



SAFEBRIDGE

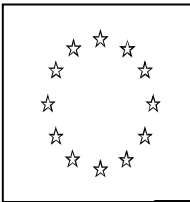
“Bridge Control Competence-Verification and Training Tool ”

Concerning the measure entitled 'Pilot Projects' of the

LEONARDO DA VINCI

Community Vocational Training Action Programme





LEONARDO DA VINCI Community Vocational Training Action Programme

Case studies

Here below are the names of the largest providers of CBT in the maritime sector, their product catalogues, their CBT contents and where possible the hardware used in the present European commercial maritime market.

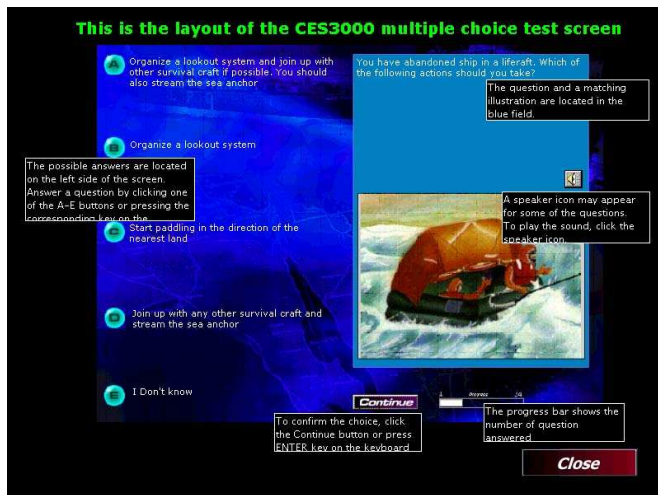
A.1 Seagull A/S

Seagull A/S in Horten, Norway has been developing CBT for the maritime sector since the early 1990s. Formed in 1997 from Kongsberg Norcontrol Training they drew on their experiences of working closely with the Kongsberg-Group, a large Norwegian conglomerate which amongst other things was also developing maritime systems, the Norwegian Maritime Directorate and the IMO. Their principal clients are ship owners and nautical training colleges.

Today Seagull offers a comprehensive learning package for the maritime sector. It has been developed, drawing on the experience of professional seafarers and their own areas of expertise. Their package can be used in an e-learning format or “traditionally”. Years of experience in developing seminars have enabled them to produce modules in a CBT format. Also by maintaining regular contact with their clients they know their current requirements.

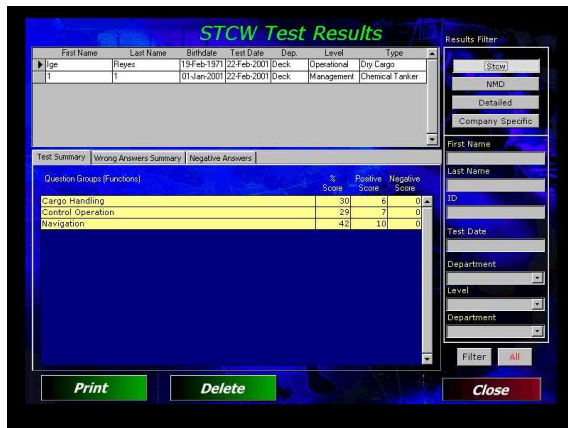
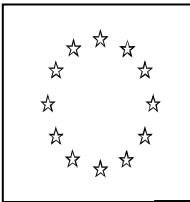
What the CBT package offers is a complete approach but made up of several products. The “Onboard Library” is the electronic equivalent of the traditional classroom courses. The range of computer-based learning modules, specifically developed for use on board, is continually being added to. Such CBT titles as navigation, loading techniques and safe loading, operations and safety, marine engineering, electrical engineering, radio communications and maintenance and repairs are available. The catalogue currently lists about 80 completed modules with notice of 40 more. This has to be the largest range on offer in this sector.

The courses currently available can be viewed on line.



The Competence Management Tool is a competency assessment tool linked to a data base of questions, which allows the competency of the crew to be assessed. This programme is licensed by the Norwegian Maritime Directorate and is used by many shipping companies for crew assessment. The programme package comes with an administration programme, which allows the user's personal data and class of ship, on which he's serving, and the courses completed to be registered and stored. With this programme the person in charge of

further training can administer all the CBT modules used by the company, look at where an employee is with his training and give the employee access to further modules to work on.



The products can be looked at by groups of officers and their reactions obtained. In the first instance they are supplied with the “Authorware” tool from the American software provider Macromedia and then can be played on all Windows’ platforms. Seagull has come up with an interesting contents display using first appealing graphics with audio, visuals and text. A lot of emphasis is laid on interaction and animation. At the end of each module there are multiple choice questions to test what has been learned. The result is stored on the hard disk of the computer being used and then can be retrieved with the Administrator programme.

