4. Simulator instructors will have opportunities to widen their simulator training horizons by sharing their experience with other instructors through meetings and workshops.

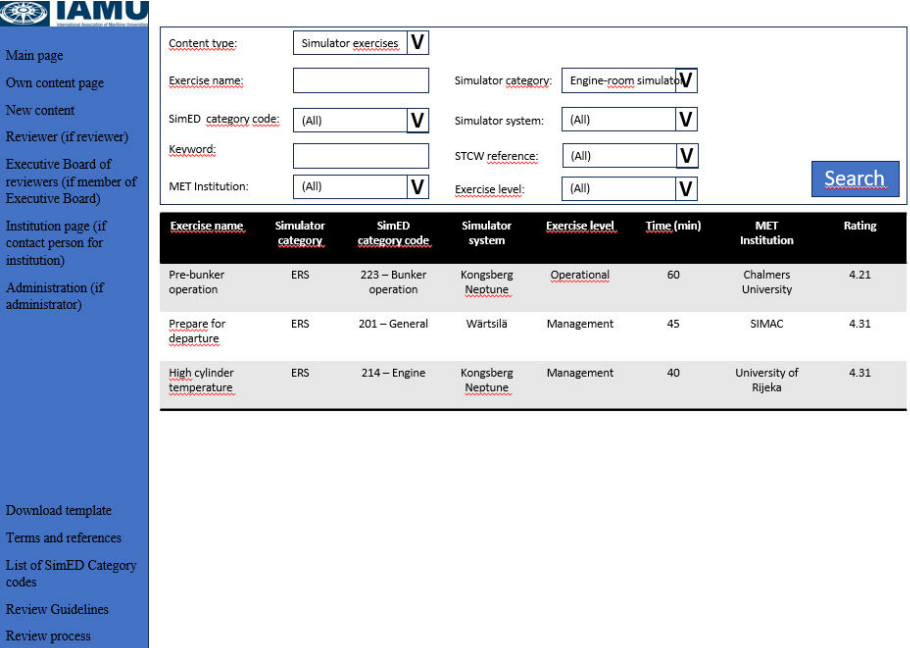
What are the requirements to be a SimED member?

1. Member of the International Association of Maritime Universities
2. To upload at least three exercises
3. To appoint at least three reviewers

Web interface

To be developed!

- Search for approved exercises
 - Download
 - Comment, rate and nominate for awards
- Add exercise
- Review process
- News
- Administration



The screenshot displays the IAMU SimED web interface. On the left is a blue navigation menu with links: Main page, Own content page, New content, Reviewer (if reviewer), Executive Board of reviewers (if member of Executive Board), Institution page (if contact person for institution), Administration (if administrator), Download template, Terms and references, List of SimED Category codes, Review Guidelines, and Review process. The main content area features a search form with fields for Content type (Simulator exercises), Exercise name, SimED category code (All), Keyword, MET Institution (All), Simulator category (Engine-room simulator), Simulator system (All), STCW reference (All), and Exercise level (All). A Search button is located to the right of the form. Below the form is a table of exercises with the following data:

Exercise name	Simulator category	SimED category code	Simulator system	Exercise level	Time (min)	MET Institution	Rating
Pre-bunker operation	ERS	223 – Bunker operation	Kongsberg Neptune	Operational	60	Chalmers University	4.21
Prepare for departure	ERS	201 – General	Wärtsilä	Management	45	SIMAC	4.31
High cylinder temperature	ERS	214 – Engine	Kongsberg Neptune	Management	40	University of Rijeka	4.31

On the right side of the interface, there is a 'SimED News' section with two articles: 'Invitation to Simulator Instructor Camp 20-21 April 2024' and 'Best Exercise of the Year Award 2023'.

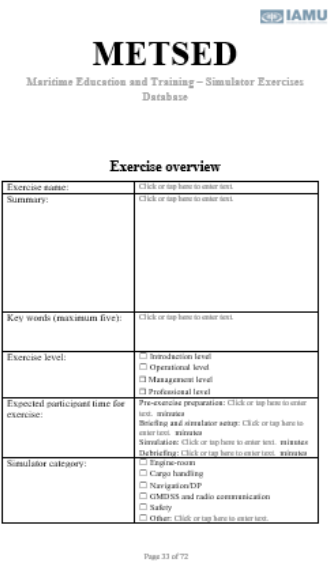
Exercise description

- Overview

- Summary
- Key words
- Level
- Category code
- Time
- ...

