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News, Views and Reviews from the
International Dynamic Positioning Operators Association

Issue 8: Summer 2011



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DP at 50
CELEBRATIONS

WELCOME

TO 6degrees, THE E-JOURNAL FROM IDPOA



This year is a very significant one in the history of dynamic positioning (DP) as we are marking 50 years of groundbreaking innovation and pioneering development.

Half a century of making the seemingly impossible not just feasible, but safe, clean and cost effective. We have seen and been part of incredible leaps in technology, and the work we have all been a part of has opened up a new world of hitherto untapped maritime possibilities. We are the past, present and future of DP.

According to the latest figures from the Nautical Institute there have now been almost 15,000 DP Certificates issued worldwide. An average of 230 were issued per month last year. So when we talk of the growth in DP the statistics really do prove the theory..

However the influx of people is not without its problems. As the number of existing DPO's has risen, and with the demand for ever more – we are at a situation of critical mass, a point where we need to evolve.

The issue of experienced guidance, mentoring, training and quality control is pivotal – but we are heading into a real problem. As the term “senior” suggests, many of the most experienced DP people have been around for a long time, and there is a slow, inexorable exodus as many enter retirement.

So what can we do to make the most of this experience while it is still available? For us the answer is to ensure an evolution as part of the change management process. We understand that losing experienced personnel is a natural development, and so we have to mitigate the risks posed, while making the most of senior people while we still have them.

The DP community is united in striving towards excellence in safety and operations today and into the future. We play our part by encouraging and fostering the transfer of knowledge, while making sure initiatives such as these awards receive the recognition they deserve, and the nominees and winners the plaudits they richly deserve too.

All the best,

Steven Jones
Executive Director

IN THIS ISSUE

Much of this issue covers papers and conversations from the European DP Conference held in London in June.

The event was a real success with a number of visitors coming from around the globe to take part in the event.

IDPOA was pleased to support the event, and after having spoken at earlier conferences it was pleasing to hear that finally the rest of the industry is seemingly catching up with us. There was a lot heard about people, and about the problems of recruitment and retention.

We have, since our launch, tried to raise awareness of the role of the human element and of the engagement which is so important if industry is going to have the people and skills it needs into the future.

Another part of the process is to look forward as well as back – and in order to ensure that we recognise the best in new talent, we are pleased to have recently announced the winners of the International Dynamic Positioning Operators Excellence Awards.

With categories reflecting the importance of individuals, training, employers and equipment, the awards provide a chance for the DP community to rally around, showing appreciation of those who do their very best and who excel. across the DP sphere

The winners were announced as part of the First Asian DP Conference – providing a wonderful opportunity for the Asian DP community to show how the recognition and support for excellence is a driver for those ashore and at sea.

1 2 3 Numbers 4 5 6 7 8

Barry Luthwaite, MD of BRL Shipping Consultants: www.brldata.com spoke at the recent European DP Conference and assessed the events driving the growth and rapid expansion of DP demand.

NEWBUILDING BOOM

A Newbuilding boom is currently evident with a record number of offshore vessels on order. In overall terms the total newbuilding backlog represents one tenth of the global situation for all types of vessels. Offshore was the only sector which held up in the darkest days of the credit crunch and recession.

Several mitigating factors have contributed to the boom leading to new challenges and sophisticated on board monitoring equipment to match. Offshore work is dangerous and state of the art technology to minimise risks and promote safety in all weather environments is vital.

From humble beginnings the dynamic positioning concept celebrates its 50th anniversary this year. The challenge is for equipment companies to match the multi-task designs which now dominate owner thinking and subsequently demand changing DP systems.

Recovery from the recession has been swifter than anticipated. With close attention being paid to energy

conservation and environmental issues, operational consideration to new vessels is paramount.

DEEP SEA DEMAND

Where the offshore industry has been looking for salvation then deep sea exploration demand has provided it. Not only have new sophisticated designs been evolved but the industry's workhorses of anchor handlers and supply vessels have moved on to a new plateau also. The new DSPSV or deep sea supply platform supply vessel has been born and fitted with DP for service over longer distances in all weathers.

This has provided a solution against less competitive conventional PSV's and anchor handlers which are also overtonnaged. Shuttle tankers have now reached suezmax size for the first time with a record number of 32 vessels of varying sizes on order and 78 in service.

MULTI-TASK VESSELS

With owners prepared to spend millions of dollars on state of the art offshore vessels, several of these are designed for multi-tasks. Even the workhorse anchor handlers and PSV's are now asked to perform multi-task roles. All this improves competitiveness when seeking long term charters and endeavouring to impress the oil majors and offshore developers.

NEW GENERATION THINKING

Judging by the number of differing designs and sheer volume of vessels being ordered it is clear that the new generation of experts driving the oil business are thinking decades ahead. Diminishing energy sources and a growing global population demand this.

WIDER APPLICATION

Essentially dynamic positioning systems keep a vessel within specified position and heading limits in varying weather conditions. Stability success has enabled a wider application of DP outside of offshore.

FACTORS BEHIND THE BOOM DEEP SEA EXPLORATION

Deepsea drillships are still very much in vogue, with a record number of 34 units are on order with still more on option or under negotiation. It is significant to note also that 124 drilling rigs are currently on the global orderbook – the largest number in history – and over half of which will be built in Singapore.

The drilling rig boom needs mention even if not directly related to DP in many cases since this underlines the sheer number of exploration projects yet to be fully exploited and spawning the newbuilding offshore boom.

MULTI-PURPOSE DESIGNS

The one significant feature of today's industry is the increasing versatility of designs. For more sophisticated vessels speculative construction is ruled out. All orders are placed against long term employment of ten or more years to the major oil and gas companies. With multi-million dollar contracts at stake owners now take the opportunity to build in design provisions for a multitude of tasks. Even platform supply vessels and anchor handlers are more readily adapted to multi-roles.

Among these are oil recovery, rescue and ice keeping facilities in addition to general transport duties. Depending on trading area most are classed with DP1

notation but several are now specifying DP2. Inspection Maintenance and Repair vessels are a new breed recently commissioned and specifying DP3 notation. Ice class plays an increasing role with support vessels especially as Russia's Arctic Passage development comes more under the microscope.

