

Shipping IT managers talk

Digital Ship gathered together a group of shipping company IT managers in Athens to talk about their biggest problems and discuss them with suppliers. Computers breaking, high satcom costs and problems with software came top of the list

DIGITAL SHIP held a two-day conference and exhibition in Athens, May 21-22, 2003. The event aimed to provide a forum for shipping IT managers to discuss their needs and wants in association with vendors who provide related goods and services.

Top issues over the two days included the need for and cost of training, particularly when introducing new technology, the availability of suitable and cost-efficient software and its implementation, concerns surrounding increased information disclosure, and the need for greater and cheaper bandwidth.

Sharing their experiences, many IT managers found that there was initially a negative reaction from crew towards new technologies on board.

Achilleas Choursoglou, IT manager, Olympic Shipping, explained; "If we are obliged to start a new technology we are afraid sometimes... afraid we will lose our job," exemplifying the situation that occurred with Radio Officers.

He said that it tended to be the older crew members who were more negative towards new technology while the younger seafarers were usually more pos-

itive and suggested this may be because the older generation of sailors are unsure as to whether they will be able to learn the new technology while younger people are more confident.



Our forum for shipping IT managers and suppliers

IT policy

While positive reactions make for a more easy transition, speakers at the conference revealed that they could also lead to additional problems.

Mr Choursoglou explained, "Some-

times the super positive reaction is more dangerous than the negative, because the [crew whose opinions are] negative don't want to use it and [therefore] don't make any changes."

For example, many companies have had issues with crew installing games and other versions of windows on the onboard computer from private PCs.

"People have windows XP in Greece in their house. They say, I don't like Windows 98 [on the shipboard computers].

To combat this problem, Mr Choursoglou suggested that standards need to be adopted and followed.

"We need compulsory procedures, eg, make backups at specific intervals," he said.

Themistoklis Sardis, deputy EDP Manager, Costamare, claimed an IT policy was essential in order to keep people involved and help them through this period of change. He suggested it should include how many PCs each ship should have and who will use them; how often they will be replaced; how to handle critical failures; and how to protect the data from unauthorized access.

Some shipping companies have very standardised policies about the computer set-up they have onboard. George Kyriakopoulos of Naftomar said that each of his company's 32 LPG vessels is fitted with 6 computers, 6 printers, a scanner, modem and digital camera.

Mr Kyriakopoulos also observed that there was a big difference in the quality of computer system onboard with vessels where there was a radio officer retrained to run the computer network.

On the vessels with radio officers, the files on the computers were generally well organized and viruses were under control. On the vessels with no radio officer, the masters generally complained about the computer systems, saying that they created work.

Susan Radford of Teo Shipping said that she had encountered problems with seafarers installing Windows in their own language.

"On some ships I would find Russian Windows installed and was not able to carry out my installation of the e-mail software," she said.

Training

Training may help to ensure guidelines are followed, although there was some disagreement as to how much training is necessary.

Problems including varying levels of IT experience, differing languages and lack of time for study, combine to make crew training difficult and possibly more costly.

For some companies such as Helle-

spont Steamship, as reported by Michael Kennedy, these issues have resulted in very individualistic training.

This is in correspondence with the views of Prof. Nikitas Nikitakos, department of shipping, Aegean University, who is currently working on a project that attempts to apply the principles of learning to the maritime environment, and matches individual needs with the education program.

George Kyriakopoulos, IT manager, Naftomar, suggested that training should be done by the software vendor and should take under 15 hours.

Mr Choursoglou believed that training ought to be continuous and therefore repeated before every vessel sign on.

Mr Kennedy suggested long handovers and overlap for onboard training, however, believes that, "The best training is that which you do yourself in the office."

He noted that this has the added advantage of relationship building between office staff and crew, which is crucial when later dealing with high stress situations on the vessel.

Mr Kennedy said that Hellepont had a solution to the problem of lack of shipboard IT knowledge: it had forced all its radio officers to retrain as IT managers. "We didn't throw our radio officers on the street. We said to them, if you're going to stay with us, you have to be the administrative officer onboard the ship," he said.

