Seamanship and Shell develop seafarer competency system

www.seamanship.co.uk

Scottish computer based training company Seamanship has won an interesting project with Shell, to build a system for Shell to use to manage its training programs onboard ships.

Shell employs a team of seafarer training coaches, including five chief engineers and three masters. They are given the role of spending time onboard the ship (not just during a port call), assessing the skill and knowledge of Shell's officers onboard and determining where additional training would be helpful.

The Seamanship software has many questions programmed into it.

When the trainer enters the seafarers' name, rank and vessel, the computer software gives a random selection of questions which are generic (deck or engine, depending on the seafarer's role), company specific questions and vessel specific questions.

The trainer can then start putting together a personal training plan, with a mixture of computer based training and personal training.

The software is designed to provide an early indicator of the seafarer's competence.

Shell made a decision to identify the individual training needs of all of its seafarers, and realised that it would be easier if there were computer tools to help.

"'When a fleet trainer goes onboard a vessel, they have a limited period to cover the various and multiple roles that go with their position," says Steve Burns, STASCO training superintendent.

"The electronic assessment means we can now hone our information about who needs what kind of training, to help the trainers maximise the effectiveness of their time onboard any given vessel, and give the best help where it's most needed.'

Mr. Burns says the initiative was designed to improve seafarer confidence.

"We're not about making people take their certificates of competency again," he says. "This is a tool to assist the fleet trainers, and the personnel onboard, in identifying the best way for them to develop their professional skills, either via one-on-one training or directional training or other methods as appropriate."

Shell is currently pilot testing the system with its eight trainers, and will subsequently examine it for potential improvements. Seamanship may develop a "light" version of the software which can run permanently on each vessel.

Norway simulator project

www.marintek.sintef.no

Four Norwegian shipping companies, 3 simulator companies, a simulator manufacturer and a research institute have embarked on a project to work out how to improve the value of simulators in marine training.

The research mainly comes down to asking participants to do tests and complete questionnaires before and after the training, so an assessment can be made of how useful it was.

Participants include Norwegian shipping companies Bergesen, Kristian Gerhard Jebsen Skipsrederi, Odfjell, Neptune Shipmanagement Services, together with simulator operators Integrated Simulation Centre of Singapore, Norwegian Training Centre Manila, Ship Manoeuvring Simulator Centre (Trondheim, Oslo), simulator manufacturers Kongsberg Maritime and Norway maritime research institute MARINEK. Project meetings have been held in Norway and Singapore.

Following the research, Norwegian Training Centre Manila advises that learning should be applied as soon as possible when onboard; knowledge is reduced by 50 per cent if not used within a month of the course and by nearly 100 per cent if not used within 2 months.

The usefulness of the course can be improved if officers discuss the course content between each other.

For more information about the project go to the project web site at: http://www.marintek.sintef.no, click on research projects, research council, improving retention of simulator based training.

Seagull's new ballast water training course

www.seagull.no

Computer based training company Seagull has launched a new ballast water training course, teaching seafarers about the problems with moving ballast water around the world and the steps to reduce the problem (ballast water exchange and ballast water equipment).

Stein Gaare, training manager at Teekay says, "The ballast water management has always been an area where training has been required, but, until now, has not yet been tackled by the industry.

"This course will enable shipping companies to provide efficient training on the subject and I am sure that officers will welcome the new module and its associated workbook onboard."

The course is certified by a number of different class societies and approved by a number of flag states. It includes a computer based training module and a workbook.

Revolution: writing logbooks with pens

www.datatrac.co.uk

UK company Datatrac has an innovative new technology for data entry onboard a ship - a pen.

Shipboard staff can write down their logs and reports and fill out checklists by holding a pen in their hand and writing it on paper.

The development is expected to save large amounts of time and effort with paperwork, because they do not have to type into a computer.

Datatrac is not trying to take the shipping industry back in time 5 years but is taking advantage of new computer pen technology.

Looks, feels and writes like a normal pen - but it's got a computer inside

It acknowledges the simple fact that it is much easier for seafarers to record things using a pen and paper than by using a computer, particularly when they are doing something else at the same time, such as navigating a ship or reading an engine gauge. For most tasks seafarers are far more comfortable with pen and paper as it is more appropriate than a computer.

As computer systems are introduced onboard ships requiring all kinds of data entry, including electronic logbooks and maintenance checklists, seafarers and surveyors are routinely writing things down onto paper and typing it in a computer later, so the computer, which was intended to reduce work, is actually creating more.

Seafarers do not need to sit down at a table, take their gloves off and wash their hands before they use a pen, as they often do with a computer.