- Detailed description of the exercise for the instructor

- Participant Manual

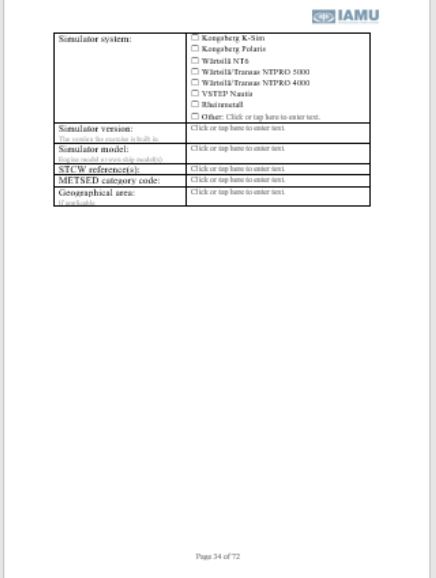


METSED
Maritime Education and Training – Simulator Exercises Database

Exercise overview

Exercise name:	Click or tap here to enter text.
Summary:	Click or tap here to enter text.
Key words (maximum five):	Click or tap here to enter text.
Exercise level:	<input type="checkbox"/> Introduction level <input type="checkbox"/> Operational level <input type="checkbox"/> Management level <input type="checkbox"/> Professional level
Expected participant time for exercise:	Pre-exercise preparation: Click or tap here to enter text. minutes Briefing and simulator setup: Click or tap here to enter text. minutes Simulation: Click or tap here to enter text. minutes Debriefing: Click or tap here to enter text. minutes
Simulator category:	<input type="checkbox"/> Equipment <input type="checkbox"/> Cargo handling <input type="checkbox"/> Navigation/DP <input type="checkbox"/> OMS/IS and radio communication <input type="checkbox"/> Safety <input type="checkbox"/> Other: Click or tap here to enter text.

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Simulator system:

<input type="checkbox"/> Kongsberg K-Sim
<input type="checkbox"/> Kongsberg Polaris
<input type="checkbox"/> Wärtsilä NT6
<input type="checkbox"/> Wärtsilä Training NTPRO 3000
<input type="checkbox"/> Wärtsilä Training NTPRO 4000
<input type="checkbox"/> VSTTP Navis
<input type="checkbox"/> Other: Click or tap here to enter text.

Simulator version: [Click or tap here to enter text.](#)


Simulator model: [Click or tap here to enter text.](#)

STCW reference(s): [Click or tap here to enter text.](#)

METSED category code: [Click or tap here to enter text.](#)

Geographical area: [Click or tap here to enter text.](#)

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Description of the exercise:
Characterize the exercise by its objective or goal, its 100 words maximum content. What will happen during the exercise?

[Click or tap here to enter text.](#)

Prerequisites for participation:
Identify the prerequisite skills, theoretical and practical knowledge and performance. Specify the exact ETOE competences.

[Click or tap here to enter text.](#)

Intended learning outcomes:
Identify the intended learning outcomes with an action verb according to Bloom's Taxonomy. Use the available Assessment and clearly stated knowledge, skills, or performance. Use the available [BLOOM'S](#) taxonomy for assistance.

After completion of the exercise the participant should be able to:

[Click or tap here to enter text.](#)

Assessment criteria:
Identify the assessment criteria.

[Click or tap here to enter text.](#)

Expected time for instructor preparation:
Click or tap here to enter text.

[Click or tap here to enter text.](#)

Simulator system and model(s) to be used:
For each simulator, indicate the simulator model, version, and type, and ETOE number and type of software to be used. If intended geographical area is used, the file should be specified. For engine room exercises, indicate engine model type and number.

[Click or tap here to enter text.](#)

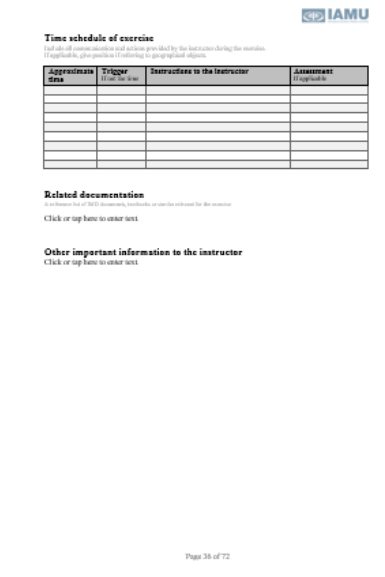
Exercise initial conditions:
For each initial exercise, include a picture showing an overview of exercise area with attached notes of case used. For elaboration of cases, upload notes information to ETOE domain, or fill a required file, or for the participant prepare the notes before the case starts (links to the preparation part of the Participant Manual).