With the wind farm industry providing much current and future employment the innovative and popular Multi-Purpose Self-Elevating Platform will become reality in 2012.

The jack-up design is designed to meet all the requirements for installation and support services in the deeper north sea depths where wind farms will be located. The unit will be self-propelled, and as is increasingly being seen will incorporate DP2 technology.

Accommodation is in demand for large numbers of personnel. Lauritzen Offshore, who recently entered the shuttle tanker business, is a pioneer in development of mono-hull DP offshore accommodation solutions when faced with the exigencies of the weather.

ECONOMY OF SCALE

Oil exploration and servicing is a very expensive business and it is no surprise that owners, charterers and operators naturally seek maximum economy of scale. For servicing, the market is seen to be dividing more for PSV's and anchor handlers into DP and non-DP. Quite apart from the fact that these vessels have grown bigger and can offer up to 25,000 combined horsepower DP fitted vessels can work in harsh weather environments and cover longer distances in half the time.

The new versatility for tomorrow's challenges will provide most owners with gainful employment after a lean time with non-DP vessels through the recent market slump and the fact that there are just too many supply vessels in service.

Some owners will turn to DP retrofitting to remain competitive if they operate relatively young non DP tonnage.

AGEING FLEET APPROACHING RETIREMENT

The average life of a stationary offshore vessel is 20-25 years. Compulsory hull survey is normally called upon every ten years and today very few owners stretch service beyond 20 years due to the rapid pace of change. Upgrading or conversion options for greater longevity used to be an option but not any more. Now there is a call for more supply vessels to be scrapped as an overtonnaged situation is depressing spot rates in some areas of the world. This situation may now correct itself as DP provision begins to occupy centre stage and grow in the esteem of charterer preferences.

WIDER APPLICATION OF DP

Having gained so much ground in 50 years it is interesting to note that dynamic positioning is still spreading to non offshore related areas. New generations of heavy lift carriers, multi-purpose freighters, mega luxury yachts, cruise liners have all been added to the DP portfolio. In a number of cases heavy lift vessels, especially if semi-submersible, are engaged in loading or offloading heavy material offshore under which stable sea keeping conditions are paramount.

Probably the biggest surprise is the application of DP1 to multi-purpose freighters with heavy lift cranes. These vessels are busily engaged in project cargo transport especially piping and steel work some of which is discharged offshore where construction works are underway. With passenger comfort in mind cruise liners and luxury yachts are providing DP with new markets to expand into but offshore and specialist vessels will always form the industry's core business.

Barry set out a snapshot of the Newbuilding Offshore Orderbook, and highlights included 259 Platform Supply vessels, 251 Anchor-Handling, 87 Offshore Support vessels and 34 drillships. With a myriad of other ship types the orderbook stood last month at some 981 vessels.



The Tough Road Ahead



Amongst the many challenges facing the DP industry today, one of the most serious is that of operator competence.

At the European DP Conference it was seen that the crewing challenges are immense, there are also cultural issues with the people.

When asked about the three biggest challenges in the future, this was summed up as "people, people, people" by Graeme Reid MD of Maritime Assurance & Consulting

From technical perspectives we are seeing issues of integration, as we look to bring everything to the focal point of the DP desk. This "new generation" thinking will see new ships, new roles and new challenges.

Innovative companies which have made their mark elsewhere are now viewing DP; this is likely to have an inspirational and challenging effect.

Even the status quo is one of change...so what does that mean for the DPO?

From the old days of frozen systems and horror stories, the present systems have made incredible strides. In fact these giant strides can make DPOs think today is perfect...it's not and the future should see the DPO involved in the design and building stage.

Practical operational knowledge can bring immense value; it can also better allow judgment to be made on the "optional extras", of the DP design, ergonomics and installations. The future challenges will only be met with enhanced and formalized operator input. Captain John Daniels of the Daniels Maritime

Group (DMG) stated rightly, "decisions should benefit users, not be account/budget driven".

The fact was stressed at the conference, that all too many DP operators are actually DP "watchers". There was also criticism of the influx of new "DPOs" many of whom showed a lack of competence and some who were deemed, "atrocious". There were calls for independent examiners to assess competency at sea. Much was spoken of the need to design DP systems to harness people, so as to ensure that DPOs are built into the ongoing monitoring and systems.

The eventual aim is to allow people to feel constantly linked and an integral part. The old saying of DP being "99% boredom 1% terror" is still perhaps true, and so much effort is now being expended in trying to lessen the spikes.

Daniels went on to add that training is vital at sea, and the role of this needs to be harnessed more effectively. DPOs learn at sea, not in the classroom.

There are moves afoot to re-think the Nautical Institute training scheme, in so far as the emphasis needs to be taken from the shore classes and put back onto the vessels. There is also a need for DPOs to remove blinkers and stop just looking at the DP screen; we have to understand the whole process, all elements and the world outside. No elements of training, of development or skill can exist in isolation – and now the time has come for a more expansive view of training.

Quite how can you examine DPOs without causing problems was not really discussed, but there is real and clear change coming. The standards of the past, the old ways of doing things, the reliance on shore training to produce quality DPOs...all bets are off as a new dawn breaks over the industry.



Deepwater Drivers

Review, Regulation and Risk

Much has been made of the 50th Anniversary of DP – but the real great leaps forward in DP have actually been made in recent years. According to Chad Fuhrmann of GL Noble Denton it is a different DP world that we inhabit now.

Indeed it is, and it is his assertion that accidents such as “Deepwater Horizon” are changing the view of coastal states when they look at offshore operations, and in particular when they begin to appreciate the role of DP?

This dawning realisation isn’t simply US-centered, the death and destruction on the Bombay High field prompted a slew of changes too, with the Indian government and the DG of Shipping waking to the importance of DP and of the significance of a new generation of seafarers, DPOs.

The fact that neither the Deepwater nor the Bombay High accidents were DP related seems to matter little. We are now seeing that coastal States are starting to look at ensuring they can police what goes on? A need which goes beyond safety, and actually becomes an issue of reassuring their populace. Where votes count, clean seas seem to matter even more.

At the moment, as we know the world of DP is self regulating. There has been very little IMO activity – in fact the moves to bring DP into STCW were only prompted by Indian Government action, and even then they did not manage to get it into the mandatory Part A.