Palmtop computers are of course another possibility for data entry onboard ships, but touch screens and small keyboards are very difficult to use with dirty fingers or when wearing gloves, and writing on palmtop computers with a stylus is not as user friendly as writing with a pen and paper.

The technology

The Datatrac e-pen has a computer inside which records all the pen strokes, so they can be automatically downloaded into a computer later.

The writing appears on a computer screen exactly the same as it does on the paper, and can be imported into word documents as a .jpg image file.

If the seafarer is filling out forms or checklists, the computer can automatically read the handwriting and crosses.

For the system to work, a tiny, faint pat-

tern must be printed on the paper as well as the form. The pattern changes every 7mm, so the pen's reader knows exactly where the pen is on the paper.

Datatrac has developed this technology for the maritime industry and created systems, including pens, special forms printed on paper, the pen reader and the software, to gather information.

Datatrac integrates the data into clients' existing data management systems. Datatrac is already talking to a number of major maritime shipboard software companies with a view to integrating its software into theirs.

Handwriting recognition technology is still quite primitive; the computer can generally decipher handwriting and if the number of possible words is limited it is more accurate. This assists the seafarer as it does not take much time for a human being to check the computers deciphering of handwriting. Reading check boxes by computer is completely accurate.

The pen actually has a Bluetooth connection, so it can communicate with an appropriate mobile phone. For example a user could e-mail a handwritten document to somebody from anywhere, for example, when onboard the ship.

Datatrac has developed its own software packages, for instance, Infotrac, which can extract data from the documents. Data written onto paper is taken directly into a spreadsheet.

The technology is also useful for ship surveyors. With this system they can answer survey questions with a pen when walking around the ship and then download it - and carrying around a pen and paper is much easier than carrying around a laptop or tablet computer. The survey report is automatically sorted according to the answers selected, for example, Pass/Fail.

Datatrac originally tried providing touch screen computers on ships as part of its service, but found that paper was much more flexible and had the added benefit that seafarers were very used to using it.

Stena

Datatrac ran a pilot project with shipping line Stena, which is now using the e-pen to record the Voyage Log on fast ferries between Stranraer and Belfast.

Officers on the Stena Voyager, a fast ferry moving at 40 knots, complete the Voyage Log with pen and paper, and it is automatically input into the computer system. The officers complete the Voyage Log 10 times a day.

To reduce the printing effort and cost, the vessel has one checklist which is laminated. After the seafarer has filled in the form, the ink can be wiped off and the form can be used again.

Stena has done trials on an additional function of data recording - this is abstracting data from the written log. In this case to analyse the vessel's fuel consumption performance with different cargo loads and in different weather conditions.

The argument tested is that the fuel consumption is affected by a combination of cargo weight and weather direction. The idea posited is that with certain weather, it may not be economic to accept another truck on the ferry, even if it has space, because the extra fuel used to drive the ferry with the additional weight will cost more than the cargo will pay. The vessels have four marine diesel turbine engines; fast ferries in rough seas consume large amounts of fuel.

The officers record the weather conditions, speed and fuel consumed during the day as part of their standard Voyage Log; Stena has the data digitally rather than on paper, it is able to do much more powerful analysis.

"We've taken an ordinary legal requirement and turned it into management information," says Jennefer Tobin, director of Datatrac.

Tags system

Another product developed by Datatrac is an electronic tag and reader system, which enables seafarers to collect data at specific equipment, delivering accurate data with a record of time of attendance.

Small contact memory tags are fixed to equipment, and read using a rugged handheld computer (PDA) with a tag reader, programmed to ask specific questions when the computer touches against different tags.

The PDA does not have any keyboard, just large arrow buttons to select responses from drop down menus, so seafarers can enter data with dirty hands or when wearing gloves.

Crew on the Stena voyager fill out their log with a pen in the normal way, but the data is automatically input into a computer

Today, there are many stories circulating about seafarers being suspicious of one another, "whistleblowing" offences to the US Coastguard in order to get a share of the fine and retire. For seafarers to keep proof of where they have been on the ship and when could be useful evidence in many different scenarios.

The systems are used to read gauges and complete checklists around the ship.

The tags are inert and require no battery and yet up to four pages of information can be stored on the tags with memory. These tags are typically attached to mobile equipment so that Test Certificates and maintenance history will be attached to the equipment.

The system can be configured so that the seafarer has to answer various questions - for example, when touching a certain gauge, the computer asks for the gauge reading.

Dobson Fleet Management of Cyprus is buying systems for six of its ships, to collect engine room data.

