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Volume 6, Issue 1

Hurtigruten

Marit Finnanger discusses the Norwegian cruise operator's unique formula to develop cruise talent

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Hurtigruten SVP Marit Finnanger focuses on people, performance and leadership every day. What happens at Hurtigruten depends on it. That story begins on page 26.

Image: Ørjan Bertelsen / courtesy Hurtigruten AS

The Future is Clear

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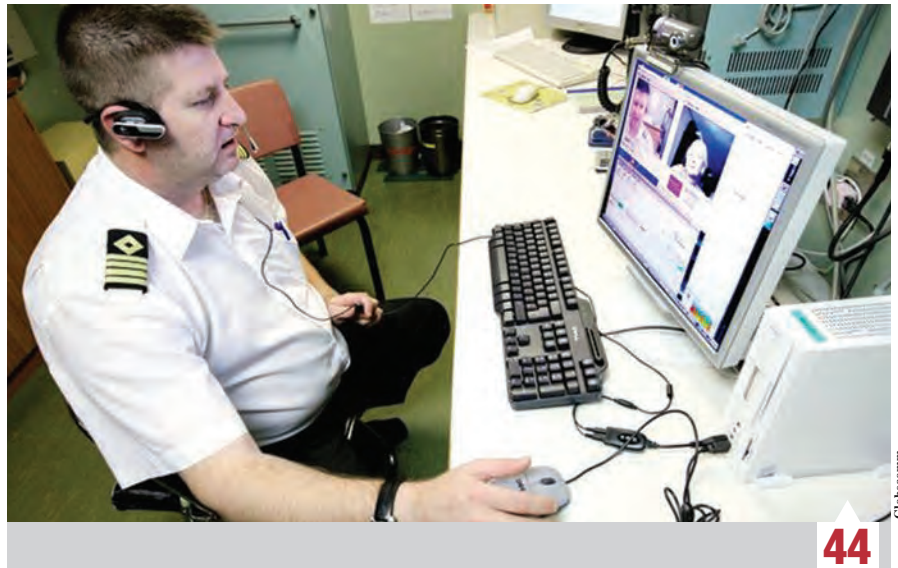
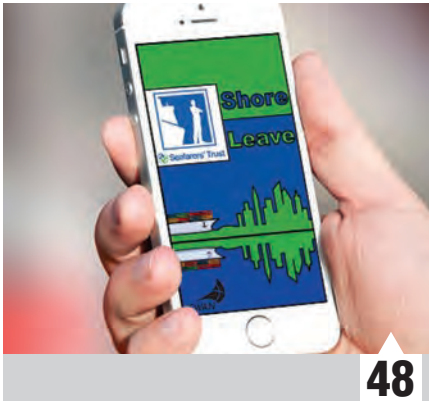
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ISSN - 2159-7758
USPS # 005-893

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Maritime Professional (ISSN 2159-7758) is published quarterly (4 times per year) by New Wave Media, 118 E. 25th St., 2nd Floor, New York, NY 10010-1062. Periodicals postage paid at New York, NY and additional mailing offices.

POSTMASTER: Send all UAA to CFS. NON-POSTAL AND MILITARY FACILITIES send address corrections to Maritime Professional 850 Montauk Hwy, #867 Bayport, NY 11705.

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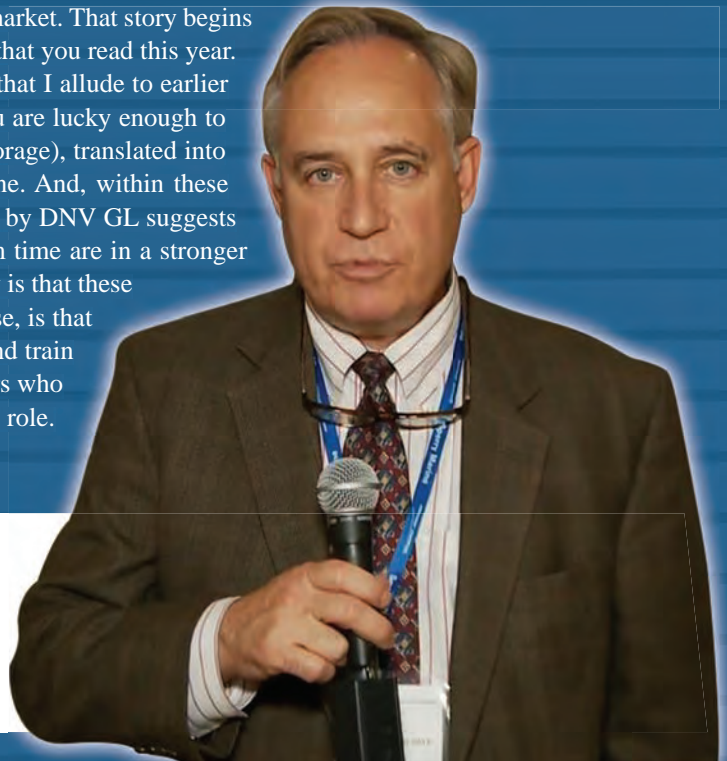
*Maritime
Professionals
Matter*

In the 36 years since I began working in the maritime industry, I honestly can't remember a time for the global waterfront and its many stakeholders when so many business, financial and regulatory variables have all come together at once, and with such a profound impact of the industry as a whole. It is with this in mind that our first quarter edition covers so much territory, and in great detail. That's because maritime professionals everywhere – ashore, afloat and anywhere in between – need to have a firm grasp on current events as they impact their livelihoods. If you are one of those professionals, then you've come to the right place.

As we began to assemble this magazine – our Maritime Training & Education edition – it became obvious that two of the most important above-mentioned variables included the need to continue to train and recruit quality talent and, at the same time, the need to treat those professionals with compassion and dignity. The first part involves the fast-moving world of simulation and innovative educational methods, without which, today's mariners will be unprepared to handle the ships and technology of tomorrow. Those operators and employers who understand the need to continue to invest their human resources even when a precariously thin bottom line beckons otherwise will be the true winners when the pendulum swings the other way.

While you invest in those valuable employees, it is also important to ask the right questions. But, what is it that mariners really want? More than money, the need to be able to connect to loved ones ashore and to have the access to an outside world that only the Internet can bring was number one on their collective list. Beyond the MLC code, and anything else, mariners crave connectivity. According to some surveys, those operators who can't find a way to provide that perk, in an economical way that doesn't break the bottom line, will eventually find themselves in the lower half of a two tier shipping market. That story begins on page 36. Actually, it may be the most important article that you read this year.

Reading between the lines, that confluence of variables that I allude to earlier in this note has, in the first quarter of this year (unless you are lucky enough to have your entire VLCC fleet chartered out for crude oil storage), translated into some difficult operating conditions for just about everyone. And, within these pages, Airswift CEO Peter Searle tells us, "A recent report by DNV GL suggests that companies which carefully manage costs in the boom time are in a stronger position to retain their staff in the downtime, but the reality is that these organizations are in a minority." The lesson there, I suppose, is that the firms who are at present able to better recruit, retain and train the best maritime professionals, are also the same operators who will at some point emerge from this cycle in a leadership role. That's just common sense, right?