A.2 MarineSoft GmbH

MarineSoft GmbH based in Warnemünde, Germany develops software solutions for the international market. The company is based in Rostock and offers a comprehensive range of products including marine simulation of machine parts, computer-based training applications, marine information and operating systems, consultancy and courseware. Their clients are primarily training colleges for seafarers.

Their CBT package aims to offer seafarers competency training in a flexible learning environment, which can be on board or elsewhere. To this end they have developed, amongst other products, a language learning system based on IMO’s Standard Marine Communication Phrases. Their aim is to familiarise the often foreign crews with the standard marine communication phrases thus ensuring that in any critical situation they are used. The system allows for training in communication in various everyday maritime scenarios such as entering or leaving port, tug manoeuvres and in stressful situations such as search and rescue or fire on board.



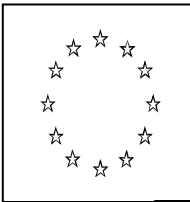
Further they have developed an ECDIS multi-media training tool based on IMO Model Course 1.27, which covers the necessary content for ECDIS training. The idea is to give a basic understanding of the theory behind ECDIS, develop flexible multi-media based distance-learning training material and the installation of a fully integrated system. They have already developed some interesting simulation software for ship’s engines. This allows the behaviour of the engine in different situations to be thoroughly studied.

In particular their approach to linking together their existing software tools deserves a special mention. This has led to a training methodology they call simulation-based training (SBT). The simulation programme is now linked to assessment, which enables the user to access specific work levels. In this application the user doesn’t need instruction from a tutor and can choose his own way of learning. They call this SPOT ON training (Self Paced On Time On Need). So the user himself will decide when he will study. In their view once what has just been learned is consolidated this training method prepares the user for future drills and familiarisation with new engines and equipment.

A.3 Videotel Marine International

Videotel has been providing training to the maritime sector since the early 1970s and moved into DOS based CBT following a lead from QuestionMark and Mentor in the mid 1980s. It has offices in UK, Germany, Singapore, Hong Kong and China.

Videotel offers nearly all the training requirements as defined in STCW95 in video courses. They use the widest range of media including videos, CD-Rom, disks and cassettes. With some titles a work book is



provided. The whole catalogue can be seen on line and is divided into 10 sections. Many subject titles are presented simply in video format and there is no reinforcing of the subject matter. Materials are also offered on network delivery platforms both on board ship and on shore. Many courses are available for continued use on-line.

But there are interesting add-ons. For example a very interesting concept evolves from the Collision Avoidance CD-Rom in the navigation section. There traffic situations are presented, some of which are taken from real life and have led to a crisis situation. The presentation puts the student in the situation so that he has to decide when to react. The programme then reacts to the response and the situation is played through until it is either resolved or leads to an accident. Then the user is shown where he has made a mistake and whether he has ignored the traffic prevention regulations.

The actual CBTs are listed in section 9 of the catalogue. CBT always implies assessment. Amongst others the SETS programme (Seafarers Evaluation and Training System) is interesting. It has a large data bank with currently over 6,000 questions, from which the user can choose those which correspond to his assignment and rank. According to the mode used the student can either test and broaden his knowledge by being shown the



correct answers, or he can be tested and his results stored for assessment by an instructor. Other packages offered work in a similar way with the testing and storing of what the candidate knows.

The package "Computer Based Simulation Systems" in section 10 goes a step further. The "X-Band – A Simulator Based Radar & Navigation Aids Training Course" tool for example uses a combination of simulator software for radar and so-called courseware, which with the simulator takes the user through specific tasks. The objective is to determine competency in using the radar without having an instructor on hand.

A.4 Kognita

Kognita provides learning management systems, off-the-shelf e-learning, and custom e-learning.

Learning & Content Management Systems. The KOGNITA Site4Learning service is a LCMS solution that can be provided as a hosted or an enterprise solution pre-populated with courses from many publishers for example in Off The Shelf eLearning KOGNITA offers access to over 5,000 off-the-shelf e-learning courses from over 35 publishers¹.

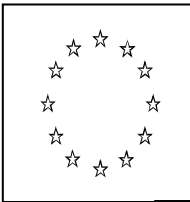
Custom eLearning Solutions

KOGNITA offers a fully-fledged custom e-learning development service including Authoring Tools: tools for trainers and instructors to use to create their own bespoke eLearning course materials.

Products are offered for deployment on CD-ROM or on intranet. By far the most popular method is to have the courses of choice deployed to employees, contractors or clients via the Site4Learning service. Clients follow a 3-step process:

1. Take out a Site4Learning account
2. Review courses from relevant customers
3. Licence the selected courses

¹ Publishing partners include: Skillsoft, Maxim Training, Jenison, Video Arts, BBC Worldwide, Auralog, Harvard Learning, Ajilon Learning, Primedia, Atlas Interactive, In Markets, Easy I, Tata, ENI Media Plus, Element K, Harvard, Skillboosters, and Learning4Business.



Whether the need is leadership or IT courses, health and safety or sales courses, it is claimed that the e-learning course that will meet requirements.

