Digital Ship
Special report
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Shipdex - providing ship technical information electronically

A report from our May 14 conference in Hamburg about Shipdex, a new non-profit standard for providing ship technical information electronically

On May 14th, Digital Ship held the first ever conference about Shipdex, a new data exchange protocol for ship equipment information, which aims to lead to the end of paper manuals on ships. Shipdex stands for SHIP Data EXchange.

The protocol covers all technical information which is normally supplied to vessels on paper, including equipment manuals, drawings, maintenance procedures, and lists of spare parts.

Shipdex arose out of the frustration which two leading shipping companies, Grimaldi Naples and Intership Navigation, were having with paper manuals, and their decision to do something about it.

"We get 1.5 tons of paper with a new vessel, including technical manuals, drawings and specifications," said Grimaldi's purchasing director Giancarlo Coletta. "It is very hard to accept that, when EDI and communication is state of the art, the shipping industry should have this huge amount of paper."

By having all of the data for a new vessel provided electronically, Mr Coletta estimates that he might be able to save as much as 8 per cent on the total costs of maintenance, because it will be much easier to manage efficiently.

"All the information you need, you can pick up from your database exactly. We can have access immediately to the information and supply faster answers," he said.

"With so much paper onboard, it's very hard to have rapid and quick access to information when it's needed," he said. "Sometimes technical manuals are a photocopy of an old manual they got somewhere, and not really consistent with the equipment they are delivering."

"One vessel has 80 to 100 different equipment manufacturers, with 700 to 900 components, up to 1000 parts per component, and 33,000 different general stores", he said.

With data provided in Shipdex format, seafarers will be able to get much faster answers to critical questions. "People ask - we have 25 tonnes of cargo. Can we load this on the vessel? Instead of searching through your manuals, you can answer immediately. It will be a great advantage in my opinion."

Seeing Shipdex as a way to make life easier for shipping companies and suppliers: Bjorn Stenwall, director, sales, marketing and major project unit at MacGREGOR, with Mats Ottosson, strategic project manager, parts and service equipment, Alfa Laval

As well as its planned maintenance systems, Grimaldi anticipates using Shipdex data in its quality management systems, technical library and computer based training systems, he said.

There are plenty more benefits.

By receiving all the electronic data in Shipdex format, you can also reduce the enormous amount of cost associated with manually building an electronic maintenance system for a new vessel - currently as much as $20,000 per ship.

You can manage your spare parts much better - so you are more likely to have the spare parts onboard which you need, and not have spare parts onboard you don't need - and small percentage improvements in spare parts management lead to big financial savings.

You can also keep your technical data up to date easier - if a supplier sends out an update to a manual, it can be automatically incorporated in the shipboard electronic manual - no posting out pieces of paper and wondering if they made it to the right ship.

In future, Shipdex could do many wonderful things - for example, to pass on information to shipyards about what equipment is onboard the ship, and store this data in a standard format, as will be required under IMO's forthcoming ship recycling legislation.

It could be used to communicate data with regulators, surveyors and suppliers, about exactly what is on the ship, and any problems which are happening with the equipment.

All of these things, of course, lead to big potential to improve safety - if it is easier to manage maintenance on the vessel, and ship staff can find the right answers to their questions much faster than they can with paper.

So will Shipdex be embraced by the maritime industry?

Till Braun, head of department - sales projects, Germanischer Lloyd, and chair of the conference, noted that there were representatives of major shipping companies, including BP Shipping and Maersk, present at the conference, "with their eyes wide open," he said.

MacGREGOR, one of the world's largest suppliers of hatch covers, cranes, equipment for RoRo ships and ports, has already decided to wholeheartedly commit to providing technical information in Shipdex format. It will also use Shipdex to manage the data about its manuals internally, so it can easily make updates and make sure new equipment is provided with the right manual, even if it is in paper format.