Joseph Keefe, Editor | keefe@marinelink.com



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A FUTURENAUTICS LOOK AT MARINER'S TOP COMMS WISH LIST

All seafarers are looking for safe passage, reliable equipment, comfortable quarters, great food and competent ship mates - but what they really, really want, according to two recent surveys, is reliable, affordable and available communications and internet access. In days gone by, there were two types of sailors: those who drank and those who read. Nowadays, it's mainly comprised of a third type - those who take heavy advantage of digital services to stay in touch, informed and entertained. And they are looking for employers that can accommodate those needs.

Ships' crew today come packing all manner of personal, portable electronic equipment - from smart phones to tablets, laptops and gaming stations. They expect to be able to use those devices to connect via social media sites; read online newspapers and books; watch movies and TV shows; play online games; get training; and take certification tests. They expect to be able to connect home via phones, email or video services such as Skype, to communicate with family, handle financial matters, deal with emergencies and participate in other online meetings. In short, they want the same connectivity and access onboard, they'd get onshore.

Beam Me Up Scotty

Maritime researcher Futureonautics explored these issues in "Crew Connectivity 2015," which follows up a similar study done in 2014. Both surveys highlight the importance of communications and the needs of crewmembers, but also reveal who is providing connectivity, what types of equipment need to be supported, and the barriers that remain to full connectivity. Among the key findings of the 2015 report, which is based on 3,000 responses from over 30 countries, are shown below.

Most crews tend to be very IT literate, and typically bring onboard three electronic devices. Smart phone use has knocked Wi-Fi-enabled laptops into second place. Those results line up with similar findings from Crewtoo's quarterly "Seafarers Happiness Index," which measures satisfaction rates in 10 areas, including connectivity, which Crewtoo says is one of the two top concerns, alongside shore leave. Crewtoo is a social media site owned by KVH Media group that has 112,000 mariner members, representing over 50 nationalities, over 30% of which work on bulk carriers and container ships. The largest group of respondents - over 15% - are captains, followed by engineers and then, third and second officers. The issue of internet access, connectivity and Wi-Fi is seemingly one of the most prevalent and emotive affecting seafarers.

The Have & Have Nots

The October 2015 third-quarter survey revealed a "growing disparity in Internet access," with most employers offering one of three connectivity scenarios aboard: good, often cheap or even free internet access; occasional access further limited by cost or technical issues; and no connectivity, a situation likened to "the stone age."

Further impacting morale, limited or poor connectivity access becomes an even bigger issue for crew that have difficulty obtaining or taking shore leave, leading to an increased sense of isolation, depression and loneliness.

Moreover, many mariners feel that the Marine Labor Convention 2006 is inadequate for addressing their communications needs. They want the MLC updated with specific guidelines for employers on connectivity, covering access, speed,




58%

respondents saying they had access to "some form of communications all or most of the time"



7%

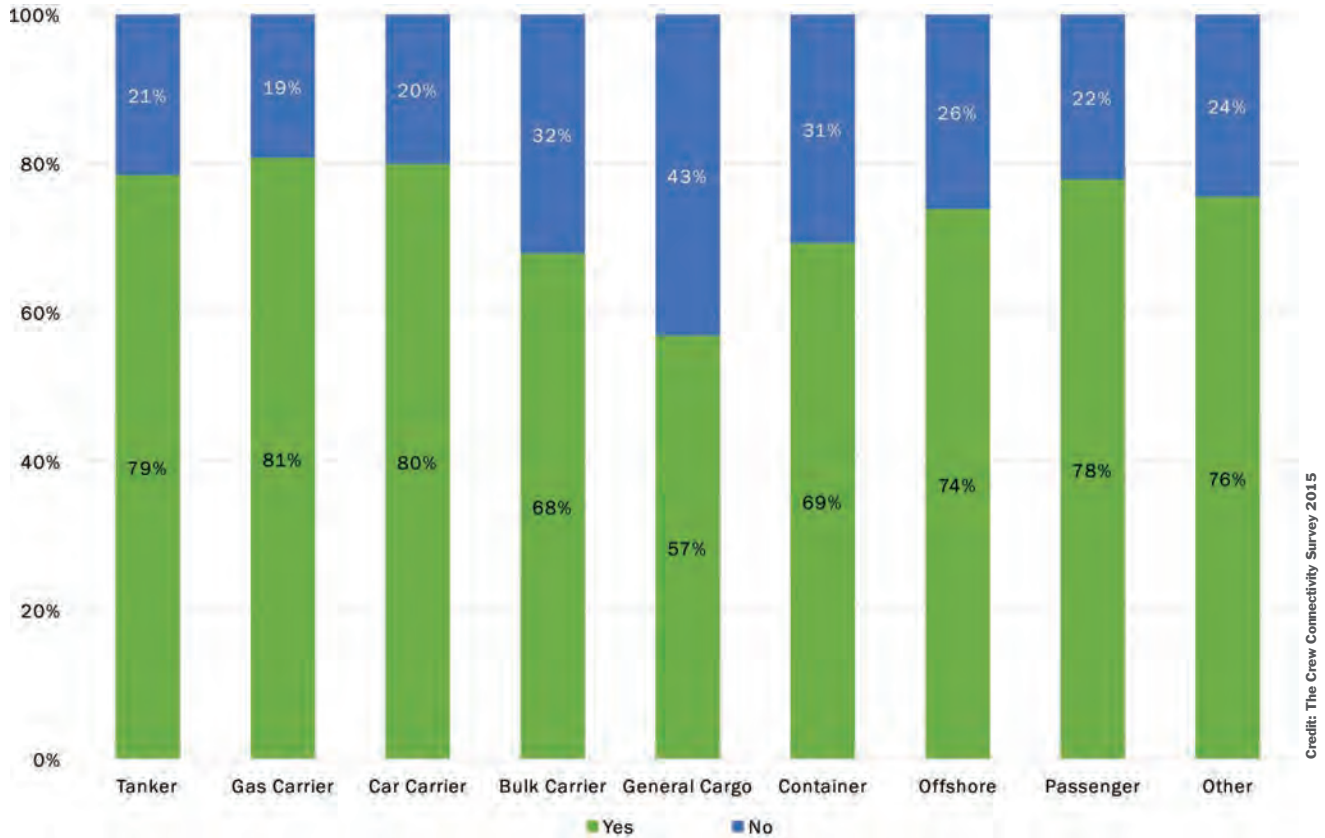
respondents reporting zero access



103,000

Futureonautics' estimate of the numbers of mariners without connectivity

Influence of Crew Communications on Recruitment – what operators provide service?



availability and cost. “There are increasing calls to mandate internet access, and not leave it to the ship owner to decide what connectivity seafarers have,” says Futureonautics.

Where cost is an issue, Crewtoo said some respondents talked of earning money at sea only to spend on it feeling closer to home. The danger here for employers, warns Crewtoo, is that these workers may decide it makes more sense to “turn their backs on the sea,” and as such, pose a threat to future recruitment and retention efforts.

“Seafarers crave the connection with home and the rest of

the world,” says Crewtoo. The issue is only going to become more urgent, and when you add in the communications needs of the business side of the equation, it’s the smart owner that ensures the internet is widely available, open 24-7 and at a no-cost or low-cost option. “Happiness and connectivity are today intrinsically and inescapably linked,” notes Crewtoo, which could have added, as is recruitment and retention. The message is clear: Investment in internet access and entertainment is a small, but necessary price to pay in return for loyal, happy, committed crew.

