### Workshop: IMEC and Computer Dialogue Teaching Approach in VHF Communication

### \* 박진수・최승희\*

\* 한국해양대학교 해사글로벌학부 교수, \* 한국해양수산연수원 전임강사

**요 약**: 전 세계 해기교육기관에서 해사영어(Maritime English, ME)를 가르치고 있는 교원들이 모여 매년 개최하는 IMEC (International Maritime English Conference)을 소개하고, 2015년에 개최된 제27차 컨퍼런스의 프로그램을 우리 회원들에게 안내하고자 하며, IMEC 27에서 소개된 ChatBot를 가지고 참석한 회원들과 함께 진행하는 워크숍을 개최하고자 한다.

핵심용어 : IMLA, IMEC, IMO Model Course 3.17, ME, Computer-assisted Learning, Maritime Chatbot, SMCP

## 1. IMLA와 IMEC

# **About IMLA** (International Maritime Lecturers Association)

IMLA is a no-border forum: a round table for discussions on sea-related issues. Teachers and other interested parties from all over the world dedicated to mediating in the process of Maritime Education and Training (MET) are invited to become members and to freely present their achievements, share experiences and exchange ideas.

IMLA came into being in 1977 and held its first major conference in June 1980, when the Association's constitution was adopted. Here its aim is clearly stated: "to promote contact and cooperation between Maritime Lecturers of all disciplines and to develop a body of professional expertise". This it attempts to fulfill at its regular international conferences and through this portal.

From the outset the Association recognized that special interest groups are a feature of MET and, as a result, has established three Sub-Committees to operate under the IMLA umbrella:

• Sub-Committee on the International Navigation Simulator Lecturers Conference (INSLC), est. 1980

Today's INSLC was established in 1979 as the International Radar Simulator Teachers Workshop (IRSTW), the first meeting was held in Liverpool in 1980. INSLC has since then played an important role in promoting best practice in the use of navigation simulators in the training of nautical ship officers and masters, and in the use of such simulators in research. Lecturers using navigation simulators at maritime academies and universities worldwide, have benefited from the exchange of knowledge, experiences and views with colleagues at and between INSLC and as members of a steadily evolving expert network.

The tremendous developments in electronic navigation and simulator potential are reflected in the titles of the Conference. The first four meetings were held as the International Radar Simulator Teachers' Workshops (IRSTW); the following two meetings as the International Radar and Navigation Simulator Lecturers Conferences (IRNSLC), and from 1992 the word 'Radar' was dropped to reflect the change towards a more integrated concept of navigation. This resulted in the acronym of INSLC. INSLC is a conference of IMLA, which has a consultative status at International Maritime Organization (IMO) and can therefore bring INSLC conclusions to the attention of IMO.

INSLC, although is mainly a meeting of users, because of the broad range of subjects covered also of interest for other maritime stakeholders who are concerned with or interested in safety at sea, on waterways and in ports from a training or research aspect, such as nautical officers and ship masters, members of professional nautical associations, VTS personnel, harbour masters, ship owners/operators, maritime safety administrations, maritime casualty investigation boards, maritime research institutes.

<sup>\*</sup> 교신저자 : 종신회원, jspark@kmou.ac.kr 051)410-4240

<sup>\*</sup> 종신회원, eng1017@daum.net

• Sub-Committee on the International Conference on Engine Room Simulators (ICERS), est. 1993

ICERS aims to support the activities of IMLA by providing an interactive forum for the international maritime engine room simulator community. ICERS seeks to achieve this aim by promoting international contact and co-operation between engine room simulator operators, researchers, commercial simulator manufacturers and courseware developers. software publishers. relevant government administrations, international and national maritime organisations, marine engineers and shipping companies. At the heart of ICERS are the academic staff and trainers world-wide who seek to support the International Convention on on Standards of Training, Certification and Watchkeeping for Seafarers (STCW Convention), and to further develop the competencies and professionalism of marine engineers, through the use of simulator technology.

### • Sub-Committee on the <u>International Maritime</u> <u>English Conference (IMEC)</u>, est. 1981

**IMEC** is a no-border forum: a round table for discussions on sea-related communication problems concerning a universally accepted language, that of Maritime English. Teachers and other parties from all over the world dedicated to mediating in the process of maritime language acquisition are invited to freely present their achievements, share experiences and exchange ideas on the IMEC.