Susan Radford, IT manager, Teo Shipping, emphasized the importance of clear instructions and good communication channels between shipping companies and crew, to ensure all understand the required procedures.

She suggested detailed, step-by-step, instructions and manuals help to ensure the technology is used and guidelines followed, as long as the crew understands the language in which the information is written.

Achilleas Vardakis, a shipowner who is



The Bezeq 711 team, with Prof. Takis Varelas of Thenamaris Shipping

also managing director of software company SES-Vardakis, said that he disagreed with the sentiments previously expressed and instead suggested that the application should be so intuitive that training isn't necessary.

Still, training does not only involve the use of software. Paul Ashton, managing director of Vector Informatics, believed that training, although possibly minimal, was still required and often involves "more of a concept of how to manage the maintenance system via a computer."

Panteleimon Pantelis, talking as IT manager of Parolos Maritime, said that in 1996, the company looked for alternatives to putting manuals onboard full of safety information and trying to persuade seafarers to read them.

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Software companies

One of the biggest problems with software companies cited is that they try to make their lives too easy, and end up not solving the problems and don't want to provide

enough support.

There was plenty of discussion about the means of resolving the problems.

"Buying software is like marriage. Its fine before, its what happens after that counts," said Achilleas Vardakis, managing director of SES Vardakis.

Many software companies wait for clients to shipping companies to spot bugs in the

software rather than finding them themselves, he claimed. "The clients should never be considered to be the quality department."

Paul Ashton of Vector said that his company's policy was to employ staff with a maritime background, and get its non-maritime IT people out onto ships to see what it is like.

Panteleimon Pantelis of Ulysses Systems said that software is like a fantasy world, where everything is possible. "But its expensive to do it properly," he said. "There's a lot of thinking to be done and IT people don't like thinking this kind of thinking."

Making sure it is used

Olympic's Mr Choursoglou raised the importance of user feedback to improve both the system and training procedures.

In accordance, Panagiotis Nomikos, IT consultant to Stelmar Tankers, highlighted the importance of this continual improvement commenting, "CT (computer training) must decrease workloads. At the moment it is increasing it."

Panteleimon Pantelis, director of software company Ulysses, stressed that it is not enough to have the technology, it needs to be used.

He claimed, "We just go and buy technology we do not need... people in shipping buy software just to pass compliance, not necessarily to use it to improve their processes."

He concluded that to get return on investment (ROI) on the technology it must be used, and said that for this to happen "software must become a science."

In addition, Prof Takis Varela, CIO, Thenamaris, posited the unused computer system "degenerates to complementary instead of critical for decision support."

Dimitris Papaioannou, electrical engineer, Environmental Protection engineering, commented, there should be "no impractical dongle. If it is easy the sailor will use it. If it is not, he won't."

"We had two types of seamen," said Aris Igglessis of Samos Steamship. "Ones who thought they knew and ones who didn't know and didn't want to know."

Cheaper, higher bandwidth

Mr Kennedy told delegates that a previous project linked Hellenpont's Korean and Greek offices achieving synchronisation of data so that it could all be controlled from

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George Barclay, secretariat of Equasis, with Graeme Brown of INVSAT

one location.

According to Mr Kennedy, this resulted in "real work improvements and efficiencies." He lamented that despite exploring several options, the cost of bandwidth is too high for synchronization of data between ship and shore.

He posited that 25 megabytes per day would allow this synchronisation and hoped for cheaper bandwidth in the future. This need for a synchronisation and a central database in order to share information and provide immediate access was felt by many speakers and delegates.

Asad Salameh, managing director of ship-shore software company WorldLink, pointed out that the driving force behind the data consolidation at Hanseatic Shipping was cost allocation, with the integra-

tion of data from various reports allowing a better understanding of facility usage and where money should be spent.

Jacqui Knight, Lloyd's Register, commented, "Everybody is drowning in data. Manage your knowledge for effective advantage."

It was generally agreed that the availability of cheaper, higher bandwidth held many positive possibilities.

Prof. Varelas claimed, "It is time for all of us to exploit internet capabilities." He posited that customer relationship management (CRM) could be much improved through analysis of data such as traffic, which could lead to better decision-making and better utilisation of facilities.