Several tools that are the best of breed Do-It-Yourself (DIY) e-learning creation tools for creating e-learning courses in the areas of compliance training, HSE training, procedural training, product briefings, store layout and company or site inductions.

- Course Builder

This eLearning authoring tool has been designed to be used by trainers and instructors - not software developers or programmers. Course Builder is a hosted service, that is licenced for a period of time, and produces standards compliant elearning course content.



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A5 PC Maritime

PC Maritime made its mark with the 1994 award winning software for application of the Rules of the Road² **Officer of the Watch** which featured a clever algorithm based on the steering and sailing rules. This UK-based enterprise now majors in marine simulator systems. PC Maritime's range of marine training simulators encompasses ECDIS, marine navigation, diesel engine room and cargo operations. Each product is designed to deliver training and to test competence and knowledge without the need for live instructor input.

All the simulators run on standard PCs and networks, can be self-installed and require no special training. Priced at an affordable level, the range is ideally suited to training institutions operating within tight budgets.



Engine room simulation



Navigation simulation & CBT



Cargo simulation

PCM offer a suite of engine room training simulators, Type Approved for STCW 95. The simulators can be bought as software only, with desktop consoles, and as part of a full mission engine room installation, making the range uniquely flexible and cost-effective.

The simulators are supplied with instructor software so that they can be used in stand-alone mode or supervised. All the products are simple to install and require minimal support.

² International Regulations for the Prevention of Collisions at Sea, 1972



Fully working time-limited demos are available for serious enquiries. For larger installations with hardware, we can provide instructor training.

ECDIS

Navmaster ECDIS for Training is designed to provide a suitable system to organisations which need to deliver training in the operational use of ECDIS. It consists of type approved ECDIS software which can be run on standard PCs and networks to give realistic hands-on ECDIS operator training. It is type approved and up-to-date against all the current regulations; supports all official chart formats ; has excellent route management & passage planning tools and actual voyage data can be replayed.

With network installation it allows large classes to be taken at once and has options for Radar video overlay with PC radar card; Multi-user version for use in a classroom and Admiralty TotalTide integration for worldwide tidal height & stream.



Left and Below: Being used on a 30-station network in a Dutch maritime college, Navmaster ECDIS for Training is straightforward to install and operate. It is an ideal resource for organisations developing courses to meet IMO Model Course 1.27 and

additionally enables students to both prepare and execute passages; routes can be prepared at college and then carried out onboard a training ship.



A6 Marlins

UK based Marlins is owned a major ship manager and has grown into a global organisation offering approved testing of English language competency at centres around the world backed by the ISF which distributes test kits to enable employers to assess new recruits.

Underpinning this are the tools to improve and develop seafarers' England language ability. For example Study Pack 1 aims to: teach English in a seafaring context ; activate and develop the learners' current understanding of English and promote confidence through regular use of English.

Materials offered include in Study Pack 1 are 24 units of illustrated study material in a single volume , 60 minutes of audio cassette for authentic listening practice, translated instructions for use by elementary learners backed by extensive student reference material for assisted learning.

Study Pack 2 is a comprehensive English language training course designed for independent study by seafarers of any rank or nationality. The course is aimed at seafarers with a lower-intermediate to intermediate level of English. It combines detailed language input with extensive practice of language skills within authentic maritime contexts.

StudyPack 2 includes: 18 maritime related units in a single volume; two audio CDs for varied listening and pronunciation practice; extensive student reference material and authentic communication practice activities.

Concerning assessment the ISF Marlins English Language Test is an online assessment tool, which tests seafarers' understanding of both written and spoken English.

Use of the ISF Marlins English Language Test allows ship operators to demonstrate that seafarers, of whatever nationality, have been assessed on their ability to communicate in English, a necessity that has been given additional emphasis by the ISM Code and the revised STCW Convention.



A7 Summary of the CBTs available

In summary, it can be seen that from a technical stand point the providers have two preferred ways of producing CBTs. Either they are originated by authorware, that is software explicitly programmed for the installation of learning modules, which makes production easier. Or the users can insert programming languages, as it is hoped that in this way they can produce modules better suited to the users' needs.



The contents conform very much to the requirements set after STCW95. Depending on the provider the main emphasis might be on navigation or engineering. But it is clear that CBT providers who place greater emphasis on engineering prefer to use simulation in their CBT. On the other hand providers who focus on navigation often combine learning modules with exercises. The modules are presented through the use of text, animation and audio inserts, and in most cases end with questions on what has been presented. Looking ahead due to recent developments in the computer industry, one can no longer guarantee that all software will work on all computer systems. Microsoft will introduce a new operating system (OS) WINDOWS 7 in the next few weeks. Whilst Microsoft state that XP based programs will be supported, one cannot assure its full operation within WINDOWS 7 and one may encounter problems. Suppliers will of course endeavour to support products where possible but will not offer enhancements in the future.

However, an alternative form of training available is web-based. This is a new and interesting web based versions offer the same functionality as standard software but also offers a number of new features.

For further information contact: admin@getquality.net