**IMEC** organizes annual conferences that endeavour to improve and standardize methods of teaching Maritime English. Meetings offer splendid opportunities for lecturers from all over the world to get together, discuss matters and exchange views. Each of these groupings is featured on this portal.

IMLA is managed on behalf of its members by a Committee of between nine and twelve elected volunteers, three of whom act as Honorary Officers, namely the Chair, Secretary and Treasurer. The honorary non-executive office of President is filled by a person of stature by invitation of the Committee.

The first IMLA International Maritime English Conference (formerly the Workshop on Maritime English - WOME) was held in Hamburg, Germany in 1981. Since then international meetings have been held in Saint-Malo, France, 1983; La Spezia, Italy, 1985; Plymouth, UK, 1987; Cadiz, Spain, 1989; Lisbon, Portugal, 1991; Amsterdam, Netherlands, 1993; Gdynia, Poland, 1995; Malmö, Sweden, 1997; Shanghai, China, 1998, Rijeka, Croatia, 1999; Dalian, China, 2000; Varna, Bulgaria, 2001; Qingdao, China, 2002; Saint Petersburg, Russia 2003; Manila, The Philippines, 2004; Marseille, France, 2005; Rotterdam, the Netherlands, 2007; Shanghai, China 2008; Szczecin, Poland, 2009; Alexandria, Egypt, 2010; Constanta, Romania 2011, Yangon, Myanmar, 2012, Istanbul, Turkey, 2013; Terschelling, the Netherlands, 2014 and Johor Barhu, Malaysia this year(2015).

# 2. 27차 IMEC - 2015

제27차 IMEC은 말레이시아 최남단 도시이자, 두 번째로 큰 도시인 조호바루의 신도시인 Educity내에 위치한 네델란드계 해사대학인 NMIT Campus에서 개최되었다.



이번 컨퍼런스의 프로그램을 제시함으로서, 어떤 종류의 내 용들이 발표되고 논의되었는지 회원들과 정보를 공유하고자 한다.

# PROGRAMME : IMEC 27- 2015, NMIT, Johor Bahru, Malaysia

| 12 October 2015 (Monday)  |                               |  |  |  |
|---|-------------------------------|--|--|--|
| 09:00~10:30   | Chairperson: Zafirah Ab Rahim |  |  |  |
| Opening Address by Prof Peter Trenkner, IMEC President                        |                               |  |  |  |
| Congratulatory letter from IMLA Chair Jin Yongxing                            |                               |  |  |  |
| Speech by Captain Razali Ya'acob  |                               |  |  |  |
| Keynote Speech by Milhar Fuazudeen  |                               |  |  |  |
| Head of Maritime Training and Human Element Section, Maritime Safety Division |                               |  |  |  |
| International Maritime Organization   |                               |  |  |  |