<25%

container, bulk and general cargo ships providing lowest levels of connectivity

50%

mariners who do get Internet access, who also get it for free

79%

respondents saying they had the most commonly cited – and most expensive – form of provided communications (voice calling via satellite phone)

MarPro's

Future Leaders



Maritime Professional's newest feature involves highlighting the profiles of today's future maritime professionals. Taken from maritime academies and schools focused on maritime disciplines, these cadets from around the country – some International – represent a large subset of the future professionals who will one day provide the leadership, innovation and technical expertise for the greater waterfront – here and abroad. Working with those schools and students that chose to participate, these profiles will let readers and employers know who is coming up; it lets the students themselves shine a bit and gives the academies a chance to showcase their best and brightest. The profiles center around five questions for each student – we call it “*five questions in five minutes.*”

This edition's selections are all impressive, but we start with SUNY Maritime College's Dominique Rigby, who hails from the Bahamas. Three more profiles round out this solid quartet, taken from four different maritime campuses around the country.

Dominique Rigby, of the Bahamas



Junior at the State University of New York Maritime College
Major: mechanical engineering and a license student

Why this school?

When I was younger, I tried for a scholarship through the Bahamas Maritime Association to go to California Maritime or SUNY Maritime. I wasn't successful so I joined the military, the Royal Bahamas Defense Force. We decided to upgrade our fleet and the Defense Force needed people to volunteer to be engineers on it. I volunteered and that's why I'm here.

What keeps you here?

SUNY Maritime is better than I expected in regard to the challenges, the 21st century learning, the simulators, the professors. I like the engine side because it challenges me and it taught me perseverance. I also stay for the networking opportunities, not only with my classmates. I had the opportunity to meet a four-star general who is the commander of the U.S. Transportation Command.

What is your major and what career do you intend to pursue?

I am a mechanical engineering major; with my military background in marine diesel, that major made sense. I can see

a full-time career in the military but that's easy to say when you don't have the wife, the kids, and the mortgage. I'm leaning that way so far but if that doesn't work, the back-up plan is managing a resort or a plant. I'm more of a practical, hands-on person than someone who wants to be locked up in an office.

What one thing should prospective employers know about you?

One thing employers should know about me is my ability to adapt and catch on quickly. My first job had a lot of things that were very specialized – only certain people would do certain tasks. People were hesitant to learn different things. I just took it all on. If they were willing to teach, I was willing to learn.

Tell us about your sea training or internships.

I have done two summer sea terms aboard SUNY Maritime's Empire State VI. I found it to be quite challenging. During the semester, you are bombarded with theory. On the ship, you get to reinforce that theory by doing and it really helps you to retain the knowledge. It wasn't an internship, but during my second summer here, my military sent me to the Netherlands to learn about the ships we are building with Damen. It showed me what we're learning here is real, not just theory. I met someone in naval architecture and he said he was impressed with how much I understood of what he was saying when I told him that I was in my first year at SUNY Maritime. He said he would have expected that knowledge of a third year. I saw where they were laying the hull and I even worked one day to help build the ship. I can say that I'll be sailing on a ship that I helped to build.



Gabrielle Wells

**Maine Maritime Academy – Cadet Chief Mate /
Woman’s Cross Country Captain
Major: Marine Transportation Operations /
license track cadet**

MAINE MARITIME ACADEMY

Why this school?

Maine Maritime Academy is located close to my hometown of Kittery, Maine, but also because of the hands-on education that they offer really struck a chord with me. Whether aboard the Training Ship state of Maine, Schooner Bowdoin or cadet shipping aboard a commercial vessel, students are always utilizing practical skills, knowledge, and training to prepare for a successful career. Maine Maritime also jumped out to me as an interesting school due to their unique career opportunities and outstanding job-placement rate. Growing up around the ocean and boating my entire life I felt like attending MMA was an opportunity to skip the typical desk job and enjoy working out on the ocean.

What keeps you here?

As a senior at Maine Maritime I can say the school’s ability to supply us with as many resources as possible is the largest benefit in attending. MMA allows students to be diverse and successful in their future careers. The best part is being able to work with other cadets in a learning environment, working together to reach a common goal. I learn the most from experience and that is what MMA gives you.

What is your major and what career do you intend to pursue?

I am a senior in the Marine Transportation Operations program. After graduation I hope to sail on tankers as an unlimited license 3rd Mate.

What one thing should prospective employers know about you?

I would like a prospective employer to know that I am extremely tenacious, I pursue every task at hand safely, but with the same astuteness and resolve regardless of the assignment.

Tell us about your at sea training or internships – who did you work for or sail with?

During my time at MMA we utilized the Training Ship state of Maine during the summer months of our freshman and junior year. Freshman year we are considered deck and engine and learn about all aspects of the ship. My sophomore year I worked as a cadet for US Shipping on the tanker M/V Houston for 90 days carrying crude oil. During this time I obtained my Tankerman’s PIC and completed a cadet-shiping project that contained celestial navigation, system drawings, log books and navigation rules. I learned valuable knowledge about safety, tanker operations and navigation. Cadet shipping allowed me to use my knowledge and skills and strengthen them with real work experience. This experience was very valuable and I thoroughly enjoyed working for US Shipping. My junior summer, I sailed on the T/S State of Maine, I was selected to be the cadet Chief Mate. We sailed to Charleston, South Carolina then crossed the Atlantic to Cadiz, Spain. This cruise included standing navigational watches, maintenance, celestial navigation and shipboard operations.



Buck Cantwell

California State University
Maritime Academy

Major: Marine Transportation /
license track cadet



Why this school?

Cal Maritime appealed to me because of its location in my home state of California and because it offers up-to-date training from experienced maritime professionals in its classrooms, in state-of-the-art simulators and on the Training Ship Golden Bear. There are plenty of opportunities to gain the knowledge and hands-on experience necessary for working in the maritime industry. Also, the career center offers valuable support for graduates seeking employment.

What keeps you here?

Cal Maritime is providing me with a quality education that I believe will lead to a fulfilling career. I have found the members of the teaching faculty to be very supportive and generous with their time between classes. The location of the campus in the San Francisco Bay Area offers plenty of off-campus recreational activities and job opportunities.

What is your major and what career do you intend to pursue?

I am majoring in marine transportation and look forward to starting work as a third mate after graduating at the end of 2016. Being new to the industry, there is a lot I have yet to experience, but at this point I am interested in sailing blue water. For commercial cruise, I sailed as a cadet aboard an oil tanker. It was a great experience, and I felt that the variety of

responsibilities assumed by the ship's officers made the job interesting. I would love to find a position aboard a tanker after graduation.

What one thing should prospective employers know about you?

I am entering the maritime industry a bit later in life than most. I've had a variety of different jobs since earning my first bachelor's degree, but I've never considered any of them a "career" so to speak. I was led to the maritime industry by a desire to find a specialized field of work that I was genuinely interested in; that I could devote myself to for the long term. While I do hope to make a decent living, for me, a job has to be more than just a paycheck. This is a career that I am excited about, and I look forward to developing my skills as a ship's officer.