There has also been very limited flag and Coastal states activity with regards to DP, we are simply left to Classification rules and the high level of activity from Industry bodies. Standards have long been essentially charterer driven, even the mandate for the Nautical Institute certification simply derives from acceptance of its certificates by charterers. Aside from the odd waxing and waning interest from the Norwegian Maritime Directorate (NMD), no-one else seems to pay much attention.

Up to a point self regulation can work very well. DP is a clear example of this, but when accidents do happen, and if

standards are not improved then external agencies will act. Indeed changes are happening and while some don’t like it, this does pose opportunities for those willing to take them.

There is a quality (r)evolution as many make the flight to quality. In these days of high risk opportunity, it seems investors are sick of taking too many chances, so want more reassurance. Confidence is often boosted by regulation and certainty.

We find ourselves at the start of a new life cycle for the management and oversight of DP. Good practices lead to best practice. Best practice becomes guidance, guidance become regulations, regulations become law. Laws lead to legal disputes, which in turn lead to sanctions.


This means that only companies who operate to the highest industry standards will survive, if you start out applying best management practice then you may stay in business. Those who don’t will likely be forced to the wall.

In order to start the process, we need to ensure that the industry is at the forefront of best practice – and this needs to be communicated, shared, respected and acknowledged. Companies that either lack the resources to do the necessary, or which make mistakes which will begin to see sanctions which force change.

The Deepwater Horizon loss is such a catalyst for change. It is clear from the USA that there is a spotlight on the industry. The USCG is taking the power back...the new USCG standards will ensure that DP keeps evolving and improving and ultimately that will be good for us all.

According to a survey on offshore developments, 72% of industry executives believe that incoming regulatory changes will affect US waters most, However 30% also see great potential there too.

This is a difficult dichotomy but one that businesses will have to embrace in order to survive and especially if they are to thrive.



IDPOA JOBS BOARD

At IDPOA we work hard to bring you the latest DP job opportunities from across the world. We actively engage directly with employers and careers agencies to find permanent vacancies and contract roles at all levels on the DP career ladder.

You can use your membership of IDPOA in order to access and apply for all the jobs we advertise, upload CV's and give recruiters direct access to their careers information in the jobs section of the IDPOA website.

We are working hard to become the only industry jobs board worth visiting. So keep watching as the jobs grow and grow.

The 'Get a Job' listing in our careers section brings you the latest vacancies we find online and is open to all. Here we give you a flavour of current vacancies, find more DP jobs at www.dpoperators.org

If you have DP positions to fill... Email us to find out more about promotional opportunities: marketing@dpoperators.org

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2/O-DPO, pipelay vessel working presently in West Africa, permanent position 6wks on/off

2/O-DPO, multipurpose vessel working presently in Italy, temporary 4wk contract

2/O-DPO, pipelay vessel working presently in North Sea, Norwegian Sector, permanent position 5wks on/off

If any of the above would be of interest, please send CV's to aecmuk@angloeasterngroup.com

PLEASE REMEMBER:

- If you want to apply for a role advertised on our website please follow the links to the relevant recruiter website on the advert to apply.
- Please do not send applications to IDPOA as unfortunately we cannot forward these on to employers or respond to individual applications.

Fast and Furious

The development of new technology and shipboard systems has been deemed “fast and furious”...but has it been too fast, and too furious? Is there a risk that the human element has perhaps been left behind or sidelined in this development?

There is a danger that the technology is outstripping the competence of operators. The technological progress is rapid, and there is a definite and natural lag.

This has meant that there is an inevitable emphasis back onto onboard training, but according to Captain Lee Brown of ADPS Ltd., such system interaction appears to “bore” many DPOs.

As we all know bored students don’t learn as well as engaged ones...so there does appear to be a real problem.

There is a lot DPOs can and should be doing throughout their watches, but there are concerns that there is too little sensory input. While some jokingly questioned whether the DP systems should automatically induce failures to keep DPOs awake, there are some interesting questions here.

As the equipment has improved, there is an unquestioned faith that vessels will not fail! In many cases this is blind faith!!! And it is potentially dangerous. Anecdotal tales of proud Chief Engineers boasting that their vessels could hold position even when blacked out point to the moment when optimism replaces thinking.

In the past DP systems used to be just a console which acted upon inputs...today it is changed, and the systems now involve everything that has an impact on position keeping. They cover all aspects, such as:

- Power generation
- Power management
- PRS
- Thrusters and control systems

This means not only are DPOs in danger of ignoring the things they should be paying attention too, they also neglect the areas that they don’t even realize they should monitor.

For many the answer is simple, we do not do enough on site training. With shipboard training and evaluation comes a chance to really understand the people and the problems. This can pose a double opportunity, the potential “win-win”. In sending trained assessors to vessels we can head off problems, we can ensure we highlight existing problems, while heading off future ones.

This would also give owners a chance to understand the changes to their vessels as they age. Nothing remains the same, and that applies to technology – the blind faith of DPOs combined with the subtle effects of damp, salt, humidity, vibration, heat, etc, etc on equipment and systems can and does all too often result in incidents and accidents.

There’s a lack of understanding or appreciation of the effect of being on a ship on delicate electronics – and this should be a concern.

So the perfect storm could be brewing. We have bored, under-stimulated DPOs monitoring systems which they think will never fail, and we have electronic components which could be about to die. So do you feel lucky punk? Well do you?



The 2011 Winners are...

The International Dynamic Positioning Operators Association (IDPOA) is delighted to announce the winners of the 2011 International Dynamic Positioning Excellence Awards.

The world of dynamic positioning (DP) is about people – not just technology. The human element combines with cutting edge equipment and vessels to make DP the success it has become, coming together as a sum greater than its parts.

Steven Jones, Executive Director of IDPOA said: "The awards stand testimony to the skill, dedication, effort and commitment of people who strive to be the best and who help others become better too. We are about the DPOs, lecturers, leaders and mentors...these are the people driving DP excellence and these awards are for them."