[Click or tap here to enter text.](#)

Briefing and simulator setup instructions:
Upload appropriate instructions that need to be followed by the participant before making the simulator and/or check when the simulator is ready for training.

[Click or tap here to enter text.](#)

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Time schedule of exercise:
List all of assessment and action provided by the instructor during the exercise. Provide the approximate duration of preparation phase.

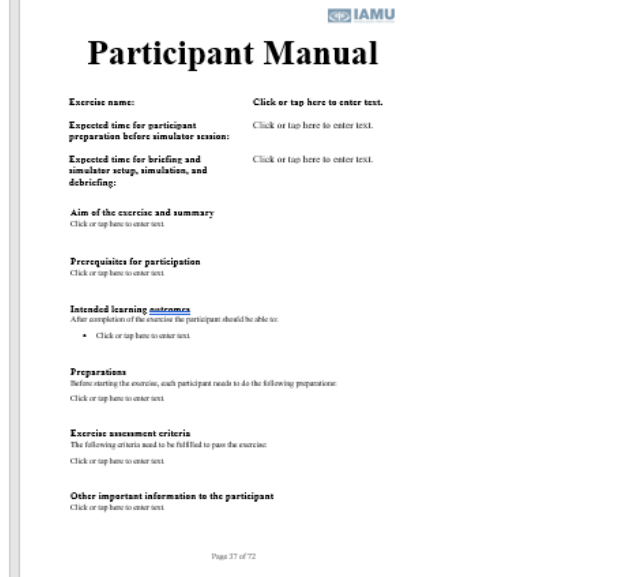
Approximate duration	Trigger	Instructions to the instructor	Assessment (if applicable)

Related documentation:
Is an overview list of MET documents, including an overview of the exercise.

[Click or tap here to enter text.](#)

Other important information to the instructor:
Click or tap here to enter text.

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Participant Manual

Exercise name: [Click or tap here to enter text.](#)

Expected time for participant preparation before simulator session: [Click or tap here to enter text.](#)

Expected time for briefing and simulator setup, simulation, and debriefing: [Click or tap here to enter text.](#)

Aim of the exercise and summary:
[Click or tap here to enter text.](#)

Prerequisites for participation:
[Click or tap here to enter text.](#)

Intended learning outcomes:
After completion of the exercise the participant should be able to:

- [Click or tap here to enter text.](#)

Preparations:
Before starting the exercise, each participant needs to do the following preparation:
[Click or tap here to enter text.](#)