Alfa Laval is also embracing Shipdex, starting by making its manuals for separators available in Shipdex format, and then its manuals for freshwater systems. MAN Diesel is also part of the working group.

Grimaldi Naples and Intership Navigation are currently making orders for 90 new vessels between them, and will use their purchasing leverage as far as possible, to try to cajole their suppliers and shipyards to provide the manuals electronically.

One delegate from BP Shipping said that he would consider trying to get OCIMF (the Oil Companies International Marine Forum) involved in Shipdex, using the purchasing clout of oil companies to encourage tanker companies to encourage shipyards and equipment suppliers to provide equipment manuals in Shipdex, because it can potentially lead to improved safety.

Maritime charts are currently making a slow, but unstoppable, move from paper to electronic. Won't ship manuals go the same way?

IN THIS ISSUE

Presentations from the conference can be downloaded from the Digital Ship website, see www.thedigitalship.com and select 'download conference presentations' from left hand menu

For further information about Shipdex, see www.shipdex.com

S1000D - following aviation

It helps that Shipdex is based on a standard called S1000D, which is used internationally in aviation and defence (including naval vessels). All documentation in the aviation and defence industry must (it is suggested but it is not mandatory. It depends on contracts) be written in the same standardised way, so it can be easily imported into different software systems.

S1000D is sponsored by the Air Transport Association of America (ATA), the Aerospace and Defence Association of Europe (ASD), and the Aerospace Industries Association of America (AIA). The document describing the standard is more than 2600 pages long.

By using a standard developed for aviation, it means the maritime industry can take advantage of all of the software and services already developed for S1000D. It also means that many maritime equipment suppliers are already providing manuals in S1000D format, if they also supply to the defence industry. Shipdex will also ultimately be an official part of the S1000D organisation.

It won't be the first time the maritime industry has followed aviation; vessel traffic systems, voyage data recorders, automatic identification systems, and using English as a standard language, were all first done in the aviation industry and subsequently adopted by shipping.

Convincing the shipyards

But the biggest obstacle to Shipdex is already clear - convincing the large merchant marine shipyards, mainly in South Korea and Japan, to provide their technical information in this format.

You just need two lines in your contract with the shipyards to force them to provide the technical information in Shipdex format, said Marco Vatteroni, SpecTec ILS manager and Shipdex technical manager

This also means convincing their equipment suppliers to provide their technical information in Shipdex format.

Theoretically, all a shipowner needs to do to have all the technical information in Shipdex format is slip a tiny clause into the contract, "all technical information should be delivered in accordance with Shipdex protocol."

This is what the Italian Navy did to Italian shipyard Fincantieri, recalls Marco Vatteroni SpecTec ILS manager and Shipdex technical manager, who was working at Fincantieri at the time.

"There were just 2 lines in the contract, saying that publications should be supplied, generically, in electronic format" recalled Mr Vatteroni. "It was at first a nightmare for us to deal with different formats. We convinced the Italian Navy to change the contract and adopt just one electronic format based on S1000D at no extra cost."

In Fincantieri's case, the Italian Navy got its own way, and ended up with more electronic and standardized data than in the past, Mr Vatteroni said. But will a merchant marine shipping company have a similar amount of clout over its shipyards?

Naval shipbuilding contracts are usually prestigious and highly valued, so shipyards go a long way out of their way to win them. Merchant marine shipbuilding is the other end of the extreme; shipyards have their slots full for years whatever they do, and actively discourage shipowners from any bespoke requests.

Stories abound in the industry illustrating shipyards' reluctance to provide anything special for individual customers, for example of the shipowner who was asked to pay a hundred thousand dollars to have a staircase painted in a different colour.

And if shipyards don't take their manuals very seriously, then it is unlikely that a smaller supplier, who only sells direct to the shipyard (who doesn't even use the equipment), will take them seriously.

The small suppliers also often operate on low margins, and will be unwilling to make investments in new systems for manuals - they would prefer to keep sending out the same document they have been making for the last 20 years.