| 11:00~12:30   | Chairperson: Clive Cole   | 14 Octob   | er 2015 (We  |
|---|---|--|--|
| Session 1   |   |  |  |
|   | ming and IT Tools for Teaching and Learning<br>English, Alcino Ferreira, France   |  | Chairperson: Zafi  |
| Maritime L<br>Marine Co   | Decupational, National and Global Standards in<br>English Competency: A Preliminary Study on Standard<br>Immunication Phrases (SMCP), Shamsul Rizal bin<br>edi, Mohd Asri bin Md Sap, Capt P. George Oommen   | Keynote Spe<br>Muhammad<br>Authority   | eech<br>Razif bin Ahmad,   |
| 13:30~16:00   | Chairperson: Peter van Kluijven   | 09:30~11:00  | 1. Piloting Pilots   |
|   |   |  | Björkroth  |
| Session 2   | uma 2.17 by Cathorina Logic and Clive Cale  |  | 2. Construct Shif<br>Maritime Engli  |
|   | urse 3.17 by Catherine Logie and Clive Cole<br>earning Will Be Applicable in MET, YU Haiyan, SMU  |  | Ozenir and Ĕr  |
|   | Maritime English Education Reform in China, Yan Li  | 11:30~13:00  | Chairperson: Car   |
|   | ua Luo, DMU   | Session 2  | 1  |
| Chairperson: Wim van Leunan   |   | 1. Lingua Franca Core for Ma<br>Teaching, Seunghee Choi  |  |
| 16:30~17:30   | Session 3   |  | The design of n  |
|   | Workshop: Intercomprehension workshop:<br>understanding unknown languages, Erik Hemming<br>and Alison Noble   | Progression and integration<br>global maritime approach,<br>Gabrielli  |  |
| 13 Octob  | er 2015 (Tuesday)   | 14:00~15:00  | Chairperson: Pe  |
|   |   |  |  |
| 09:00~09:30   | Chairperson: Zafirah Ab Rahim   | Session 3  |  |
|   | •   | Paper 16:  | Using a Lingua Fi  |
| Keynote Spe   | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang  |  | Using a Lingua Fr  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op   | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang  | Paper 16:<br>Hemming   | Using a Lingua Fr  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge   | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>perations<br>prang Sdn. Bhd.  | Paper 16: Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute   |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge   | ech<br>ini Mohd Saffian - Head of Logistics , Pengerang<br>perations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei  | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communic  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>Centred Teaching J<br>cation,  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge   | ech<br>ech<br>perations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus  | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communi<br>Peter John   | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>centred Teaching J<br>cation,<br>n, Alison Noble, N  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge   | ech<br>ini Mohd Saffian - Head of Logistics , Pengerang<br>perations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei  | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communic  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>centred Teaching J<br>cation,<br>n, Alison Noble, N  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br><u>Dialog Peng</u> e<br>09:30~11:00  | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang  | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communi<br>Peter John<br>16:30~18:00  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>Centred Teaching A<br>cation,<br>n, Alison Noble, N<br>Free and easy   |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br><u>Dialog Peng</u> e<br>09:30~11:00  | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang  | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communit<br>Peter John<br>16:30~18:00   | Using a Lingua Fr<br>Chairperson: An<br>B: Using Compute<br>Centred Teaching A<br>cation,<br>n, Alison Noble, N<br>Free and easy<br>Der 2015 (Thu  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge<br>09:30~11:00  | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang<br>er 2015 (Tuesday)   | Paper 16: //<br>Hemming   15:30~16:30   Session 4   Workshop 3   Student-C   Communit   Peter John   16:30~18:00   15 Octob   09:00~11:00  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>Centred Teaching A<br>cation,<br>n, Alison Noble, N<br>Free and easy   |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge<br>09:30~11:00<br>11:30~13:00   | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang  | Paper 16: 0   Hemming   15:30~16:30   Session 4   Workshop 3   Student-C   Communit   Peter John   16:30~18:00   15   09:00~11:00   Session 1  | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>centred Teaching J<br>cation,<br>n, Alison Noble, N<br>Free and easy<br>Der 2015 (Thu<br>Chairperson: Jar  |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge<br>09:30~11:00<br>11:30~13:00<br>Session 2  | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>perang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang<br>er 2015 (Tuesday)<br>Chairperson: Haiyan Yu   | Paper 16: 4<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communit<br>Peter John<br>16:30~18:00<br>15 Octob<br>09:00~11:00<br>Session 1<br>1. Making "3   | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>Chairperson: An<br>3: Using Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Compute<br>Comp |
| Keynote Spe<br>Mohd Khalza<br>Marine Or<br>Dialog Penge<br>09:30~11:00<br>11:30~13:00<br>11:30~13:00<br>Session 2<br>1. Limits and<br>ship – the            | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang<br>er 2015 (Tuesday)   | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communit<br>Peter John<br>16:30~18:00<br>15 Octob<br>09:00~11:00<br>Session 1<br>1. Making "*<br>Wang Xia<br>2. English a             | Using a Lingua Fr<br>Chairperson: An<br>3: Using Compute<br>Chairperson: An<br>Free and easy<br>Der 2015 (Thu<br>Chairperson: Jan<br>Salted" into "Need<br>an<br>Non-English m   |
| Keynote Spe<br>Mohd Khalza<br>Marine Op<br>Dialog Penge<br>09:30~11:00<br>11:30~13:00<br>Session 2<br>1. Limits and<br>ship – the<br>and Jane<br>2. The IMO | ech<br>ni Mohd Saffian - Head of Logistics , Pengerang<br>berations<br>erang Sdn. Bhd.<br>Session 1<br>1. On the Linguistic Qualifications of Maritime English<br>Teachers, Yang Jin-qiu and Liu Xiao-pei<br>2. The Review of Maritime English Course Syllabus<br>in DMU – A proactive way to the revised Maritime<br>English Model Course , Zhaoyan Jiang, Chunyang<br>Zhao and Yong Wang<br>er 2015 (Tuesday)<br>Chairperson: Haiyan Yu<br>I Considerations in communicating effectively on board<br>view of Leadership and Teamwork, Hyun-wook Doo | Paper 16: 0<br>Hemming<br>15:30~16:30<br>Session 4<br>Workshop 3<br>Student-C<br>Communi<br>Peter John<br>16:30~18:00<br>15 Octob<br>09:00~11:00<br>Session 1<br>1. Making "<br>Wang Xia<br>2. English a<br>Proficienc | Using a Lingua Fr<br>Chairperson: An<br>B: Using Compute<br>Chairperson: An<br>Chairperson: An<br>Free and easy<br>Free and easy<br>Der 2015 (Thu<br>Chairperson: Jan<br>Salted" into "Need<br>an  |