Tell us about your sea training or internships – who did you work or sail with?

I feel fortunate to have sailed with Alaska Tanker Company for my commercial cruise. I was impressed by the culture of safety and the commitment to preventing damage to the environment that existed within the company and aboard the vessel. Witnessing the principles and practices I have been learning at the academy being applied on a commercial vessel confirmed that the education I am receiving is relevant in today's maritime industry.



Brian Mills

Webb Institute
Graduation Year: 2016



Why this school?

I never grew up around the water, but with both grandfathers retired from the Navy, I had been interested in ships ever since I was a young boy. Whenever my family would visit the beach, I would eagerly ask if there were any ship museums in the area, practically begging to go see them. So when I began my college search, Naval Architecture and Marine Engineering immediately caught my eye. When I visited Webb, I fell in love with the close-knit environment and maritime focus of the school.

What keeps you here?

The camaraderie of my classmates helps me work through the projects and all-nighters. After having spent the past three-and-a-half years with the same 18 people, we feel almost like a family. Webb also offers a wide range of contacts and numerous networking opportunities. The required internships that take place every January and February gives you a break from schoolwork and the opportunity to do hands-on learning, as well as experience different parts of the industry and world.

What is your major and what career do you intend to pursue?

Like every other student at Webb, I am majoring in Naval Architecture and Marine Engineering. I am applying for a commission in the Coast Guard. I want to sail for a while before I transition into repair or acquisition.

What one thing should prospective employers know about you?

My broad education will make me a very valuable employee. The Webb curriculum covers many facets of ship design, and the internships give me even more varied experiences. I have the skills to tackle many different types of projects, and the ability to see the big picture, having experienced how ships are designed, built, and operated.

Tell us about your sea training or internships.

My freshman winter internship I interned at the Electric Boat Quonset Point yard, working as an outside machinist to drill holes and install equipment on submarines. That summer, I sailed on the USCGC Eagle, training with the Coast Guard Academy cadets as we sailed around the Atlantic. My sophomore winter was spent in San Diego aboard a Military Sealift Command tanker, refueling Navy ships at sea. Between my sophomore and junior year I worked in the Electric Boat naval architecture office. During my junior winter I worked in the structures department of Newport News Shipbuilding, setting up and running FEA simulations. This past summer I spent working for Metal Shark Aluminum Boats, supporting both new designs and modifications to boats already in production. My senior internship was spent at General Dynamics National Steel and Shipbuilding Company, working in the production liaison groups for both hull and outfitting.

Weighing in on Maritime Human Resources Trends

Industry recognizes the need to invest in its people like never before. But are the skills and headcount there?

By Phil Parry

It's hard to look forward to 2016 without reflecting back on 2015. What an 'interesting' year it was. As maritime recruiters, we're always attuned to what the market's doing because our sector is immediately hit by the slightest changes in sentiment. We see it and feel it before anyone seems to voice it. Strangely, given the overall dismal feel to 2015, unless you were in tankers/LPG, we enjoyed the best quarter in financial terms in our 18 years in business, even when the shipping press was using words like 'crisis', 'downturn' and 'struggle'.

The rest of the year was nevertheless generally average. In fact, 2015 was a real rollercoaster – the perfect manifestation of an uncertain market. At the same time, our HR Consulting business grew turnover, headcount and profits and had its best ever year. And that's the problem when it comes to discussing the outlook for 2016. When asked, "What's the recruitment market looking like at the moment?" we can no longer give a clear answer. For example, one might think that recruitment in dry bulk would have been slow in the last year and flying in the tanker market. Not so. There is no way of describing the market in terms of sectors any longer.

Investing in Future through People

One thing that is very clear: industry recognizes the need to invest in its people like never before. That said; candidate and skills supply still are not great. 2015 felt a little like 2009 in that many candidates were keeping their heads down and working on the premise of "better the devil you know." Today, the world has become a more sober place for job movers and their reasons for moving on are more fundamental and personal than simply money-motivated.

During the boom years, we saw HR professionals being hired for the first time. Shipping is still playing catch-up to some extent, but it is catching up fast. In tandem with the rise of HR in shipping, we have seen significantly increased demand for specialist HR Consulting services. The Maritime HR Association first established in 2006, now has close to 100 members. Prior to its existence, shipping employers simply didn't benchmark salaries and benefits in any kind of professional way. Good corporate governance and the need to hold onto talent in what is a skills-short marketplace (even if it isn't

a great freight market) means that shipping has got to get better at this aspect of their business model.

With that in mind, a good place to start is a look back at what the market in 2015 meant for bonuses in shipping. The number of companies making bonus payments declined for another year, with just under two-thirds of employers paying bonuses to some or all of their staff, compared to 85% of companies in 2013 and 2014. Big bonuses (100% of base salary or more) were still paid but only to a lucky 0.5% of employees, a significant decrease on 1.3% just two years ago. Not surprisingly, those who lost out most were dry bulk commercial staff, especially freight traders/operators in all but a small number of companies who successfully bucked market trends. The remaining 100+ club members were predominantly group CEOs, senior chartering staff and rainmaker shipbrokers who steered their companies through the storm. Naturally, tanker staff fared better than those in dry bulk, offshore and containers.

There was far less vessel type or sector distinction when it came to ship management staff. Well over half received some kind of bonus between 1 and 20% of salary with between 25 and 40% receiving nothing across the various levels of seniority.

Separately, a definite attempt by many to keep costs down and at the same time deal with the difficulty in finding superintendent staff has resulted in firms increasing the number of vessels looked after by each superintendent. This has gone hand-in-hand with allocating some of their responsibilities, particularly documentary and regulatory work, to fleet support staff. This makes perfect sense, but there are only so many vessels per superintendent that can be achieved before over-work and too many hours on airplanes destroy the work-life balance and send staff to another firm, towards a nervous breakdown or back to sea.

Skills

Shipping is still relatively skills-short. Vessel numbers are up since 2008 despite erratic market performance, so demand hasn't eased. Investment in young operations and chartering talent has been reserved. Certainly, very little recruitment into those areas took place in 2009 and 2010 and many young new hires were laid off by brokers and owners at the end of 2008.



That effectively translates into a hiring void from 2008 to 2010 and those people would now have five to eight years of experience. Specifically, it has been particularly tough for employers looking for good dry bulk operations staff in Singapore for the last few years unless they are willing to break their budgets and set new market highs. When a good operations person comes along – especially those with strong customer-service skills who can look after contract of affreightment business – they typically are hired very quickly.

Matthew Cornelius, Spinnaker Global's head of Asia Pacific commercial desk said earlier this month, "There simply isn't the local supply to match the requirements of the shipping companies. The preference for local and permanent Singaporean residents plus the clamp-down on Employment Passes from the Singaporean government has contributed to the struggle to find staff. Vacancies are in danger of not being filled because there aren't enough people to fit the criteria and employers are understandably unwilling to open the salary floodgates."