Safety benefits

When you realise what enormous safety benefits there could be from having manuals supplied electronically, you might expect the International Maritime Organisation to make it mandatory.

The primary safety benefit will be from ships being better maintained - because they have better maintenance management systems, with data directly input from the manufacturer's procedures.

A secondary safety benefit is that if there is ever any problem, seafarers can find out what to do about it much faster from an electronic manual, than having to look for the right page in 1.5 tons of paper.

"By having the information very well structured and searchable, you can quickly find the correct information for the specific equipment," says Eva-Lisa Martinsson, manager, Technical Documentations Services, Competence Centre Cranes, MacGREGOR, "You can have the correct safety instructions for particular equipment. If something happens, it's easy to find the right page in our manuals."

"If you have a question, how do I fix the pump, it takes 1 minute instead of 10 mins to find the answer," said Kay-Michael Goertz, head of logistic procedures and IT at HDW - ThyssenKrupp Marine Systems.

Managing spares

If equipment information is supplied in Shipdex format, shipowners can also load the data about their spare parts automatically into their purchasing systems - and with better data in their purchasing system, they can make sure they have the right spare parts onboard and always order the right spare parts.

It takes 1 minute instead of 10 minutes to find the answer to a critical question - Kay-Michael Goertz, head of logistic procedures and IT at HDW - ThyssenKrupp Marine Systems

Even if only a small percentage of your spare parts are wrong, it is very expensive and potentially dangerous.

There are many stories in the industry of shipowners forced to airlift critical parts, or charts, to a vessel by helicopter, because they will get detained if they don't have them.

By having a better database of your spare parts, it is possible to do many new things. For example, you might determine that a supplier is trying to get you to buy a spare part, which is only needed for one procedure, and that procedure can only be done by a dry dock - so there's no point in buying it.

Better manuals

A big hope for Shipdex is that it will encourage suppliers to improve the quality of information in their manuals.

There is no guarantee that a manual provided electronically will be of any better quality than a manual supplied on paper, but it should be easier to assess the quality of an electronic manual, and so put pressure on the supplier to improve it.

For example, a common problem with today's manuals is that they have a reference to another manual, but the page in the other manual doesn't exist any more or can't be found. If the links are electronic, the computer can alert you if there are any broken links, so they will all need to be kept up to date.

"Very often handbooks are absolutely terrible quality. The information is rubbish. It's very difficult to find the information you want," said Giampiero Soncini, CEO of SpecTec.

"We got one supplier to agree with us - it is impossible for crew to read what we have delivered. Have you ever seen Japanese handbooks translated into English? Sometimes I'd rather read Japanese."

The reason manufacturers often do not provide particularly good manuals today is because they lack incentive - people tend to buy equipment on the basis of its price and fitness for purpose, not the quality of the manuals.

"97 per cent of negotiation (with the manufacturer) is about are we getting what we want for the price we want," said Dimitris Lyras of Lyras Shipping. "I don't think manufacturers believe they get a competitive advantage from the information in their manuals."

Benchmarking and dashboards

Having better data should make it much easier to compare one vessel with another, so companies will have a better idea of how well they are doing.

"We have one customer with 23 vessels, each database is built by different people," said SpecTec's Mr Soncini. "So they are completely different databases. It's impossible to compare one ship with another."

Bob Kessler of ABS Nautical Systems recalled a Dilbert cartoon, which showed a manager asking for executive summary information, or 'dashboards', but not caring whether the underlying data is any good or not, a scenario many in the maritime industry will be familiar with.

"Everybody wants 'dashboards'," he said. "But if you have bad data, you won't get any useful dashboards."

Everyone wants management 'dashboards' but they are only any use if the underlying data is of good quality, pointed out Bob Kessler, head of Europe, Middle East and Africa with ABS Nautical Systems

Managing the service bulletins

If all technical information is supplied in Shipdex format, it should make it easier for suppliers to update their manuals for equipment in service.