DP Operator of the Year - Malcolm Benson

The DPO of the year is a significant award, it recognises not just that there are committed, dedicated and highly skilled operators out in the field, but that such people care about their profession. They care about safety, the environment and of giving back to their profession. A DPO who not only has detailed knowledge of the equipment but is a highly skilled, experienced and diligent operator. Ensuring not only the proper execution of duties but goes above and beyond to make the right things happen and the wrong don't. Malcolm can do every role and has worked on every piece of kit, he is hugely capable and above all is a real gentleman.

DP Lecturer of the Year - Matt Barney of AMC Search, Australia

Matt was runner-up last year, and his popularity continues to shine.

It takes genuine knowledge, skill and a capacity to engage with students to lift the DP training environment from the classroom and allow students to feel where their newly found ability fits into their professional lives. He has the knowledge and experience born from working in the classroom and out in the field. That would be impressive enough, but is built on a calm, assured, easy going and engaging capacity to get knowledge across to students and to bring the best out of the DP system, the course and the people.

DP Mentor of the Year - Charlie Stuart

For experienced and junior DP Operators alike, it is hugely important to be guided and encouraged by someone with real leadership skill, operational expertise and enthusiasm. In Charlie, the DP Operators working with him have someone who is willing and able to support and lead not just in the office but out in the field, and is someone who is always ready to help. He has turned the role of DP mentor into his own, he has created a role, a position and a system of management which many companies can perhaps learn from. Do you help your DPO's in the way Charlie does? If not, perhaps it is time you did?

DP Training Centre of the Year - AMC Search

It is all too easy for students to leave training centres with barely a look back over their shoulder. That is certainly not the case with AMC. With first class facilities, dedicated, professional and passionate lecturing staff, AMC was a highly popular winner.

DP Manufacturer of the Year - Kongsberg

As DP equipment seems to get better and better, it is perhaps hard for equipment manufacturers to truly differentiate themselves. However, with excellence in innovation, intuition, quality, control and service the award to Kongsberg was a very popular one. Their equipment is fitted on more ships than anyone else, and the DPOs like them.

DP Employer of the Year - EMAS Offshore

The company won special praise for its leadership and vision, which is led from the very top. The passion and desire to succeed which is evidenced by the highest levels of management acts as an inspiration to those who work for the company. Add to that the training and support which they experience, and it is easy to see why EMAS has achieved this award. Congratulations.

DP Vessel of the Year - "OSV RELUME"

According to the nomination process, the vessel performed almost faultlessly on DP - throughout the construction phase of Greater Gabbard Windfarm, and exceeded all expectations. The performance of the vessel, owned by Middle East Navigation Aids Service (MENAS), showed that you do not have to be the biggest, most powerful and most expensive to be regarded with the best.

Services to DP Award - Bill Milne

Bill has been a DP Instructor for 25 years of great service to the DP industry. His knowledge and enthusiasm have impressed students over many years. He turns 70 years of age in January, but is still working hard passing on DP to the next generation. Bill was nominated and chosen for this fitting award for selfless long service and a commitment to making the students he teaches the best they can be.

We felt it important to recognise the contribution to training of DP Operators made by Bill. Whenever you speak to influential people working with DPOs, his name is mentioned as having been a positive influence on them. He has been doing it a long time and a lot of people have benefitted. Having been teaching for half the life of DP itself means that the innovation, changes, developments he has brought to the industry highlight the approach, philosophy and dedication which has run so long through a career based on bringing good things to the industry and of the people he trains.

The 2011 International Dynamic Positioning Excellence Award Winners



Ian Smith handing over his certificate for 2011 Mentor of the Year to Charlie Stuart, Tidewater as part of the Asian DP Conference, Singapore



Lectures at the Award Winning AMC Search DP Training centre in Perth

Full Scheme Ahead

Outside those in the know, the world of dynamic positioning is pretty much invisible. Even in mainstream shipping little is really known or heard of DP. We can debate whether this is perhaps good or bad, whether it actually represents success or is it a failure.

This lack of visibility affords some scope for quiet progress, however it also means that when the dawning light of realisation does wash over the rest of shipping and indeed the legislators, then we have to be ready to show our hand.

The one thing which is clear is that with the vessels, people and technology we have there is a continuing need to deliver ever more, ever safer and ever better.

Shipbroker analysis shows that confidence is still extremely high, with record units for deep sea drilling on the global order book. The drilling rig boom is real and will have an immense effect. Add to that the current order book of 6 offshore vessels a week and it becomes clear that there is an urgent need for 3000-4000 extra DPOs.

Given the time to properly develop fully trained, certified and experienced DPOs it is clear, at least to us, that the ticking time bomb is getting louder, and slowly this has awoken many owners to the concerns about recruitment and retention.

Speaking at the conference on the “freedom of movement of DPOs”, Captain Mark Pointon of the Nautical Institute (NI) stated that there has been a sea change over the past year, with owners increasingly seeing that they have to step up.

With around 15,000 DP certificates issued, Pointon sees that at the “top of the food chain” there isn’t a perceived problem. However with no formal system to push people through the NI scheme there are problems elsewhere. With the biggest and best companies either ignorant of the risks to their manning pool, or deciding not to acknowledge it then there are concerns.

The NI sees that the drop off between basic/induction courses and attendance on the advanced/simulator course is around 30%. That is a lot of wastage, and it puts immense pressure on

the overall system which is designed to provide a streamlined flow of fresh DPOs into the industry.

For all this, there are still those who refuse to see there is a problem. According to them, supply is supposed to equal demand. Yet listening to the debate elsewhere poaching of PDOs is still being seen as a massive problem.

This supply and demand dichotomy makes no sense. You don’t have to be Dr Spock, to know that it seems illogical, and the spluttering stream of new DPOs is not sustainable. To us it seems the manpower side of the DP industry is eating itself.

While DP stakeholders come together within the NI DP Training Executive Group (DPTEG) to look at training and certification, there is no human element/careers equivalent.

Recruitment and retention are two sides of the same coin, you cannot divorce them. Where there are problems with retention, then allied with the growth of new builds and increasing demand, then there are clearly problems ahead.

There has been some criticism in the past as we have looked to get involved in the process of trying to bring more DPOs into the industry. There arguments are perhaps valid on a personal level, but professionalism isn’t about your own circumstances, it is about the greater good of the “profession”. The clue is in the name really.