What do we know about the outlook for the shipping economy in 2016 and what will it mean for maritime employment? A great, albeit depressing, statistic to put things into context is that China's slowing growth has crushed shipping rates to such an extent that newspapers reported hiring a 1,100-foot merchant vessel was cheaper than the price of renting a Ferrari for a day. Here is what the market is saying:

- » **2016 could well be a year of record scrapping. We hope so.**
- » **The consensus is that the dry market really has finally reached the bottom and the smart and brave money should buy. Many have started.**
- » **Tankers will continue to have a good ride for 6 or 9 months but even continued low oil prices won't compensate for large numbers of newbuildings due late in the year and the first half of 2017.**
- » **Offshore? Another tough year almost certainly.**
- » **2016 is the year to invest in LNG, which is poised to benefit from new liquefaction and regasification projects in the next few years.**
- » **Containers will continue to suffer from a rather large number of rather large ships.**

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Drivers: Job Stability, Employer Brand

So, what does all this mean for maritime employment? The simple answer is that there is no simple answer. In general, job stability and employer brand are the key market issues. A good analogy can be made of the freight market in terms of 'counter-party reputation.' Candidates are being much more diligent in their assessment of the quality of a prospective employer when moving from a secure job. Despite that, when negotiating offers, senior candidates in particular generally won't buy the argument that they should see a prospective employer and the opportunities they offer as an investment in their future. They know how volatile the market is. They assume that the 'last-in, first-out' policy is valid and they are negotiating packages firmly and staying put if not convinced.

We have had quite a number of offers turned down in recent months. It's a catch-22; employers are trying to control costs and candidates are saying "if you want me, make it worth my while" and they are also conscious that bonuses aren't what they were, pushing for good basics at the same time.

There is obviously a distinction between active candidates and those who are more passive / dipping their toes in the water and those who are being headhunted. By definition, the latter are usually people with good reputations in secure roles and they need a well-prepared and polished sales pitch.

Employer reputation (and perceptions of financial strength) is so important. Work-life balance is important but everyone pitches

the same story in this respect, so employers in turn need to demonstrate that they mean it. Room for growth can be a big pull, but only when tangibly described, rather than dangled as a vague carrot. The more open employers are about succession planning and timing, business plans, finances and remuneration levels, the more successful they seem to be at recruiting. The same metric applies for decisive recruitment processes – a firm, speedy process makes candidates feel wanted and impresses them.

Just as some companies seem to be seeing 2016 as another year to invest in cheap tonnage while awaiting an upturn, the better positioned companies are able to invest in succession and workforce planning. Spinnaker Global, for example, focuses not necessarily on specific sectors, but instead on specific clients.

Salaries: Everyone's Bottom Line

In 2016, shipping employers will try to keep a lid on costs – and that means salaries, as well. Shipping pay reviews in 2016 will again be low compared to other industries. Pay increase will be lower than in 2015 with Switzerland predicting the highest at 3.38% in real terms considering inflation. Most countries seem to look to decrease their pay increases with only India, Indonesia, Norway and Switzerland having increased them for 2016, even if only by a very small amount. Singapore predictions remain low again - just under 3.5%, compared with the 6-7% the market had become used to. UAE HR departments look to be anticipating restraint for 2016 with a big drop in their pay increases from 2015 – down from 5.42% last year to a predicted 3.9% in 2016.

In the UK, Spinnaker is predicting the largest drop in pay increases – by 2.08% in real terms (from 3.08% to just 1% above inflation, largely the result of very low inflation in 2015). This is closely followed by the US with a 1.83% decrease (from 2.88% to 1.04% above inflation).

At Spinnaker a promising start to 2016 means that the firm is taking on fresh vacancies daily, and comparing with the past four or five years, a healthy pipeline of interesting projects and individual open jobs on our books. We are noticing a large upswing in European jobs, with technical vacancies leading the way, but whether that will continue remains to be seen. We've also experienced a significant climb in sales and marketing roles within shipping. Despite the fearful words we see in the press, people are still hiring. Long may that continue.

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The Author



Phil Parry co-founded Spinnaker in 1997 and is acknowledged as an expert in maritime HR and benchmarking issues and was the founder of The Maritime HR Forum, which is the global shipping industry's major source of compensation and benefits data. He is a maritime lawyer and practised law with maritime law firm Ince & Co where he specialized in shipping and insurance law. He was awarded an Honorary Doctorate in Business by Plymouth University in 2012.

Navigating 2016's Marine Insurance Market

By Anne Marie Elder



Marine insurance may have the distinction of being the oldest line of insurance in existence, but it's not letting its venerable age hinder its growth or flexibility. Given the new, emerging and increasingly complex risks faced by the maritime industry, the insurance market must adapt to meet the evolving needs.

In fact, the marine insurance market continues to grow and evolve to address maritime industries new operating and trading environment. While bad weather and rough seas may have been the big risk of days gone by, today's risk management challenges also include constantly changing global economic conditions, and larger, more technically-equipped vessels which pose a cyber threat and a larger concentration of insured values. The maritime industry's insurance needs are changing, often quite rapidly, but so is the marine insurance industry that's intent on meeting them.

2016 Market Snapshot

In 2016, there are over 100 marine insurance carriers in the global insurance market with continued new entrants every year. Last year, and continuing this year, the insurance industry has seen its share of Merger & Acquisition activity. Most notably, global marine insurance XL Group acquiring Catlin Group to become XL Catlin in May 2015 and more recently, in January 2016, ACE Group completed its acquisition of Chubb and is now operating under the Chubb name. We have also seen UK's Amlin being acquired by Japanese Mitsui Sumitomo and US-based HCC's acquisition by Tokio Marine Holdings.

M&A activity like this can increase a marine insurers' scale and their global reach. For maritime companies, that can translate into access to more insurance capacity – higher limits from larger carriers – as well as a connection to insurance coverage in more countries across the globe. This activity in

the current market is driven by insurers need for scale and depth of product service, but to best serve their maritime clients, they will also need to be efficient, nimble and not encumbered by heavy infrastructure.

The growing number of marine insurance carriers, along with some other factors, has created a very competitive marketplace that looks like it will persist into 2016 and beyond. For maritime companies, marine insurance rates – across all lines of cargo, hull & machinery, and marine liability – have continued to show downward pressure. While initially, there was market speculation that the explosion at China's port of Tianjin would result in increased rates, there is little evidence we will see significant movement in today's market.

Loss estimates from the blasts at Tianjin, which also killed more than 170 people, hover around \$3.3 billion. The abundance of market capacity helped absorb the losses without generating much in rate increases. In fact, according to global broker Willis' report, Marketplace Realities 2016, rates are expected to remain flat to fall by as much as 10 percent.

While competitive rates can be good news for maritime companies, it carries some risk of its own. With many new market entrants, there is the risk that they lack the longevity and track records to support their maritime clients through "rougher seas" or at least a large loss event. Few would argue that while the market has seen fewer losses, especially those related to natural catastrophe events, the ones that do occur – Tianjin, Costa Concordia, Deepwater Horizon – have been larger and more complex than previously seen.

Both large and small maritime companies require specialized expertise both in underwriting and claims. Unfortunately, the repercussion of having so many marine insurance markets is that talent can be diluted. Similar to the maritime industry's talent shortage concerns, the marine insurance market is having similar issues. Experienced marine underwriters – with an

intimate, thorough knowledge of the maritime industry and the risks its up against – are in demand. With increasing governance and the need for compliant programs, it is even more important to partner with the right marine insurance carrier. So while the maritime industry enjoys today's insurance rates, they are wise to carefully evaluate what they are receiving in return such as depth of knowledge, and risk management expertise including loss prevention and claims management.