Currently, the only way for suppliers to update their manuals is to send out a paper 'service bulletin' - but this isn't easy, if you don't know exactly which ships are using the equipment, there is no easy way to post the bulletin to the ship, and you have no way of knowing if it has been received and is being read as needed.

It would be so much easier if the update could be sent to the ship electronically, and automatically incorporated into the ship-board electronic manuals, with the maintenance, spares and purchasing systems updated as required; and Shipdex makes this possible.

ShipServ's technology could be used for updates and service bulletins - Neil Firth, ShipServ

This communication between supplier and vessel could also be two ways - with the vessel providing the supplier with useful information about how well the equipment is performing (both provided manually and electronically).

Neil Firth, chief technology officer with electronic purchasing company ShipServ, suggested that his company could potentially assist here, by carrying manual updates through its TradeNet hub, which many vessels and equipment suppliers are already connected to.

The benefit is the reduced amount of IT integration which needs to be made. Every time a vessel connects to a supplier, there is IT work in doing the integration; and if each vessel is connected to multiple equipment suppliers, and each supplier is connected to multiple vessels, that's a lot of integration work. But if each vessel and supplier connects once to TradeNet, no further integrations are required.

Some suppliers may work on the basis that they can send out updates by e-mail, but Mr Firth pointed out that there are many shortcomings to this, in particular not knowing if the message has been received.

"It's not a safe mechanism for delivery," he said. "With our process, you have an audit process."

Building the database faster

Perhaps the benefit of Shipdex with the biggest immediate impact on the shipowner's bottom line is the reduced cost of putting together a good maintenance database on a new vessel.

Or - since only a small proportion of shipowners are making this investment - it means that the vessel can actually have a really good maintenance system for the first time.

Creating a good maintenance management system using current methods is very expensive.

Grimaldi Naples currently spends 2 to 4 months manually inputting data for each new vessel it has, at a cost of around $20,000.

Other shipowners work with contractors to create a computerized maintenance management system from the information in the manuals.

Building a maintenance system from the paper manuals involves "a lot of data population steps; none of them very simple," said Dimitris Lyras, special advisor to Ulysses Systems, a company which provides this service. "There's a million ways to make errors."

"Someone has to understand the manuals- things aren't listed in the same way," he said. "People have to look at the manuals, mark them up, and have someone extract the data. It's a bit like translating. We have to abstract people's translations into a common format."

"It takes 6-8 weeks to do," he said. "We get the crates of manuals. They have to be opened, indexed, studied, copied, repacked and sent back."

Don't expect much help from the shipyards, who put the manuals together. "Shipyards don't find this stage important or particularly interesting," he said.

Giampiero Soncini, CEO of SpecTec, estimated that it takes 90 days (12 weeks) to build a maintenance system for a new tanker or bulk carrier from the paper documents; but if the data was available electronically, it would reduce to 2 days.

"If you do it in the Philippines, it may cost $10,000, but you have to pay another $10,000 to send the manuals there and get them back, and you only have 1 set of manuals," he said.

The time to build a maintenance database for a new vessel would reduce from 90 days to 2 days - Giampiero Soncini, CEO of SpecTec

SpecTec currently earns $4m every year from its manual data entry services, but Mr Soncini would be happy if it didn't have to do it anymore. "We could turn the 40-50 people who do it into consultants and have them doing work onboard instead," he said.

There are no real short cuts to putting together a maintenance management system, said Mr Soncini.

One unfortunate habit is for shipowners to buy software with a so called 'skeleton database' already on it - which refers to general equipment parts, not something specific to the vessel.

They then discover that having a generic maintenance system is worse than useless, in that it tells seafarers to do tasks which don't need doing, and doesn't tell them what actually needs doing.