Still, without the availability of affordable additional bandwidth, the vessel cannot become integrated into the corporate network and thus, as Dimitris Theodosiou, managing director of Danaos Management Consultants, commented, "The vessel remains an island."

He told delegates that the fact that today's onboard system is offline is a significant drawback.

Mr Nomikos lamented that shipping has been left out of the IT revolution. The processes "must be highly integrated," he said, "and what has been holding us back so far is bandwidth...prices need to come down."

It was pointed out that several shipping companies manage very well with very lit-

tle ship shore communications, with one well known shipping company using radio data communications at just 2,400 bits per second for all its communications on 180 vessels.

Off the shelf software

Mr Nomikos told conference attendees that there are three different ways to automate a shipping company's processes:

Firstly, the software can be written in house, where the specific needs of that shipping company are met, involving much effort.

Secondly, shipping companies can integrate different off the shelf software systems - creating a customized system, involving substantial effort

Thirdly, they can purchase off the shelf - a system that is not customized where the shipping company ultimately has to adapt to the system.

Mike Kennedy of Hellespont was one of the biggest proponents of making software yourself, claiming that the only software which had worked properly was "stuff that we had the source code to or stuff we wrote

ourselves."

Mr Vardakis stressed that the majority of ship owners could not afford to develop their own systems. His company spent \$3m to move from version 4 to version 5.

"What company would be able to afford this amount of money?" he asked.

Use one vendor's software to the extent that you can use it."

Mr Vardakis added a fourth option - integrating software into the shipping company's own system, and suggested this was better than integrating several different solutions.

"A mosaic does not work in this business, use one software vendor to the maximum extent and customise if necessary," he said.

Aris Igglessis, IT manager with Samos Steamship, said, "It is preferable to invest in small applications that are doing the same thing as people are doing right now." "We don't change the way we work," he added.

Mr Theodosiou suggested if companies have the budget to develop a quality system and can "foresee commercial development in not using an off the shelf solution, then go for it."



Lene Simonnes Weidner and Paul Ostergaard of ShipServ

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In reply, Mr Ashton said, "The majority of ship owners don't want to be in software but most ship companies don't know how to organize their data."

He claimed that selling software was the minority of a software company's business, which also included matching the applications to a shipping company's business workflow, working with IT to integrate to existing applications, building data libraries and training.

Mr Vardakis stressed the importance of the relationship between shipping companies and software houses, claiming it is "overlooked with disastrous results."

Paul Ashton, managing director of Vector, pointed out that Hellespont is a special case, operating a fleet of high-tech gas tankers.

Christopher Heng of Neptune

Shipmanagement in Singapore; Asad Salameh of World Link Communications, Boston, and Stephen Evans of Stratos, London



Supply chains

Dr Panagiotis Nomikos, IT consultant to Stelmar Tankers, talked about how shipping companies will change in the future into becoming a component of the whole supply chain, and will score points with customers based on their efficiency and reliability in moving goods from one place to another.

Shipping companies will distinguish themselves, he suggested, by the ability of their staff to respond immediately to situations, and they will need to be available 24 hours a day. In compensation, they will have much more flexible leisure time.

Shipping companies have no option but to look at ways to bring the vessel closer into their office systems, just like how every company is integrating its operations closer and closer, he said.

Fleet 77

Mr Kryriakopoulos outlined the advantages and disadvantages he believed Fleet 77 would have.

The advantages would be that it would help with training, help exchange data between ship and shore, help provide services to ships like digital charts and news, help transfer updates and upgrades, and help provide seafarers with online help, provided both by the office and other authorised companies.

The disadvantages, he said, were that it would spread viruses, increase communi-



Aris Iglissios of Samos Steamship

cations costs through the use of the internet onboard, and create problems with data security.

Pandelis Goros, CIO, Common Progress, related his experience of F77 to the conference after a vessel dry docking in Piraeus had the option to trial the new Inmarsat service. The terminal was supplied by Navarino Telecom.

Removing the old Inmarsat -A terminal, Mr Goros said, took 3.5 days, due to a mixture of bad weather and the terminal being very difficult to remove. "By the 3rd day the only thing I wanted to do was go out there with a hammer and kick the b**** thing," he said.