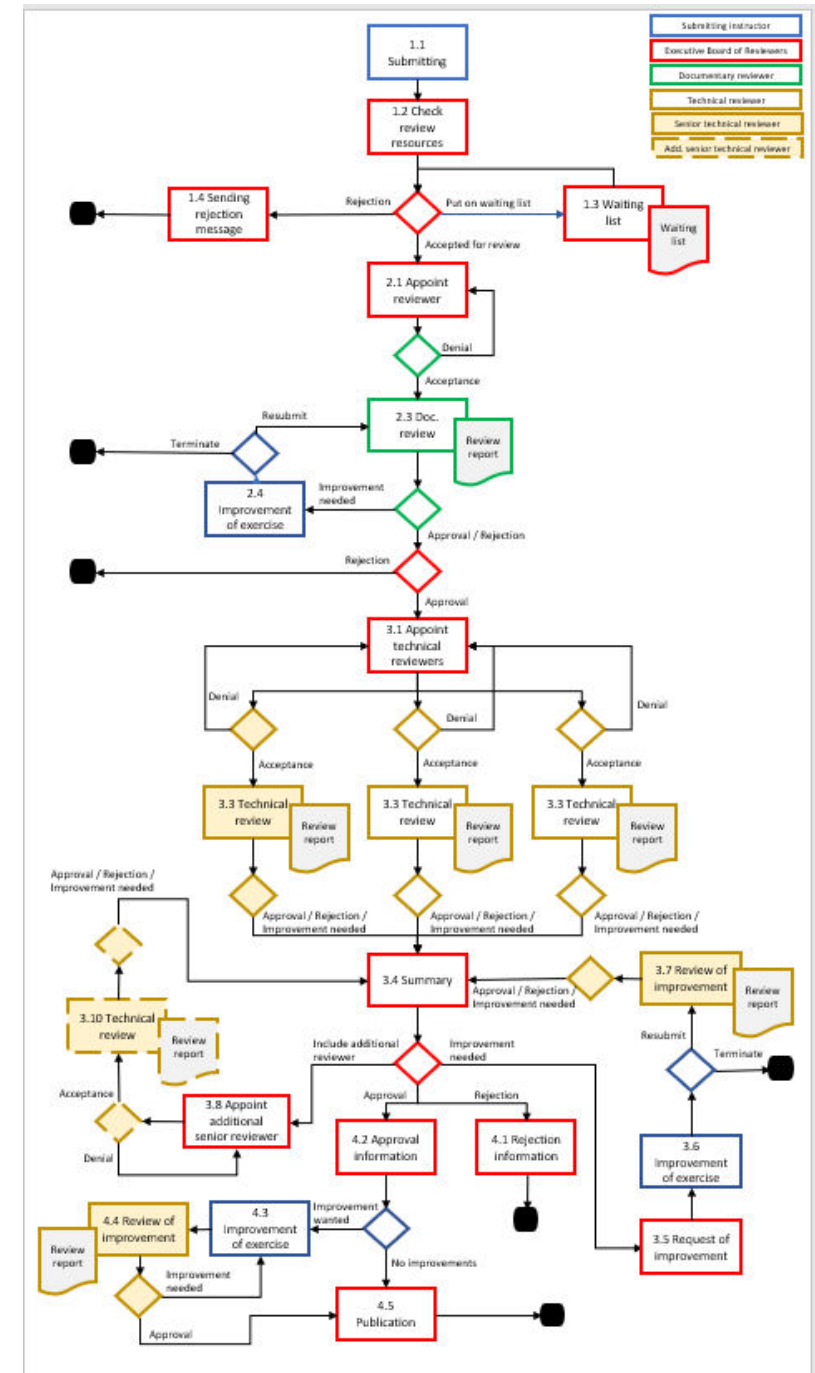
Exercise assessment criteria:
The following criteria need to be fulfilled to pass the exercise:
[Click or tap here to enter text.](#)

Other important information to the participant:
[Click or tap here to enter text.](#)

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Review process

- Double-blind peer-review process
- Documentary review (by 1 reviewer)
 - Language
 - Format
- Technical review (by 3 reviewers)
 - Start-up evaluation
 - Documentary evaluation
 - Content evaluation
 - Professionalism evaluation
- Approval / Improvement needed / Rejection