At that point, the person who made the decision to buy it typically looks for other people to blame (such as the chief engineer or the software company), instead of blaming himself for buying the wrong software, Mr Soncini said.

Also at that point, so much investment has been made in trying to make the poor quality software work, that there is a real reluctance to throw it away and start with something better, although that is the only way forward.

"It has a list of equipment but with no information on it," Mr Soncini said. "It is sold for $2000. But people never say 'I made a mistake' after buying it."

Many companies invested in maintenance systems to meet their ISM requirements in the late 90s, but invested in a system which would get the 'tick in the box', not a system which would actually provide value.

Future development

There are plenty of ideas as to how Shipdex could evolve in the future to do more.

For example, it could be useful in future for facilitating communications between the vessel and class, flag state and shipowner, about any problems related to equipment.

"If you have an accident on the vessel, you can talk to class, flag state, owner, and say '1567' and they know which anchor winch isn't working," suggested Till Braun from Germanischer Lloyd.

There are plenty of potential benefits to class societies, who often have to communicate a lot of information about equipment, for example between the class surveyors and the equipment suppliers.

"We are all aware, such an industry standard would very much support our day to day work," said Mr Braun. "Class can see Shipdex as a way to communicate with manufacturers."

Bob Kessler, from ABS Nautical Systems (a maritime software company linked to class society ABS), said that ABS is already working to develop a database system which can gather information automatically from surveyors, and it could use Shipdex for this communication. "We need it too," he said.

Dimitris Lyras who is also director of Lyras Shipping, suggested that Shipdex could be used as a basis for a wide range of communications systems related to ship equipment - including enabling shipping companies to check the vessel is being operated safely. "Shipowners need to know if someone is in the tank who shouldn't be in the tank," he said.

Shipdex could be used to communicate information about the status of box containers - for example, to enable people to check that the refrigeration unit on their container is still working ok, suggested Kay-Michael Goertz, head of logistic procedures and IT at HDW - ThyssenKrupp Marine Systems.

There were suggestions that Shipdex could be used as a tool to communicate navigation information - connecting the navigation equipment with suppliers of navigation services and electronic charts - and possibly linking in with IMO's "e-Navigation" initiative.

Shipdex, pdfs and paper

Many of us have used manuals supplied electronically as a pdf, and it is important to emphasise the difference between Shipdex and a pdf manual.

Building a maintenance database manually, as it is done today, involves a million different steps, none of them very simple - Dimitris Lyras, special advisor, Ulysses Systems

A pdf is an electronic document. However, unlike the digital display of a paper document you get with a pdf, where the computer cannot understand the information contained within, a Shipdex dataset contains chunks of text, data and drawings, which the computer can understand and utilise in different ways.

Different pieces of software are available which can be used to put these chunks of information together to display it or create an electronic document out of it (which could be a pdf).

But the information can also be imported into maintenance and purchasing systems. So, for example, you might want to import information about recommended intervals between maintenance for a certain item into your maintenance system. When it is time for the maintenance task, the software can automatically display information about the necessary procedures, show you the diagrams, and also arrange for the right spare parts to be ordered, via your purchasing system.

An equipment supplier might also choose to manage their manuals within the company by keeping the data in Shipdex format, and then using this data, with appropriate software, to create a conventional looking manual when needed by the customer - which can be provided on pdf or on paper. MacGREGOR plans to manage its manuals internally in this way.

Having an electronic manual does not mean you can only read it on screen. Screens are not a particularly good way to provide information to someone doing a maintenance task; so it is likely that seafarers will still want to print the information out and take it with them on paper when they do the maintenance.

But there is a lot of difference between a printout from an electronic manual, and using a paper manual.

You can find the information you need much more quickly if it is electronic, than you can from one cubic metre of manuals. You can also update and work with the data much more easily if it is supplied electronically. You can also throw the paper away when you've finished with it - it doesn't matter if it gets covered with engine oil.