We believe there is a need for a formal, clear, understood and respected industry system through which high quality candidates can pursue a career in DP. This will help us all - senior DPOs will benefit ultimately, Masters will be able to sleep safe in the bunks as good people will be at the desk- while employers can sigh with relief at having a ready supply of people to tap into.

It seems perhaps the time has come for a tri-partite group representing owners, operators and the certifying authority to formally come together to look at these issues. Without such a move there is a real danger that IDPOA, IMCA and the NI become the three wise monkeys of DP...seeing, hearing and saying nothing while the system collapses around us.

EUROPEAN

DYNAMIC POSITIONING

CONFERENCE

Delegates who attended Riviera's third annual European Dynamic Positioning Conference (EDPC) in London took part in powerful and candid discussion which will lead to profound changes in the way the industry goes about training.

Held in association with the Dynamic Positioning Centre, and supported by IDPOA, IMCA and the NI, the conference attracted 135 delegates from 13 countries, including 34 ship operators, a 30 per cent increase on last year's attendance.

The supporting exhibition also grew substantially. Once again, it incorporated practical DP demonstrations, and was a focal point for networking and information exchange. Exhibitors welcomed the opportunity to mix with existing and prospective clients, and reported strong interest in their goods and services.

Highlighting the importance of the event, Mike Inglis, fleet operations manager for offshore shipowner Technip Marine said "The conference has evolved into a 'must' for attending and can now be considered a key industry event."

Echoing this sentiment, Peter Aylott, chief operating officer at C-Mar and a director at the Dynamic Positioning Centre said: "Riviera's conference is an excellent event which in three years has grown to equal MTS's long standing DP conference in Houston."

The 2011 conference built on the success of last year's two day event. Highlights included a broadening of the programme to include increased operator participation, greater emphasis on the shuttle tanker and cruise sectors as well as an innovative roundtable session to close day one.

This saw the conference room transformed to hold six parallel discussions, involving all attendees, and facilitated by some of the industry's foremost specialists. These produced a list of action points for the industry which were shared at the event and a public commitment was made to take these forward with industry regulators. Next year's conference, scheduled for June, will report on the outcomes.

Over the course of two days, the conference generated a number of ideas for improving existing training provision. An exceptional DP operator forum led to industry calls for refresher courses and a crack-down on fraudulent DP logbooks.

Discussions on failure mode and effects analysis (FMEA) of DP systems also excited considerable debate. It was concluded that owners should provide more information on what should be tested during an FMEA. But there is uncertainty as to what owners should specify. The message was strong enough to persuade Peter Somner, chairman of the technical committee at International Marine Contractors Association (IMCA) to raise the subject of publishing a guidance note on FMEAs at an IMCA meeting which was held in the same week as the EDPC.

Other sessions at the DP conference included an update on regulations, including guidance on what is coming in the wake of last year's Deepwater Horizon disaster. There was an upbeat forecast on future demand for DP systems and development of new DP technology.

Derrick Green, marine superintendent with Consolidated Contractors said: "It was informative and well worth attending"; While Steven Jones Executive Director of the International DP Operators Association said the two-day conference is "an excellent event that keeps on improving and evolving".

To kept up to date with the 2012 event as it develops please click <http://goo.gl/NjGmN>



THE ONLY WAY IS ETHICS

The issue of DP certificate fraud has received much attention of late. While incredibly there are many who still don't believe it to be a genuine problem, for others the problems are writ large. We receive anecdotal evidence from a growing number of DPOs stating that fraudulent activities are prevalent.

Even when announcing our DP Excellence Award winners, one observer stated that there was an award category missing – as we hadn't covered, "The best new DPO to have his DP time flogged up to get a ticket then take a job from someone who knows what they are doing". While he wouldn't name and shame, it seems the problems are getting wider and deeper.

In response to criticisms the Nautical Institute has developed a new feature on their website, this allows you to "Verify validity of a DP Certificate" <http://www.nautinst.org/DP/index.htm> .

You can check to see if a certificate is valid, though as problem spotters will have realised, it doesn't actually tell you whether the seatime, or indeed the Master's signature were real.

The NI has admitted an increase in evidence relating to fraudulent certificates and improper recording of sea time. Indeed specific incidents are now being reported to NI and it was stated that, if on investigation, fraudulent activity was found to have occurred, action will be taken against those involved.

At the moment the extent of this action relates to two fraudulently obtained certificates – and the candidates have subsequently had their certificates cancelled. However don't worry about the individuals in question too much, after an unspecified period they may re-apply for a DP certificate - but hey, at least they'll have to start from scratch, including the courses. Is the punishment fitting the crime?

Most fraudulent statements in DP logbooks relate to trainees signing for DP time when no DP time was served. There are some safeguards being introduced, and as of next January the NI will require additional documentation to be submitted with an application:

- Certified statement of DP days.
- Verification of position on vessel by owners / managers

It seems that the system has struggled as too many Masters are perhaps complicit in their lack of action to clamp down on the applications. When they sign Section F of the logbook, they are signing to state that they trainee should be issued with a certificate. The NI's eyes and ears in the field are failing!

Indeed the credibility of signatures has to be addressed by all stakeholders and there has to be some responsibility attached to signatures in the logbook. Accountability and integrity needs to be brought back.

Captain Mark Pointon speaking at the European DP Conference stood up for the NI and the training scheme, seeing it not so much as a failing on their part, but reminding owners, "the issues are happening on your ships, through your people. Now what are you going to do?"

Captain Derrick Green, a former DP operator and now marine superintendent with CCC stated that there will be blood on the hands of those that facilitate fraudulent applications – and so all Masters must do the right thing and ensure there are safeguards in place.

There are stains on the conscience of the profession...if masters are not convinced that DPOs are up to standard then they should not sign the logbook. It is that simple! We have to develop a conscience, to regain our ethical and moral compass and focus once more on integrity.

Training Update



There are now 63 Nautical Institute (NI) approved DP centres with 5 more very likely by the end of the year. As of May 25th, 2011 there have been 14,581 DP Certificates issued. An average of 230 were issued per month last year with about 2,800 in total being issued.