Experienced underwriters and claims specialists can play a key role in helping firms effectively address both traditional risks, and the risks that are more complex than ever before. Consider these risks that many maritime companies must contend with:

- **Larger Vessels:** Ships are getting bigger – much bigger. The average size of container vessels navigating US ports has grown considerably over the past five years. Most of the ports have not yet made improvements to accommodate the industry's new megaships looking to provide the appropriate water draft, berth size, terminal space, appropriate size dock equipment and rail connections.

- **Higher Cargo Values:** International trade volumes continue to climb. With more cargo on larger vessels there is an increase in concentrated values which presents the potential for a large catastrophic loss.

- **Arctic Trade Routes:** Global Warming and sea ice melting have opened the Arctic trade routes for longer periods of time. Shipping companies are optimistic about the potential, in particular to save time and money. To compound the situation, cruise ships are looking into the possibility of adding Arctic trips to their portfolio of exotic cruises. These new activities could be very problematic in the event of a casualty as there is no current infrastructure and little services to respond to emergencies.

- **Cyber Threats:** The majority of cyber-attacks are attempts to obtain personal or financially sensitive data. Now, companies across all business sectors – not just maritime companies – are bracing for what they anticipate will be more sophisticated cyber-attacks. Attacks that attempt to inflict damage to property and operations by seeking to take command of industrial control systems such as vessel navigation and propulsion systems, cargo handling and container tracking systems at ports and on board ships. These are all controlled using software that is fundamental to smooth running operations. Highly-skilled hackers have demonstrated the ability to penetrate the systems used by the maritime industry, with potentially disastrous consequences.

- **Political Unrest:** Recent events have all businesses operating with extra precautions, not just the maritime industry. Early last year, a Libyan warplane from forces loyal to the internationally recognized government bombed a Greek-operated oil tanker anchored at the Lybian port of Derna, killing

two crew members. Piracy is still a concern and is surging in some parts of the world. In June 2015, the *Orkim Harmony* was hijacked. Unlike pirates off Somalia who seek ransom, in Southeast Asia, these criminal gangs are targeting ships to quickly offload their fuel cargo to sell later.

- **Emerging Markets:** The maritime industry is already booming in Brazil and global insurers are building underwriting capabilities there to meet continued demand for local coverage. And some are watching other parts of the world, like Iran where a nuclear deal between world powers – known as the P5+1 – led to the removal on January 16 of international oil export prohibitions as well as restrictions on banking, insurance and shipping for Tehran. US sanctions are still in place. Obtaining international insurance cover will be vital as Iran looks to take advantage of foreign shipping opportunities.

- **Talent:** Human factors are a constant concern for the maritime industry. It's becoming increasingly difficult to maintain well-trained and qualified ship crews. The increasing prevalence of new technologies that require special training is making the task even harder.

Business risks are constantly changing. Maritime risks are no exception. And with so many maritime companies operating in today's global trading environment, using new technology, advanced systems, and larger vessels, there is no question that the industry has its risk management work cut out for it. Fortunately, there is no shortage of marine insurers eager to support their customers' needs and activities, making sure insurance coverage evolves to provide the right protection for new and emerging risks.



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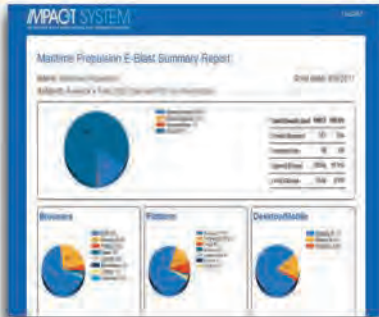
The Author

Anne Marie Elder is XL Catlin's Chief Underwriting Officer, Marine – Americas. She joined XL in 2011 as SVP, Chief Underwriting Officer, Inland Marine. A graduate of the United States Merchant Marine Academy at Kings Point, she is part of the Transportation Committee of the Inland Marine Underwriters Association (IMUA) and currently is Chair of IMUA's New England Advisory Committee.

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UNITED STATES BANKRUPTCY COURT • SOUTHERN DISTRICT OF NEW YORK

In re OIC RUN-OFF LIMITED and THE LONDON AND OVERSEAS INSURANCE COMPANY LIMITED Debtors in Foreign Proceedings.

In a Case Under Chapter 15 of the Bankruptcy Code Case No. 15-13054 (SCC)

NOTICE OF ORDER GRANTING RECOGNITION OF FOREIGN MAIN PROCEEDINGS, PERMANENT INJUNCTION AND RELATED RELIEF

NOTICE IS HEREBY GIVEN THAT, in connection with the petitions filed on November 16, 2015 (the "Petitions") by Dan Yoram Schwarzmann and Paul Anthony Brereton Evans (the "Petitioners"), in their capacity as the duly authorized foreign representatives, as defined in section 101(24) of title 11 of the United States Code (the "Bankruptcy Code"), of OIC Run-Off Limited (subject to a scheme of arrangement) ("Orion") and The London and Overseas Insurance Company Limited (subject to a scheme of arrangement) ("L&O," together with Orion, the "Companies"), the United States Bankruptcy Court for the Southern District of New York (the "Court") has entered an Order Granting Recognition of Foreign Main Proceedings, Permanent Injunction and Related Relief (the "Order") [Docket No. 18], which provides, among other things, that:

1. The proceedings respecting the Amending Scheme (as defined in the Order) in the High Court of Justice of England and Wales are granted recognition as foreign main proceedings pursuant to section 1517 of the Bankruptcy Code;
2. All relief afforded foreign main proceedings pursuant to section 1520 of the Bankruptcy Code is granted;
3. The Amending Scheme (including any modifications or amendments thereto) shall be given full force and effect in the United States, and shall be binding on and enforceable against any person or entity that is a Scheme Creditor (as defined in the Amending Scheme), including, without limitation, against such person or entity in its capacity as a debtor of the Company in the United States;
4. All Scheme Creditors are permanently enjoined from taking any action in contravention of, or inconsistent with, the Amending Scheme;
5. Except as otherwise provided in the Order or in the Amending Scheme, all Scheme Creditors are permanently enjoined from: (a) commencing or continuing any proceedings (including, without limitation, arbitration, mediation or any judicial, quasi-judicial, administrative action, proceeding or process whatsoever) against a Company or any of its property in the United States, or any proceeds thereof, or seeking discovery of any nature against a Company; (b) enforcing any judicial, quasi-judicial, administrative judgment, assessment or order, or arbitration award and commencing or continuing any proceedings (including, without limitation, arbitration, mediation or any judicial, quasi-judicial, administrative action, proceeding or process whatsoever) or any counterclaim to create, perfect or enforce any lien, attachment, garnishment, setoff or other claim against a Company or any of its property in the United States, or any proceeds thereof, including, without limitation, rights under reinsurance or retrocession contracts; and (c) invoking, enforcing or relying on the benefits of any statute, rule or requirement of federal, state, or local law or regulation requiring a Company to establish or post security in the form of a bond, letter of credit or otherwise as a condition of prosecuting or defending any proceedings (including, without limitation, arbitration, mediation or any judicial, quasi-judicial, administrative action, proceedings or process whatsoever) and such statute, rule or requirement will be rendered null and void for proceedings; and
6. In accordance with the terms of the Amending Scheme, all persons and entities in possession, custody or control of property of a Company or the proceeds thereof, are required to turn over and account for such property or proceeds thereof to such Company or the Scheme Administrators (as defined in the Amending Scheme).