"People must have the capability to print," said Kay-Michael Goertz, head of logistic procedures at shipbuilder HDW - ThyssenKrupp Marine Systems. "You can print out A4 cards and take it with you when you are working."

Getting too much data?

One possible pitfall with Shipdex is that shipping companies get besieged with so much data they don't know what to do with it.

To take an extreme example - a simple blender in a galley could have 100 different parts in it, any of which could potentially fail. If you received your manual for the blender in Shipdex format, and it was completely comprehensive, should you import data for all of those spare parts into your purchasing system, knowing that you are very unlikely to want to order any of them over the lifetime of the equipment (ever bought a spare part for a blender?)

Bob Kessler, head of Europe, Middle East and Africa with ABS Nautical Systems, had an interesting solution to this problem - look at your historical purchasing data, and see which parts you have bought in the past, and only add these to your purchasing system.

Or, maybe one of the companies which operates maritime electronic purchasing systems, such as ShipServ, could be persuaded to provide information about which spare parts the whole shipping industry has purchased; you could reconcile the list of spare parts for your equipment against the list of spare parts purchased by shipping companies before, and those are the ones you put in your purchasing management system.

Expanding the user group?

Possibly controversially, a decision has been made not to allow any further members in the protocol maintenance group, on the basis that it will make decision making too slow.

Giampiero Soncini, CEO of SpecTec, has said that he would not have gone ahead with developing the protocol if more companies had been involved in the outset, because the amount of work would have been much greater.

This is a decision which may need to be changed over time. It is hard to imagine a big shipyard such as Hyundai agreeing to provide all of its manuals in Shipdex format without a seat on the protocol maintenance group (although the protocol maintenance group will aim to take into consideration requests from Shipdex members).

Having said that, if the shipyard doesn't want to use Shipdex, it does have the option of using the full version of S1000D, the 2,600 page document being used in aviation and defence industry, that Shipdex is based on, and all Shipdex systems will be compatible with it.

The Shipdex organisation

There is a membership fee to joining Shipdex - Eur 2,500 initially, and Eur 500 per year after that.

Shipdex is technically a non profit making company owned by shipowners Grimaldi and Intership navigation. The fee is used to maintain the company - which will employ staff to run the Shipdex website, and answer questions.

For this fee, you do not automatically get access to the manuals, but you buy the rights to use the Shipdex protocol in your software, which enables you to use Shipdex documents.

Of course, there is nothing technically stopping you from using Shipdex without paying the fee, but without paying the fee you do not have a voice in the development of the protocol, and you cannot access the documentation which describes how to make documents in Shipdex standard.

Live demonstration

A live demonstration of Shipdex was presented at the conference by SpecTec and Hico, of the first two software applications which have been developed to use the protocol.

In one example, SpecTec's AMOS data manager software was used to validate Shipdex datasets, and create a Virtual Publication Structure.

In the second example, the Shipdex data was imported into AMOS, and used to automatically create the relevant database.

Further technical information about the protocol was presented at the conference by Marco Vatteroni, and can be downloaded from the Shipdex website www.shipdex.com. DS

MacGREGOR - the first supplier to embrace Shipdex

MacGREGOR, one of the world's largest suppliers of vessel hatch covers, cranes, and solutions for cargo lashing, bulk handling, offshore load-handling and naval logistics, is the first ship supplier to wholeheartedly embrace Shipdex, seeing it as a way to make life easier for itself and its customers, and also to differentiate itself in the market.

We decided to go for the standard and use it for all our manuals in the future," - Björn Stenwall, director, sales, marketing and major project unit at MacGREGOR.

"We decided to go for the standard and use it for all our manuals in the future," said Björn Stenwall, director, sales, marketing and major project unit at MacGREGOR.

"We are convinced this is a good thing to do. A common standard is what we need for sure."

"When we started we were a bit sceptical," he admitted. "But then we made quite good decisions about it, and put in good resources to get it going."