The online registration process to obtain a DP Certificate has been running since January. 800 online applications have been received with 400 having been approved. The 400 not approved were mainly declined because of problems relating to online payments for the required courier service to return logbooks and certificates. The new system requires online payment for return courier service. This will be the only return option as NI can track goods shipped by courier in the event of loss. Regular mail cannot always be tracked.

Assessment for the Induction course is still planned for January 2012. MAP indicated that there would be a 5 to 6 month trial period before the examinations become mandatory. The online system for examinations is in place but the question database for the exams is not yet complete.

A guide relating to the operation of the system will be provided to training centres on release.

Assessment for the Simulation course has not been ruled out but there are no immediate plans for implementation at this time.

Revision of DP logbook / Strategic development of training scheme

A new Nautical Institute DP logbook will be produced next year to reflect changes being made with the scheme. There is no sample available yet for review and the implementation date has not yet been determined.

The updated logbook will include updated tasks to be performed during phases 2 & 4 as alluded to in the attached document. Revised tasks have not been formalised.

The new logbook will also have changes relating to recording of sea time. The format to be adopted will be similar to the IMCA logbook.

DP time was discussed at length. The starting position was that there should be a direct conversion of days to DP watch

hours (30 days = 360 hrs & 180 days = 2160 hrs).

An alternative proposal was to reduce the number of hours from 30days/360hrs to 200 hrs and 180days/2160hrs to a reduced number of 1200 hrs. The justification for the reduction was the inclusion of task-based assessments in phases 2 and 4.

Factoring of time based on the type of vessel served on was also discussed, but it was believed that due to the large variety in DP vessel operations, this would lead to a very complex system for recording of sea time.

The final outcome of the discussion was to keep the current method of recording days of DP time (with modification). The definition of a day of DP time would have to be more clearly defined. The NI will be producing a document relating to the proposed changes and wording.

It was the consensus that, a day of DP time will be earned if the individual in question is on watch when the vessel is on DP and the individual is involved in that DP watch. There is no stipulation as to the number of hours the vessel must be on DP for the day.

Example: A vessel going on DP at 23:30 and off DP at 00:30. If an individual were on DP watch for that hour he/she would receive 2 days of DP time. It was agreed that there would be more discussion before this issue is finalised.

As noted in the attached document, allowable sea time reduction courses will be reduced from 2 (12 weeks sea time equivalent overall) to 1 (6 weeks sea time equivalent overall).

At the previous DPTEG meeting it was proposed that sea time reduction might be allowed for onboard training schemes accredited by NI. This option is no longer being considered.

The "DP Competent person" mentioned in the attached document will most likely be the Master or Senior DPO.

OSV Certification Industry workgroup

An Industry stakeholder work group, facilitated by the Nautical Institute, will be formed to investigate potential solutions to issues that the OSV sector has with DP training and certification.



celebrating 50 years of dynamic positioning

For a “people organisation” looking back on the first 50 years of dynamic positioning (DP) doesn’t really paint the whole picture. For so long the world of DP was about oscilloscopes and equations, it was only a mere 30 odd years ago in which the true “operators” arrived on the scene. People who were intelligent enough to understand the theories, were technically savvy enough to understand the equipment, but yet also understood the sea and what was going on around them.

Slowly the white coats gave way to boiler suits and a new bona fide career was forged based on some of the most incredible equipment ever devised for ships. Indeed the history of dynamic positioning is one of groundbreaking innovation and pioneering development. The pursuit of making the seemingly impossible not just feasible, but safe, clean and cost effective has led to incredible leaps in technology, and opened up a new world of maritime possibilities.

The growth and development of DP has been matched by an equivalent boom in the training and certification of qualified and skilled DP Operators (DPO’s). Indeed this increasing use of DP has seen unparalleled growth in newly certified DPO’s, and a steady stream of new accredited training centres worldwide. The technological progress being matched by the creation of a new breed of highly specialised seafarers, making these everyday “miracles” happen.

Such change brings new problems, and the standards of DP are being closely scrutinised, employers are struggling to find the very best new people, and experienced professionals are wrestling to ensure newcomers know the ropes. The potentially grave implications for failure mean we have few options as we look to attract, retain and to develop the current and future personnel at the DP desk. As the number of existing DPO’s has risen, and with the demand for ever more – we are reaching a tipping point, a time where we need to evolve.

Today sees a new set of challenges, and we are at a juncture in the supply, training and management of DP personnel. With virtually every new offshore oil and gas vessel coming equipped with DP, and many older ones having systems retrofitted, there is a high stakes race developing to safeguard the supply and capabilities of qualified DP personnel globally.

So while the first 50 years have been a triumph, what of the future? Today we probably face one of the biggest challenges to the continued success of the sector. Here the irony sees the equipment forever improving and becoming ever more cost effective, but there is an issue with getting people to operate it. Unfortunately we there appear to be barriers to recruitment, we have sidelined those who invest in their own training as they look for a true career path, and all too often fingers are pointed and accusations of greed are levelled at DPOs. There has been a worrying tendency for a “mercenary” relationship to develop between DPOs and their employers.

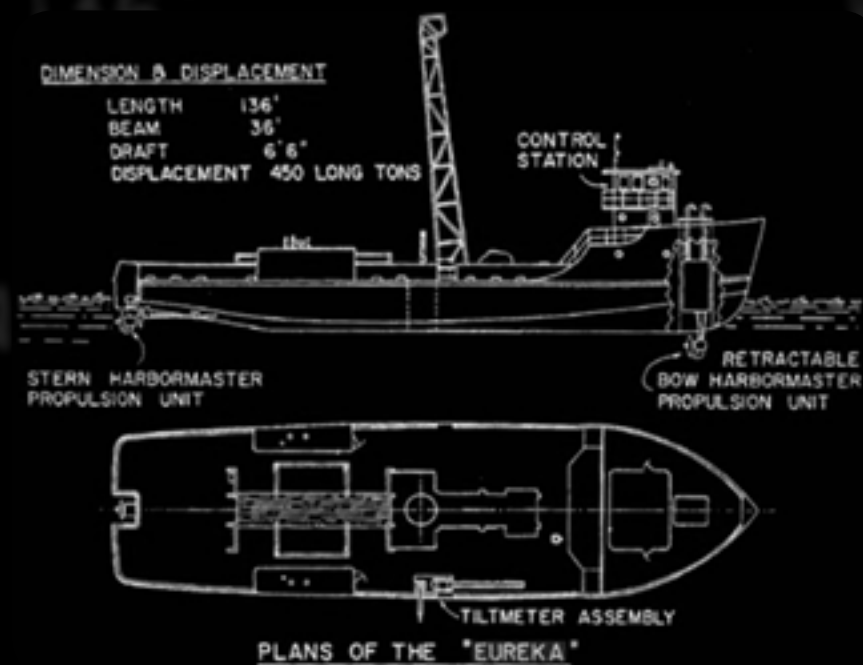
There is a dangerous disconnect developing, and it needs to be addressed urgently. In many respects some of the problems have emerged from the difficulty in getting DP seatime as trainees look to get certified. Many lose faith in employers and an industry which simply ignores them, and all too often once qualified they develop a rather self-centred approach to their career.