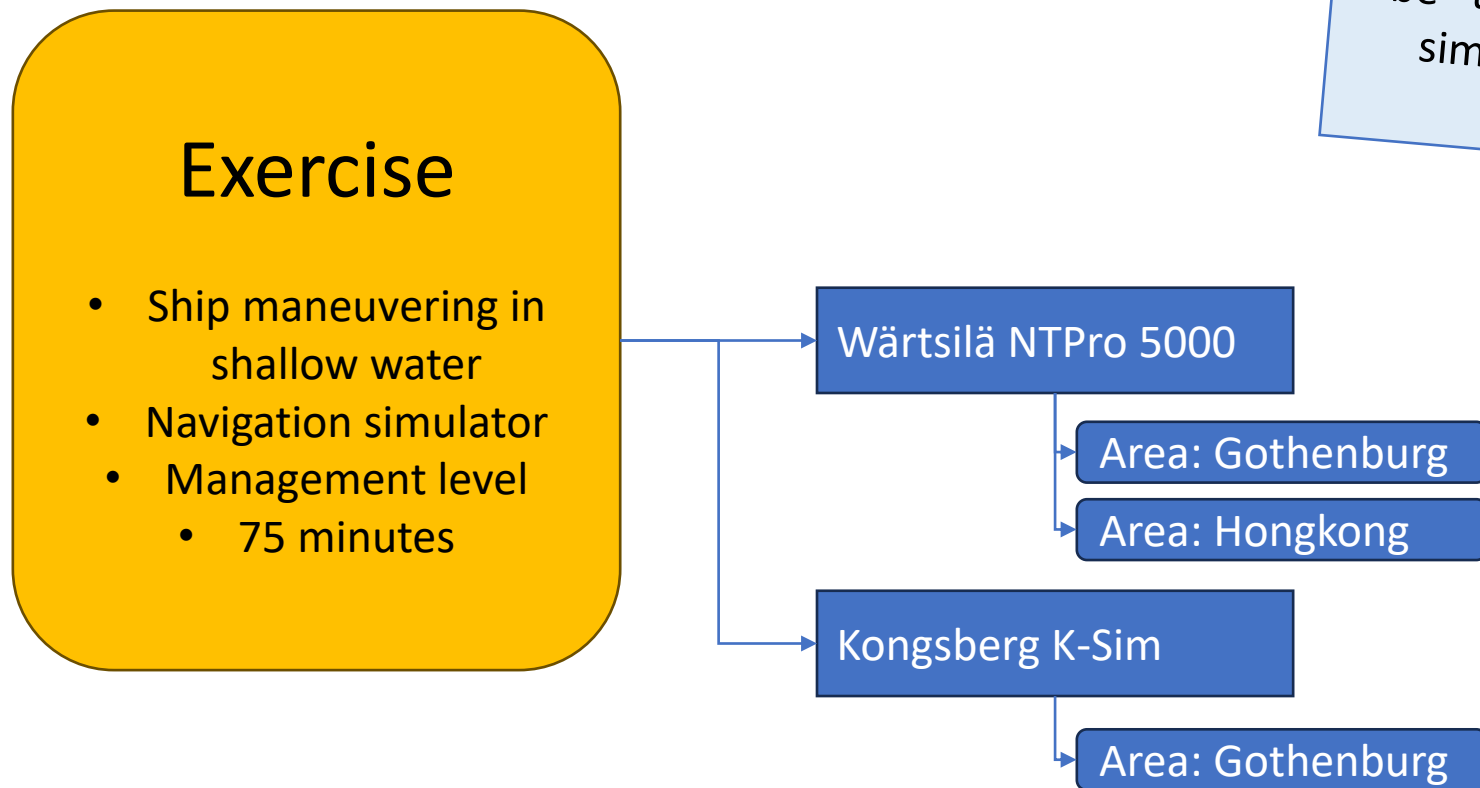
Example of review guideline



Professionalism evaluation

Below the norm (suggestions for improvement)	Criteria	Above the norm				
	The structure, elements, and content of the exercise in general are prepared in good maritime practice and in line with the exercise level					
	The specific training objectives and tasks are selected so as to relate as closely as possible to shipboard tasks and practices (STCW Code A-I/12, §6)					
	The exercise scenario and consequent tasks are as realistic as suitable (substantiated with appropriate background exercise environment on the specific topic/exercise area)					
	For navigational exercises: Traffic pattern and vessels' name, call sign, MMSI, AIS information etc. are grounded in reality					
		Score				
Overall professionalism evaluation		1	2	3	4	5
		<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Simulator system and area/model



The original exercise could be "translated" to other simulator systems or areas/models

Community

- Building a strong community of simulator instructors
 - Digital meetings (3-4 times per year)
 - LinkedIn (“IAMU SimED”) – join already today
 - Simulator Instructor Camps



What is a Simulator Instructor Camp?