But putting the Fleet terminal took just 4 hours to install, configure and get work-

ing; it even used the same cable as the old Inmarsat -A. "Before I knew it, one of our staff was using it to surf the internet and chat to his friends," he said.

Mr Goros said the company had found MPDS was good for email messages of up to 40KB but had been disappointed with the internet browsing, because web pages were too data heavy and expensive to use with MPDS. Typical MPDS data speeds were 12 to 24 kbps.

He said that it was cheap and easy to install video streaming, but that MPDS was too slow and expensive for this use. Microsoft Messenger chat was cheap.

In regards to training, he said that F77 was similar to Mini -M and therefore crew had minimal new knowledge to learn, if they knew how to use Mini -M.

He added that because it was easy to use there was a high level of user acceptance.

The trial did not include ISDN and Mr Goros said they would like to test this in the future, looking at using MPDS in conjunction with ISDN for maximum cost reduction.

Stephen Evans, head of technical support with Stratos, talked about how Inmarsat Fleet could be used to facilitate the solving of problems.

For example, if a piston fails, the seafarers can get involved in an online discussion with the superintendent and equipment supplier, all looking at digital photographs of the failed part and working out how to fix it.

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Repairing shipboard computers

The main problems with shipboard computers, according to Aris Igglessis of Samos Steamship, are flaky power supplies, vibration, humidity, lack of maintenance, problems with software configuration and interference from shipboard staff.

Software systems need to be available, reliable and maintainable, said Dr Takis Varelas from Thenamaris.

Tassos Makris, IS Director, Gourdomichalis Maritime, had had problems with Mini -M and called for better support, diagnostics and standard checklists.

When the company installed mini-M terminals, the captains were very happy, because they could talk and fax more, but the terminals did not prove to be reliable, he said.

On one vessel, a mini-M installed in September 1999 was dead in November 2000. It took 3 weeks before the terminal was replaced.

A year later, the terminal had an error message "Platform error" and stopped working. The vessel was at -15 degree C temperatures at the time, in Leningrad, but no warning had been given that mini-M terminals do not work at low temperatures.

The maritime IT exhibition



The mini-M started working when the vessel left Leningrad; the manufacturer was asked to send a technician to fix it at the next port of call, Philadelphia, but he did not show up.

A technician was sent to the next port, Hamburg, who suggested that the mast should be changed and the system recalibrated, and this did not work. When the vessel reached Piraeus, a Greek technician suggested changing the gyro track sensor and the problem was solved.

None of the engineers had any idea what a "platform error" was. "The technicians were not up to standards apart from Greek technicians," he said. "We must insist on better support and better diagnostics."

Gourdomichalis has also had problems with e-mail over mini-M, with the software not terminating the connection after the data has been sent. In one case, the terminal was connected for 8 hours before anybody noticed, leading to a massive bill.

Other speakers discussed problems they had had with computer hardware and software.

Vassilis Kalapotharakos, IS Manager, Pleiades Shipping, had found conflicts between the hardware and software purchased and suggested that the most reliable products were desktop PCS from the big brands with software already installed.

He claimed that when problems arose it was usually cheaper to send a new computer to the vessel



Panagiotis Nomikos, IT consultant to Stelmar Tankers; Achilles Choursoglou of Olympic Shipping; and Tassos Makris of Gourdomichalis Maritime

rather than getting the old ones fixed.

"Many problems start when seafarers try to solve a minor fault themselves without reporting the problem," he said.

Seafarers often cause problems by installing their own peripherals and software on the shipboard computer which use up all of its processing power.

There was contrast between different computer packages into how robust they are, he said. Charts and loading software tends to be extremely robust, while automatic message exchange is the most delicate.

According to Themistoklis Sardinis, deputy EDP Manager, Costamare, so-called "Marinised PCs", which are extra tough for the maritime environment, are not worth the money.

"Marinised PCs are not that robust," he said. "I don't believe the increased price justifies the use of them."

Mr Sardinis recommended purchasing standard off the shelf computers, but getting the more expensive ones with worldwide warranty. He also recommended all ships have a backup power supply.