Copies of the Petitions and the supporting documents and the Amending Scheme documents are available (1) on the Bankruptcy Court's Electronic Case Filing System, which can be accessed from the Bankruptcy Court's website at <https://ecf.nysb.uscourts.gov/> (a PACER login and password are required to retrieve a document), (2) on the Petitioners' website, www.oicrun-offtd.com, or (3) upon written request to the undersigned counsel:

CHADBOURNE & PARKE LLP • Attorneys for the Petitioners • 1301 Avenue of the Americas
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MarPro


 Profile

Frances L. Keeler

Senior Counsel, Clyde & Co US LLP

Frances Keeler might not necessarily be your typical ‘maritime professional’ but what she does on a daily basis is no less important to the waterfront – and the environment – than, for example, anything the builder of the best designed vessel in service today can put together. That’s because Keeler represents clients before various regulatory entities including the US EPA, California Air Resources Board and the local air pollution agencies on rule development, compliance issues, state and federal Clean Air Acts; district, state and federal regulatory development; Title V and equipment permitting, credit trading, global climate change.

As a member of her firm’s criminal environmental defense team, you may also someday (but hopefully not) find that Frances is the best friend you’ve got. As the South Coast Air Quality Management District’s Senior Deputy District Counsel from 1998 to 2006, she advised the District Governing Board, staff and advisory committees on legal authority and obligations under all applicable laws including the state and federal Clean Air Acts, California Environmental Quality Act, Torts Claims Act, Brown Act, regulatory development, conflicts and contracts law. As she worked her way up the ladder, there was little she didn’t take on when it comes to protecting the environment, defining the law and ensuring compliance. All of that, and more, comes in quite handy in private practice, especially when it comes to guiding her many maritime clients.

In the beginning, Keeler earned her Bachelor of Arts in Chemistry before attending Western State University’s College of Law where she earned a Juris Doctor in August 1987. And if all of that seems like it’s a long way from the waterfront, then you are probably right. But, as the regulatory noose tightens around the collective maritime industry, stakeholders not only find themselves trying to play catch up with myriad equipment installations designed to ensure environmental compliance, but also scratching their heads as they navigate the legal aspect of the compliance game. And, that’s where Frances comes in.

Early Decisions, Changing Course

An undergraduate degree in Chemistry doesn’t necessarily translate into a career in law, or for that matter, the hint of a right turn towards the water. But, in Keeler’s case, that’s exactly what happened. She told *MarPro* in February, “Growing up I always wanted to be a doctor, and never thought I would become an attorney. During college, I volunteered for five years with the Red Cross in hospitals on air bases, either in the emergency room or laboratory and participated in the professional internship program during high school conducting research in radioisotope labeling of tumors. I had some doubts at the wrong time as to whether I could cause pain to people in order to help them. When I graduated, I began working at the air district. I felt the need to continue my education and at the suggestion of several different colleagues and former professors, I applied to law school two weeks before the semester started. I had not even taken the LSAT at the time.”

Frances moved a lot during her formative years. With her father in the U.S. Air Force, she actually attended 13 different schools before graduating from high school. And, while some might have viewed this nomad, start-and-stop lifestyle as a negative, for Keeler, it was anything but. “What I learned was to be quiet and listen. I was lucky enough to have a lot of great teachers wherever we lived, and was able to get a lot of different advice and then choose what was best for me.”

Not necessarily someone who would ask for help along the way, Keeler characterizes herself as very independent. Nevertheless, there was help and wisdom to be gleaned from others along the way. “The term ‘mentor’ was always a bit foreign to me. I never really have sought out advice, but again studied other people very carefully. That said; there were a few people who I really admired and helped shape who I am. If I had to pick one I would say Edward Camarena, who was my boss early in my career and was the Deputy Executive Officer for Engineering, Compliance and Source Testing at the air district. He was always very calm, thoughtful and fair. He put

the needs and the mission of the agency above any personal ambition, though his career is quite impressive. I often ask myself when preparing a case, ‘What would Mr. Camarena want to know?’”

For Keeler, her years as a regulator have proven invaluable. She explains, “I started as a field inspector at the South Coast Air Quality Management District. I went to every kind of land based industry imaginable. Combined with my technical degree, that allowed me to get a solid understanding of a large variety of industrial processes and pollution controls. I went to law school part-time at night and then transferred to the legal division helping to draft and interpret rules and regulations. Not only does all of this education and experience help me to understand the agency perspective, it puts me in a better position to determine whether there is a problem and to help find a solution that everyone can buy into.”

Keeler continues, “Actually, what I am most proud of in my career is helping to greatly improve the air quality in the greater Los Angeles area and reducing the health impacts air pollution causes to millions of California residents. When I first came to Southern California, I didn’t know there were mountains in our backyard. Today I can look out the window and see the beautiful snow-covered peaks; the result of all our collective (agency, industry and community) hard work.”

Beyond that, Keeler is a puzzle-solver. She enjoys helping clients find the best solution to their issues and working with regulators to find an amicable solution. She adds, “While I do litigate and find that sometimes it is the only solution, I don’t necessarily believe that litigation is the best way to resolve an issue.” That might just be music to the ears of today maritime shipping executives.

On the Waterfront

In California, where it seems most everything is regulated, Frances told



While I do litigate and find that sometimes it is the only solution, I don't necessarily believe that litigation is the best way to resolve an issue.

Frances L. Keeler,
Senior Counsel,
Clyde & Co US LLP

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Actually, what I am most proud of in my career is helping to greatly improve the air quality in the greater Los Angeles area and reducing the health impacts air pollution causes to millions of California residents. When I first came to Southern California, I didn't know there were mountains in our backyard. Today I can look out the window and see the beautiful snow-covered peaks; the result of all our collective (agency, industry and community) hard work.

MarPro that the most difficult issues typically involve blue water shipping engaged in international trade. Along the way, Keeler has seen it all, from both sides of the equation. She applies that knowledge and experience every day to the task(s) at hand, saying, “I think the biggest environmental challenge, not just for the commercial waterfront, is addressing so many different issues all at once and doing everything well. Water, air, waste, hazardous materials, and many other media need to be tackled. I was shocked [when I left the air agency and came into private practice] at just how many regulations affect any given industry. And, so many of them are very complex. It takes a lot of time and training to have successful environmental programs, and it takes constant attention.”

Keeler is only too aware as to the enormous regulatory pres-

sure being exerted on the maritime cluster at this time. That said; she doesn't necessarily think that the waterfront is being unfairly targeted. She explains, “Land-based industries have been regulated for many years. When an agency looks at reducing pollution, for instance air pollution, they first look at who is contributing to the issue and by how much. In years past, marine vessels were contributing to a smaller portion of the total volume of air pollution. As land-based industries continue to be regulated, their portion of the pollution is reduced and the relative contribution of mobile sources, such as marine vessels, becomes larger. I am not sure there is an issue with the industry not being proactive; we see a lot of companies pushing to become greener and looking for new technologies to help reduce environmental impacts. I think it is just that it took longer for everyone, including regulators, to focus on the industry.”

