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M'AIDER PROJECT

Maritime Aids' Development for Emergency Responses

INSIDE:

M'AIDER mainly concerns those aspects of human error related to emergency situations which can be corrected by preparing a whole range of scenarios, simulating actual accidents, incidents and near-misses. It is the systematic attempt to develop accident or incident scenarios for the training of young cadets and seafarers working at sea and in ports in emergency situations. The programme proposed is considered to be novel and has not been done before.

The project is in the second phase of the SOS project which initiated the harmonisation of education and training of merchant navy officers through the instigation of several nautical institutions of further and higher education in Turkey, England, Scotland and Norway.

The M'AIDER project concerns the aspects of human error related to emergency situations which can be corrected through the removal of existing deficiencies in Maritime Education and Training (MET) of cadet officers as well as those working on board vessels as officers of various ranks. This project intends to prepare a whole range of scenarios simulating actual accidents, incidents and near-misses focusing on emergency situations and incorporate these into the existing MET programmes in the partner countries and later European-wide. A training programme on the scenarios would also be prepared for seafarers working at sea and in ports. The intention is that the scenarios would lead to identification of the causes of accidents and incidents as well as near-misses including grounding and through training these causes could be removed as such training will enhance the awareness of dangerous situations significantly and what actions to take to avoid them.

An example of a ship simulator involved with M'AIDER

PROJECT KEY AIMS:

1. To improve safety at sea and in ports by identifying emergency situations known so far and creating a knowledge base of scenarios for the training of seafarers at officer level and above.
2. To develop exercises based on scenarios created for application in bridge, engine room, propulsion areas as well as in integrated and full mission simulators.
3. To transfer the knowledge that already exists in the form of a software suite together with an existing internet e-learning/assessment platform to integrate the scenarios and exercises created based on aims 1 and 2.

Education and Culture DG

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KEY PARTNERS

The partnership is composed of well known MET providers for different types and ranks of merchant navy officers. The project will be carried out corroboratively by 7 partners, from 6 different countries. The expertise necessary for this project cannot be found in a single country in Europe, but required the establishment of a consortium at European level. These aspects are mirrored in the composition of the consortium who have reached a high level of recognition and expertise within maritime education, training and maritime related research to tackle the issues addressed.

Here is a brief introduction to all seven Project Owners and Partners from across Europe that are bringing M'AIDER to life.

1. Maritime Institute Willem Barentsz (Holland)
In the 135 years of its existence the institute has developed into one of the foremost nautical colleges in The Netherlands, of great renown at home and abroad.

2. C4FF-Centre of Factories for the Future, (England)) A leading organisation in the development of prestigious programmes of education, training, research and development. C4FF is at the cutting-edge of innovation and technological advancement

3. TUDEV-Turkish Maritime Institute (Turkey)
An institution that provides high quality education and training to meet the needs of the Turkish Shipping Industry.

4. Lithuanian Maritime Academy (Lithuania)
A higher educational institution providing the highest quality MET, combining its own traditions and the latest international standards in developing seafarers, and also highly qualified specialists for many other areas of the maritime industry.

5. University of Strathclyde (Scotland)
Established in 1796, Strathclyde is known for its focus on research, science and engineering disciplines.

6. Spinaker d.o.o. (Slovenia)
Simply the Quickest and Easiest Route to obtaining Knowledge about Marine GMDSS Communication

7. IDEC (Greece)
IDEC 's main activities are: management consulting, telecommunications and computer networks, software and multimedia development, training, advanced internet solutions and international co-operation projects.

PARTNER MEETING

The first Group Meeting of the M'AIDER project took place over a two-day period at TUDEV on 6-7 December 2007.There were partner representatives from the U.K., Scotland, Holland, Greece, Slovenia, Lithuania and Turkey.

At the first project partner meeting in Turkey at the end of 2009, all the start up issues were discussed, work packages were evaluated and action points distinguished. Plenty of comments and issues were raised at the meeting and action has been taken in response.

A steering group has successfully been formed. The committee will include one person from each organisation involved with M'AIDER and they will set agenda's and schedules in relation to the project, with the first group meeting being held early this year (2010).

One of the most important issues raised at the meeting was funding and to determine just how much would be needed for the project. All partners have now put forward a salary specification to the MIWB for each participant involved with the project to determine its funding scales.

A website has succesfully been created allowing each partner to have its own space and identity to upload materials and content. The website will also allow partners to interact and communicate with one another as well as other potential interested parties.

Overall the first meeting in November 2009 was a huge success and has created a platform to build on for the future.

Location: *Tuzla, Turkey*
Dates: *23 - 24/11/09*

Research by TUDEV and C4FF Leading to the Development of the M'AIDER Project

by Professor Ziarati

Safety at sea has been regarded as the most important consideration for all those concerned with water transportation. Accidents and incidents at sea and in ports have been analysed by many researchers (such as Ziarati and Ziarati, 2007) as well as accident reporting agencies (such as MAIB, MINMod, and so forth).

It has been stated in no uncertain terms that "The history of navigation is actually the history of human error" (Bennet, 2002). In a paper published by the Parliamentary Office of Science and Technology (2001) it has been stated that human capacity has limitations; this is inevitable but human error can be reduced through a good/intelligent training system designed with the feedback from its potential users for improved safety and making good decisions.

While the trend over the past decade is a steady decline in marine accidents, in recent years the accidents are increasing according to major publications and some accident investigating boards. Larossi (2003) believes that the magnitude of damage inflicted by a major shipping accident increases the public attention paid to those accidents, and negatively influences the perceived safety of shipping. It is also argued that the psychology of 10 years ago and the level of tolerance for accidents is very different to the psychology of today and the high value put on human lives. Considering the technological developments and investments made in human resources as well as infrastructure and equipment, the level of tolerance for accidents is getting less and less. Furthermore, while the number of accidents overall is decreasing, those attributed to human element is actually increasing (Ziarati, 2003). According to IMO (2005), 80% of accidents at sea are caused by human error. In a research report (Turan, 2008), it is reported that the accidents are due to human error, poor design or equipment failure. However, the number of accidents due to human error, is shown by far to be greater than those caused by poor design or equipment failure. It is now believed that the majority of human errors could have been prevented by adopting a (more) human oriented approach. Appropriate training is crucial in this respect.

In a paper by Ziarati (2006) the causes of human error are identified as follows:

- incorrect use of navigational equipment
- competence (or lack of it) in English Language
- misinterpretation of maritime rules and regulations
- organisational factors – lack of training, disregard of factors such as manning levels, etc. which could lead to tiredness and hence lead to mistakes
- onboard working conditions
- cultural factors
- linguistics

The project is not about just using the previous results and/or outcomes but to take into consideration the work of several EU member states and their report concerning recent recommendations to IMO (MCA, 2006, IMarEST2006) asking the organisation to revise the most important international treaty dealing with crew standards – the International Convention of Standards of Training, Certification and Watch-keeping for Seafarers (STCW) and include provisions for emergency situations. According to Ziarati (2006), these cannot be implemented successfully without the full and serious support of European, national and related industries. Smaller companies often do not have the resources to keep abreast of so many emerging requirements and cannot afford to have a meaningful training programme for their personnel without the support of a local training provider with access to automation training material.

Analysis of accidents at sea and in ports, as reported for instance by IMO (sub-committee minutes, 2005 and 2006), clearly point the finger at problems with human factors and gaps in the education and training of seafarers. Their reports (Ziarati, 2009) clearly indicate that countries which take safety seriously and provide necessary resources for personnel training and development in the sector are among the safest maritime nations.

This project intends to use benchmarking and promote good practice throughout the partnership and beyond.