Daily noon data reporting is a straightforward application; typically ships have engine logs with up to 60 different fields of data - the standard way of completing the log is that the seafarer writes it into one notebook while going around the ship and then copies it by hand into a clean logbook later. From this the Chief Engineer abstracts the Noon Data and then keys it into a computer. With Infotrac the data is collected during Engine Room rounds and not handled again. It reports directly into a spreadsheet for the Chief Engineer to approve and export.

Datatrac offers a lease of a handheld computer, ten tags and 2 months software licenses on three applications as part of its GBP 1500 starter pack. This pack also includes an electronic pen and three pen applications. There is a GBP 750 returnable deposit required for the handheld computer.

Marine Transaction Services doubles transactions

www.martranserv.com

Marine Transaction Services, the electronic purchasing company backed by Unitor, Alfa Laval, Jotun and Hellman Logistics, reports 40,000 transactions expected for 2004, compared to 18,000 in 2003 and 3000 in 2002.

Currently 650 vessels are putting all their purchasing through the MTS system, and there are integrations with 65 suppliers.

The company's aim is to link together different computer systems and provide information technology, says CEO Brynjar Gevelt.

MTS' aim is to remove cost from the value chain, enabling transactions to be processed much faster, increasing response times and helping improve relationships between buyers, suppliers and forwarders.

Mr Gevelt says that the door is still open for new partners to join the system and anticipates that more partners will be announced shortly.

Mr Gevelt says many people still think internet companies are not profitable or that they have no benefits.

"27 per cent of IT spending in the world is on some kind of web service," he said.

"40 per cent of 200+ listed internet companies made profit in Q2 2002.

More than 80 per cent of post 1995 web based productivity gains are in non-technology based industry."

Logistics

Electronic purchasing company MTS has launched a logistics system, Logilink, to help shipping companies manage the delivery of their supplies.

The project was originally developed with shipping company Jo Tankers, software company Xantic, and Hellman Logistics.

The shipping company can be informed about the deliveries the supplier has made and the pick-ups. The shipping company can also decide how to make different deliveries to different vessels.

The ship agent can be incorporated into the system, so they can advise on delivery status and sort out transport details.

The system links together the software / ERP systems used by the shipping company and the supplier; it does not just require that they go to a website.

"This is an important differentiator," says says Mr Gevelt.

"We are the first to provide this."

Hellman Worldwide Logistics

Hellman Worldwide Logistics has set up a special emergency delivery service for the maritime industry, including shipping companies, shipyards and engine manufactures, called "SOS Logistics".

"When a ship breaks down far away, no one discusses freight charges!" says Michael K. Claus, managing director of Hellman Worldwide Logistics.

"We saw an opportunity to establish a high-yield business and we took it."

The service includes air freight, air charter, a partnership with Lufthansa courier services. It can even deliver goods onboard ship by helicopter.

The service is run from Hellman offices in Rotterdam, Hamburg, Kobe, Piraeus, Seoul and Pusan.

Hellman now anticipates a close tie up with its SOS Logistics service and MTS, and wants to build the service from only spare parts to a broader range of ship deliveries.

"SOS will become a dedicated express product, where the message is to get the goods to where they are needed, whatever it takes," says Mr Claus.

The company says it strongly believes in paperless transactions as far as possible, with a constant flow of data and information.

Jotun

Jotun, which supplies coatings for over 20,000 vessels, says it chose to become a partner of MTS because the software fitted well with its own system.

It had considered linking with other systems but decided against it because the cost of changing its systems and procedures to fit in with any system outweighed any benefits.

MTS partners Unitor, Alfa Laval, Jotun, Hellman Logistics and Cap Gemini

Esben Hersve, managing director of Jotun Paints Europe, said that he liked the MTS philosophy "By the industry, for the industry".

"The e-commerce sector has developed more slowly than expected, but the growth curve is now starting to rise sharply. We feel that the time is right," he says.

"By choosing MTS as our e-commerce enabler, we aim to take costs out of the value chain; not just move them around," he says.

"As an interface between Jotun and its customers, MTS will provide mutual benefits through lower transaction costs and greater accuracy - fewer mistakes."

"We also see opportunities to communicate with other systems on the market, which is very important with respect to our customers. I would also add that the indications are that our customers are very positive to this step."

"There are customers out there that want to talk to us and we want to talk to them," says Jotun. "We don't care how they talk to us as long as they can."

"Bergesen used to have their own electronic purchasing system. I think they used to find it too expensive."

Jotun plans to fully integrate MTS into its own order management system.