The sad fact remains that if you kick enough puppies you shouldn’t be surprised when dogs bite you, and in denigrating trainee DPOs and in creating a system which is so difficult to progress through then perhaps employers shouldn’t be surprised when people try to take the power back in the relationship.

So how do we progress? Well we need to have a formal industry system in which good quality people can follow a career path with confidence. We need to take the guesswork out of gaining experience. Only then can we engage with future DPOs, while also tackling the increasing worrying rise of fraudulent seatime. Without a unified system in place, and without employers, the certifying authorities, trade and professional bodies coming together as one, then the next 50 years will see negatives rather than DP reaching living up to the incredible potential it still has.

We should never forget that DP is the future of shipping. As the control and command of ships inevitably evolves further we just hope that the science fiction of the past and present can continue into the reality of tomorrow, with safety, the environment, quality, fulfilled employees, and satisfied clients at the core of everything we do.

Dynamic Positioning: past current future



Dr Richard I. Stephens of Convertteam UK Ltd on the 50 years since the first dynamic positioning (DP) system was installed on the "Eureka" and the future.

THE EARLY YEARS

On the 14th March 1961, Howard Shatto Jr and Robert Dozier filed a patent application entitled "Ship control system" at the US patent office (eventually to become patent number US 3,187,704 (Shatto and Dozier 1965)). Later the same year the Shell Oil Company launched the Eureka, a core drilling vessel which used the ideas developed in the patent to maintain position automatically using rotatable thrusters. A study of the patent is enlightening and shows the ingenuity of the inventors who had no digital computers and relied on wonderfully elegant mechanical-electrical solutions.

DP was brought to the attention of a wider public when the Glomar Challenger undertook a series of seabed sampling across the world under the auspices of the Deep Sea Drilling Project. Dating of the samples showed that the seabed is largely much younger than most of the land, and helped to justify the emerging theory of plate tectonics. Whilst the US led the DP field at the start, they were quickly followed by France, who launched their own DP vessels in the 1960s. In the next decade these two were joined by the UK and Norway in having their own DP systems and subsequently by a number of other countries.

MAJOR ADVANCES

From 1970 onwards, the growth of the number of DP vessels was exponential, doubling every five years. In 2009 more than 300 DP vessels were commissioned. Although the growth has stalled since the global financial crisis, DP is now a mass-produced item. Where the early systems took months to commission, today a system can be commissioned in hours, thanks to standardisation of interfaces, self-configuration, self-tuning and advanced tools.

As the number of DP systems has rocketed, so too has the variety of applications. DP vessels are now involved in all areas of marine working, including: drilling, pipelaying, research, dive support, cable-laying, crane barges, well intervention, fishing, fish farming, accommodation, FPSO, shuttle tankers, surveying, dredging, offshore support, mine-hunters, and most recently, wind turbine installation.

Computing power has been a key development, the Eureka did not have the benefit of digital computers, of course. By the mid-70s minicomputers were available and in the 1980s the Kalman filter controller was introduced. This had been used on the Apollo moon missions for navigation of the spacecraft. DP became, therefore, "rocket science".

REGULATION

By the mid-70s, classification societies and safety bodies started to take notice. DNV drew up guidelines for vessels with DP and published their initial DYNPOS notations in 1977. Other classification societies followed suit, with largely similar requirements.

The International Maritime Organization published its "Guidelines for vessels with DP systems" in 1994. Training of DP operators also started to be looked at, and the Nautical Institute began their definitive DPO training scheme in 1983, providing training of operators and certification of training schools.

The DP Vessel Owners' Association was formed in 1990. This body eventually merged with the Association of Offshore Diving Contractors to become the International Marine Contractors Association (IMCA) in 1995.

One of the chief requirements coming out of the regulators was the tolerance to system faults. The current peak of redundancy and reliability is the Class III triple-redundant, triple-voting system.

MEASUREMENT SYSTEMS

The earliest DP systems used taut-wire (also called tiltmeter) systems. By 1968 the Glomar Challenger had been

equipped with an acoustic positioning system. This allowed position measurement in deeper water, with greater flexibility, since the vessel could roam further, without the need to raise a weight.

In 1994 the US Department of Defense made the new Global Positioning System (GPS) available for use. It has revolutionised DP position measurements: it is easy to use, requires no deployment of beacons or weights, is always running and is available around the globe. There are some disadvantages, of course, but no modern DP vessel would be complete without it.

THRUSTERS

The final part of the control system is the actuator, or thruster. The Eureka was fitted with two rotating thrusters which were biased against each other to avoid excessive rotations, just as is common with azimuthing thrusters today. The thrust allocation was straightforward with so few thrusters, but vessels were soon being fitted with larger numbers and different types of thruster. The use of computers allowed more general and flexible thrust allocation algorithms to be used.

Today, there are a number of thruster types available. Azimuthing thrusters have been improved with greater reliability and greater range. Podded thrusters have also become available, making use of electric motors which are removed from inside the vessel, saving space. The first patent for a podded thruster was filed in 1935, but their earliest DP application was circa 1990.

THE FUTURE

Reliability and safety remain top priorities of suppliers, owners and operators. Greater and greater redundancy is not the answer, however. In particular, there are limited redundancy options for position measurement systems.