Mr Stenwall explained how having manuals as electronic data could lead to savings in many different areas.

"With Shipdex, shipowners can improve spares and maintenance costs. They know what to buy and what to maintain," he said.

Shipdex can help reduce storage costs, by helping companies build better systems to keep track of what they have in stock. "We have over 35,000 articles in stock and don't necessarily know what we have onboard after a while," he said.

Shipowners might be able to reduce their insurance costs, or they can demonstrate they are keeping their equipment better maintained, he said.

Shipdex should certainly be able to help reduce maintenance costs. "Maintaining all the documents on a ship takes a lot of administration," he said.

And also, there could be savings on the crew cost. "The crew must be very frustrated in the situation they are in today - they don't know what to do or when to do it," he said.

Typical operating costs for a vessel today are 47 per cent crew, 20 per cent spares and maintenance, 12 per cent administration, 10 per cent insurance and 11 percent lubrication and storage, so you can see how Shipdex might impact total operating costs (which are themselves 56 per cent of the lifetime cost of ownership of a typical ro-ro vessel).

"If we decide 100 per cent of our manuals should be available in a structured way, I am more and more convinced the pay off will be there," he said.

Mr Stenwall used a Rubik's cube to illustrate the complexity of managing all the information about equipment on a ship. "A Rubik's cube has 27 small cubes and 6 sides, and I couldn't solve it," he said.

We wanted to have influence on this new standard, and we wanted to have some positive PR - Katarina Munter, manager, technical documentations services, competence centre RORO with MacGREGOR

By comparison, "a ship might have 100 suppliers, with 800 different pieces of equipment, with 100 different parts in each one."

Katarina Munter, manager, technical documentations services, competence centre RORO with MacGREGOR, told the story of how MacGREGOR became involved in Shipdex.

"We started on this because we were invited by our customers and were curious about where this was heading," she said.

"We wanted to have influence on this new standard, and we wanted to have some positive PR."

MacGREGOR expects to reduce some of its document production costs from using Shipdex, she said.

"By using Shipdex we should reduce our document type definition (DTD) development costs," she said.

"It is time consuming and costs a lot of money to make manuals - also it's really seen as a contractual obligation."

Shipdex should also make it easier to communicate changes to the manuals to customers.

At the moment, "we have trouble communicating changes to the customer, and it's very hard to know if an update has reached the customer," she said." We don't have a natural way to send out the updates."

"There is a possibility of misunderstanding between suppliers and the end user, because it is so hard to get updates to the customer."

"We have a problem getting feedback from the end user," she said.

Meanwhile Eva-Lisa Martinsson, Manager, Technical Documentations Services, Competence Centre Cranes, MacGREGOR, has also been experimenting with Shipdex and is pleased with what she has discovered so far.

"We see our information in a new way," she said. "We see that by changing our way of working to XML, we have a lot of opportunity to make our way of working much better."

There is less cost and administrative work doing the manuals - Eva-Lisa Martinsson, Manager, Technical Documentations Services, Competence Centre Cranes, MacGREGOR

"We can make producing our manuals more secure and faster. By decreasing the manual work involved in making manuals, we get less errors," she said. "We know we have the correct information in our manuals. There is less cost and administrative work doing the manuals."

"We also see - this thinking fits very well into the product lifecycle management system (PLM)," she said. "A good PLM system, using Shipdex as the standard, will make our lives better."

MacGREGOR is currently developing a new product lifecycle management system, which will connect with its documentation system, and it will all use Shipdex data protocols, she said.

Ms Martinsson is particularly pleased about the improved two way communication between buyer and supplier which Shipdex should help facilitate. "Putting out information that we have should really be automatic," she said.

"We will have a closer relationship between the supplier and shipowner," she said. "We know what we have onboard and can supply the correct spare parts. The key to success is close co-operation between buyers and suppliers." ■