14:00~16:00 Chairperson: Alison Noble Session 3

ComPic 'Communication using Pictography' – enhancing safety for navigation by using pictography, Patrick de Jong, Max de Vette, Jurian La Roche, Montijn van Rossem, Presented by Peter C. van Kluijven, Netherlands

2. Communications between ships' pilots, masters and tug operators – some suggestions for the IMO Standard Marine Communication Phrases, Roy Stall

16:30~17:30 Chairperson: Naoyuki Takagi

Session 4 : Workshop: Creating a Maritime English Board Game, Alcino Ferreira and Jean- Francois Jaouen

### ednesday)

firah Ab Rahim

, General Manager, Johor Port

- in a Full Mission Simulator, Peter
- ift of Marine Engineering Cadets in lish via On-Board Training, Müjgan Erdogan Bada

rmen Chirea-Unqureanu

- laritime English Pronunciation and Jinsoo Park, Korea
- maritime education and training: n in Maritime English courses, for a Johan Eliasson and Annamaria

eter John

Franca for Communication at Sea, Erik

nnamaria Gabrielli

er Dialogue Systems for Providing a Approach in SMCP-based Maritime

Naoyuki Takagi and Peter Björkroth

### ursday)

ne Magallon

- ded": The New Model Course 3.17,
- major Teachers' Assessment of Oral nian Maritime English Learners, Ali Asghar Roostami Abusaeidi

atherine Logie

#### Session 2 SWOT Analysis on Cultural Awareness Training for Seafarers, Carmen Chirea - Ungureanu Chairperson: Peter Björkroth 13:30~14:30 Session 3 Workshop 4: Language Learning Strategies for Continuous Language Improvement Christine Holland and Annamaria Gabrielli 15:30~16:15 Closing Ceremony

# 3. Workshop

 Using Computer Dialogue Systems for Providing a Student-Centred Teaching Approach in SMCP-based Maritime Communication<sup>1)</sup>

The workshop focuses on training SMCP-based maritime communication with the help of computer dialogue systems. The communication competencies put forth in the SMCP code (Chapter II, Table A-II/1) are acquired by practising relevant maritime communication at the students's own individual learning pace thus catering for a student-centered education approach.

Computer technology known as ChatterBot or ChatBot is presented. ChatBots are computer dialogue systems which on Artificial Intelligence (AI). They allow users to interact with computers in a natural discursive manner by providing realistic dialogues. ChatBots are widely used on the Internet. They are also programmed to function as virtual communication partners in chatrooms.

However, very few attempts have been made so far to use this fascinating technology for teaching purposes in general, and no attempts have been made yet to deploy ChatBot in Maritime Education and Training(MET). This challenge has been taken on by the VTS-Bot research project supported by the IAMU.

http://www.smcpexamples.com/

<sup>1)</sup> IMEC-27 Proceedings의 동일한 Workshop 내용을 인용하여 소개함. (저자: Peter John, Jade University of Applied Services, Germany 외 3인)