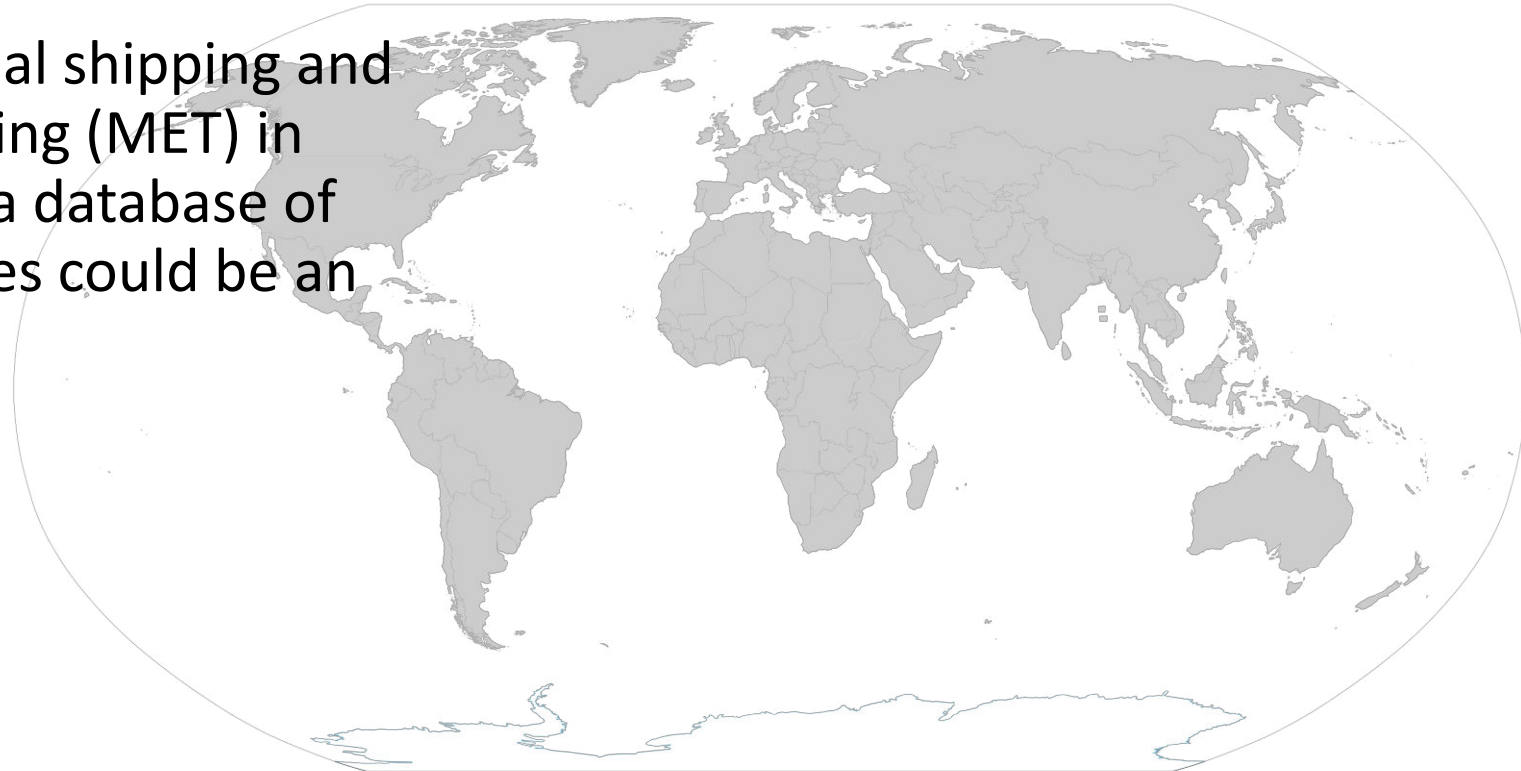
Tested in Svendborg,
Denmark, in June 2023
with very good result!

- Meet simulator instructors from other MET Institutions
- Testing and developing exercises together
- Share experiences and insights and develop our cross institutional network with special regards to simulation



Helping MET Institutions in developing countries?

- IAMU Peer-assisted evaluation schemes (PAES)
- Philippines, Kenya, South Africa, ...
- To increase the quality of global shipping and Maritime Education and Training (MET) in developing countries, maybe a database of high-quality simulator exercises could be an invaluable resource



Important topics

- Intellectual property – who is the owner of the exercise, how could it be used etc.
- Prevent corrupt files, viruses etc. – anti-virus check, IT security
- Development costs for web interface and database – Chalmers University will fund development of a first version

Summary

- Aim: Fulfill the STCW requirements, increase quality and save time
- Concept
 - Peer-review quality process
 - Standardized exercise description
 - Web interface for easy access
 - Simulator instructor community
- Questionnaire



Will the database be used?



- Fulfills the STCW requirements
- Increased quality
- Time-saving (exercise development)
- Inspiration
- Community
- Credit and awards
- No cost to use



- Time for reviews
- Willingness to use other instructors' exercises in training

Yes, we are convinced this is a very good idea!

What do you think?

- A questionnaire will be sent out to all IAMU members
- Interest of developing this concept and use the database
- Responses before December 15, 2023

<https://forms.office.com/e/xXXTFpkgyz>



Q&A

The image features the text "Q&A" rendered in a clean, white, three-dimensional sans-serif font. The letters are positioned on a white surface, casting soft, subtle shadows to the right and slightly forward. The lighting is even, highlighting the depth of the characters. The background is a plain, bright white, creating a minimalist and professional aesthetic.