Shipping companies should expect one computer hardware failure per ship per year, he said.

Then speaking on behalf of Lyras Shipping, Pantelimon Pantelis told delegates that "managing IT on a ship is not expensive

if you repair it in the right place," referring to the cheaper costs of repairs in some parts of the world as compared to others.

Mike Kennedy, IT manager of Helle-spont, recommended that computers should be flat rather than vertical, because the vibration damage is less.

The contacts must be tested frequently and corroded contacts replaced. "In one sulphur carrier I was one, the contacts lasted 3 months," he said.

Information disclosure

Delegates discussed the issues of growing transparency through the increased availability of information on ships and shipping companies.



The Digital Ship team: Eva Suminska, Panagiotis Nomikos, Karl Jeffery and Jayde Card

Lloyd's Register, through Class Direct Live, www.cdlive.lr.org and Equasis www.equasis.org both provide free information on ships and shipping companies, including information such as classification, vetting schemes, association membership, special certifications and P + I information.

The discussion on information disclosure also included AIS, long range tracking devices and new SOLAS requirements, and raised concerns surrounding the accessibility of data to pirates, terrorists and competitors.

Products designed for ship tracking purposes were believed beneficial. One delegate commented, "I need to know where my ship is. I have a daily report that the ship is somewhere but find out that the ship is not there."

Another delegate added that ship owners would like to track their vessels without having other people know this information.

When asked by moderator Mr Nomikos if ship owners were worried about the availability of information on their ships, the answer came that ultimately, "It doesn't matter, it's been like that for a while, but we would prefer that the competition know as little as possible."

Mr Nomikos replied that the way forward is for "everyone to know who is a good and bad ship owner for ethical reasons. If we follow the rules, we do what we are supposed to, we shouldn't worry that the information is public."

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The Future

Mr Nomikos asked IT managers to prepare two wishes for improvements within the industry.

Answers included better, properly tested product software; software packages offered on a leasing basis; less different versions of Windows; better response times from suppliers; more reliable better tested and cheaper software; but the overwhelming response was a call for cheaper and better bandwidth.

Providing a response from the maritime software suppliers, Mr Ashton commented, that we "have to be realistic about the wishes the IT manager has and the budgets that they have to spend."

Perhaps getting years of frustration of his chest, he said, "We have heard I want, I want, I want and I don't want to pay."

Then, in an effort to bring down barriers between the IT managers and vendors, he added, "This is not us and them. An efficiency will be created through us and them working together."

Mr Ashton said that shipping companies could be clearer about their objectives and financial goals, which would help the suppliers work towards them.

A speaker from Eletson commented that the biggest problems he has encountered are from computer hardware onboard ships breaking. This is a much bigger problem than the price of communications, he said.

As far as Inmarsat's prices, it was pointed out that a legal agreement has been made between Inmarsat and the Land Earth Station Operators (LESOs) to reduce prices by a specific amount every year.

In accordance, Mr Nomikos said, "We need to listen to our anxieties and try to understand each other. We can help one another."

Barber Software Solutions

Haakon Dalon of Barber Software Solutions (BASS) talked about his SAFIR software which enables shipping companies to communicate information about ship accidents so other seafarers can learn from them.

There are no obvious channels of communication between ship officers, he pointed out; of the 400,000 officers only 10 per cent are members of the Nautical Institute and 2 per cent are members of the International Federation of Shipmasters. "Its very hard to get information out to them," he said.

Equasis

George Barclay, secretariat of online shipping information service Equasis, talked about his service, which enables anybody to find out about a ship from just the first 3 letters of its name.

From Lloyds Register Fairplay database you can get the IMO number, call sign, type of ship, flag, owner, manager,

gross tonnage, year of build, ship, owner and manager address.

From the class society, you can find out about the ISM code audit, the P+I insurers, port state control deficiencies and what they are. You can find out about private vetting schemes if you are authorised.

You can access statutory information from 60 flag states; unfortunately the two

largest shipping flags, Panama and Liberia, refuse to make this available.

The biggest users are the insurance industry, he said.

Many of the original presentations from this conference can be downloaded free of charge at www.thedigitalship.com/presentations.htm



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