The Holy Grail of DP is a new, completely independent method of position measurement. In the

absence of this, however, the existing measurement systems are becoming more intelligent, particularly from the point of view of detecting faults and correcting for them. This can be seen in the integration of INS with acoustic and GPS, where the additional information from the INS is useful in fault detection and smoothing.

The DP displays for the operator are always evolving. More information, better layouts and integrated displays are evident from all suppliers. For example, the integration of maps, including mariner's objects, brings the DP system to the centre of attention for all manoeuvres and allows the captain, pilot or operator all the information they need on one platform.

As oil reserves become more difficult to access, the push to go into deeper and deeper water is driving change. The use of INS is helping acoustic systems to provide reliable measurements at greater depths. This move to more inhospitable regions includes arctic conditions. Strategies for DP in ice will be required if the exploitation of polar regions is to be achieved.

But perhaps the biggest driver of change at this time is the need to reduce emissions from ships.

The introduction of green taxes, penalising emissions of carbon dioxide, sulphates and oxides of nitrogen, means that operating costs, particularly in coastal waters, can be severely impacted by emissions. DP has traditionally concentrated on the achievement of position without heed of the smoke going up the chimney.

Operators can now see that revenue will be affected if they cannot reduce emissions. Many of the major advances in the near future are therefore likely to impact on the power system.

Further enhancements to thruster drives and motors will soon yield even greater savings. In the latter stages of development is the advanced

propulsion motor based on active stator technology. This revolution in drive design puts an intelligent converter arrangement inside the stator of the machine, reducing size and weight. Its design also allows greater control and improved efficiency. These machines can be fed from AC or DC supplies, opening up the possibility of direct use of energy storage and clean technologies to drive them. These are now becoming available on larger drive sizes.

Further into the future, efficiency savings will be even greater with the next generation of electric machine based on high temperature superconductors (HTS). HTS machines will be smaller, lighter and far more efficient than their conventional counterparts of today.

The construction relies on cooling the major conductors to about 30 Kelvin (-243°C) with gaseous helium or liquid nitrogen. At this temperature, the superconductors have negligible resistance and machines of incredible power density are possible. This technology is currently being trialled, but the initial findings suggest that machines, including their cryostat cooling equipment, will have less than half the losses and less than half the size of an equivalent conventional machine.

CONCLUSIONS

DP has come a long way since 1961 and the Eureka. At that time it was an oddity and an adventure. Now, it's a common-place and the basis of a huge industry. It has irrefutably assisted and enhanced many fields of human endeavour, from dating the earth's crust, through salmon farming to bridge building.

Who, in 1961, would have dreamt of measuring a ship's position using a constellation of satellites and a receiver the size of a loaf of bread?

Whilst the last 50 years have opened up the envelope of possibilities for DP, who knows what other weird and unbelievable discoveries will find their way into DP systems by 2061?

SHIP to SURE



HOME OR AWAY : THE LATEST TECHNOLOGY YOU JUST CAN'T SAIL WITHOUT



Pentax WG-1 GPS camera

The new Pentax WG-1 GPS camera is packed with features. As the name suggests, it offers an integrated GPS chip, and is capable of recording location information alongside all of your photographs. The fact it's incredibly rugged is should appeal, and if you do somehow manage to go over the side, well the WG-1 can survive being up to 14ft under water.

It's dust and mud-proof, with a rugged casing that can withstand drops from up to five feet. All of which makes it perfect for shipboard life and the odd run ashore. Rough, tough and looks great too...

Google+

If your Mum, Dad and Gran all rocked up in the same bar when you were out trying to impress your friends what would you do? Yes of course, you would high tail it out of there.

Well the same as now happened with Facebook with over 50's flocking online. But where can you run? Google+ perhaps?

Google+ is built to take on Facebook - bascally it is setting out to allow "sharing" on the web, whether news, photos, music (ahem, maybe not music), erm...you know loads of things. Well it will allow you to see what people are up to and get to know new friends and then, ding dong...yes your folks just turned up again.



CopyCat Scanner

So many notes, so little time. You just cannot carry all your paperwork with you. So what to do? Well the CopyCat Handheld Scanner is here to digitise anything and everything you fancy.

The battery-operated device allows you to capture books, magazine pages, photos, text and virtually any document you can think of in a matter of seconds. Simply sweep it across the required pages and presto, the high res images are written onto micro SD card (up to 32GB), ready for idiot-proof USB drag-and-drop transfer to PC or Mac.

Capable of storing more than 30,000 pages, the CopyCat scans colour images at an impressive 600 dpi



What's On 2011



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www.asiadeepwater.net



www.middleeastworkboats.com



Dynamic Positioning Conference

11-12 October 2011

Hilton Houston Westchase,
Houston, USA

As Dynamic Positioning marks its 50th anniversary, the DP Committee of the Marine Technology Society celebrates its 15th year of consecutive conferences. Recognized as the leading DP Conference in the world, this event provides an annual forum for the discussion and exchange of knowledge,

experience, new technology and technological know-how associated with the application and evolution of Dynamic Positioning.

Two days of cutting-edge presentations, exhibits, opportunities for informal discussions, social gatherings and comprehensive Proceedings published on the Internet continue to make the DP Conference a must-attend event for DP professionals.

From the outstanding number of abstracts received, the Technical Committee has developed an excellent and well-balanced program which will suit the interests of DP professionals, including designers, operators, support staff and vessel managers/owners. This year's Conference will again provide a session focused on solving the challenges of DP on Ice, and a session covering New Applications.

2011 provides the opportunity to attend an optional full-day Workshop on Monday October 10. This Workshop is focused on the MTS DP Operational Guidance released this year. Note that there is limited space available for the workshop, so please register early if you wish to participate.

EARLY REGISTRATION DISCOUNT

Register by September 12, 2011 for the early registration Conference discounted rate of \$450 for MTS members and \$525 for nonmembers (\$100 if you are an ACTIVELY SERVING DP Operator). Registration includes technical sessions, lunch both days, evening receptions and online access to the Proceedings.

The optional Workshop is offered at \$100 per person (free for ACTIVELY SERVING DP Operators registered for the Conference).

For full information, please visit:
www.dynamic-positioning.com/next_conference.html

To promote your events in 6degrees or on www.dpoperators.org
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