Today, whether it involves a maritime or stationary source, the bulk of Keeler's practice is rooted in environmental and/or regulatory compliance, permitting, analysis (such as CEQA), rule development advice, and when necessary, litigation. Whether on the dock, aboard ship or in the courtroom, Keeler approaches all of it in the same fashion. “I am fortunate enough to work with a lot of intelligent, nice, committed and interesting people from all over the world. I am fascinated by their stories. The people are all great and believe in protecting our environment, whether maritime or land based. The only difference is the applicable regulations.”

Mentoring and Collaborating: finding common ground

When she's not solving a thorny environmental issue or defending her clients in court, Frances Keeler somehow finds time to join and actively participate in a raft of maritime, educational, ports and harbors organizations. Among these organizations, she notably serves as President of the Board of FuturePorts, as Secretary/Treasurer of the Board of the Harbor Association of Industry and Commerce; a Board Member of the International Trade Education Program; and is a member of the Propeller Club of Los Angeles-Long Beach.

She finds great satisfaction in them all, explaining, “I believe that educating the next generation is key to maintaining and improving our way of life. Equally important is for industry, regulators, community and environmental organizations to keep an open dialogue. There is a lot of common ground that actually is shared among all, but is obfuscated because of misunderstanding and misinformation. Whatever small role I may have in keeping our global supply chain strong or economy healthy and improving our environment, I am happy to contribute.”

One such place where her influence is especially helpful is at California Maritime Academy (CMA). Serving on the California Maritime Academy Foundation Board, Keeler supports



the goals of the University, but her participation doesn't end there. She told *MarPro* in February, "I try to participate in various activities at the University so that I better understand the culture and educational program and therefore its needs. When I am on campus, I will randomly approach cadets and start a conversation. I am always impressed at how poised, eloquent and open they are."

Like CMA, all of the maritime academies are addressing diversity in terms of recruiting a wider variety of students. Keeler approaches that issue thoughtfully, saying, "A big part of the solution is just awareness. As a young woman in the seventies, I drove past the Academy hundreds of times on the freeway and did not know it was there. I knew nothing of merchant mariners. Getting out to the community, to high schools and letting students know that there are so many opportunities for them in the commercial waterfront and global supply chain will go a long way in influencing career and higher educational choices."

And, of course, like so many of her colleagues, Keeler is an active member of Women's International Shipping & Trading Association (WISTA), a networking organization for women at management level in the maritime industry. WISTA gives women in the maritime industry a place to network, a source for mentors and advice, and a voice in the industry. For Keeler, also a WISTA board member, the organization and affiliation means so much more. "I love being able to spend time with intelligent, accomplished women. I am always so impressed and humbled to see women, like my fellow board members, out there contributing and positively influencing the industry while at the same time helping other women advance. I am fortunate enough to be a part of this formidable force of change. I can't wait to see what happens to the face of the industry in the next ten years," she says, adding, "And besides, they laugh at my jokes!"

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COOKING UP

CREDIBLE CRUISE CREDENTIALS

Norway-based cruise operator Hurtigruten AS has developed its own unique formula for developing cruise talent. The practice is already paying handsome dividends.

By William Stoichevski

Cruise Leadership

Fun, luxury, experiences — that’s what cruise operators sell, and by all accounts, it is selling well. With bookings up three years in a row, competition for skills and customers is up. Increasing in frequency, too, are cruise-company launches of the largest floating cities ever. Yet, steaming up alongside for a share of this business are modern day versions of storied coastal steamers building Transatlantic credentials from headquarters in Norway, Italy and elsewhere. Conspicuous among them is recently revamped Hurtigruten AS with a focus on expedition-like adventure, expediting cargoes and “flexible” staff.

OSLO—“Qualifications: pleasure craft boating certificate; mariner security certificate; restricted operators certificate,” the Spitzbergen Travel job ad says, adding that the company also prefers “weapons experience, outdoors experience” and experience in and around the remote, polar-bear-filled Spitzbergen archipelago. Applicants are encouraged to call the operations leader for expeditions at the Travel company, a shore-based



business of Hurtigruten AS (pronounced Hoorty-rooten).

Among other company ads with deadlines expiring in mid-February are calls for payroll experts. A new CEO from the successful airline Norwegian Air Shuttle was brought in just over three years ago. Not long after that came — just in time for 2105’s massive ship overhauls and a needed new crew training regimen — Hurtigruten brought in Senior Vice President, People and Organizational Development, Marit Finnanger. She joined a management team just finishing up a major turnaround, as Hurtigruten went from being a cash-conscious coastal steamer with a mix of older and newer vessels to an upgraded coastal and expedition cruise company divided into Norway and Transatlantic divisions. On the HR side, the soft-spoken but clearly managerial Finnanger says the change in HR focus means from purely manning and regulations to “structural changes” focused on making the seaborne side of the HR organization and its shore-based people development work in tandem.



ADVENTURISTS:

STAFF AND TRAVELERS HEAD TO SHORE AT BROWN BLUFF, ANTARCTICA

Credit: Esther Kokmeijer/courtesy Hurtigruten AS

wegian.com: enter desired port of call and end destination. Voila! Hurtigruten's Web design teams have done the rest, so travelers can choose a slice of any non-stop tour. All Hurtigruten coastal vessels are in continuous operation, night and day.

"On the business side, getting organizational development to work hand-in-hand with business development has been key. There's a strong focus on people, performance and leadership, and this year we're continuing to integrate these values and standards in our daily operation."

Seagoing Firsts

With its core aim of becoming the world leader in exploration travel, this expedition cruise operator would seem to have to shout louder than the formidable marketing machines of the very large cruise ship operators with over 10-times the staff and passenger counts. For Hurtigruten, it's a strong but niche brand versus the new trend aboard ocean giants to be "first at sea" – to entertain in myriad new ways that include virtual parachute descents and indoor snow. Hurtigruten's aces (apart from glacial descents and real snow) are a recruitment base largely accustomed to working by or on the sea and a pedigree for moving worldly travelers, cargo and locals that arcs back to 1893. Staff, then and now, have had to speak one Scandinavian language plus English or German.

To fight for its market share, Hurtigruten has offices in London, Hamburg, Paris and Seattle. The German sales staffs have been central to the company attaining a turnover of about 3.5 billion kroner. Hurtigruten's U.S. Northwest office is also key to the drive to recruit and manage Arctic and Antarctic expeditions with the explorer ship M/S Fram (soon to be joined by the M/S Spitzbergen). For these, there are positions open, as we write, for an expedition coordinator and leader.

"We hope to find this person internally, already in one of our fleet teams, we don't know for sure," says Joern Henriksen, product manager, Explorer. Friendly on the phone, Henriksen – who was working closely with HR to fill the Explorer Leader role – tells us the right person would have to be "able to fish ... a real leader. All hiring is geared toward that." The expedition coordinator might still be found in Seattle or Canada: unlike other Hurtigruten job ads, this one's in English. The lucky soul would likely be aboard the M/S Fram, the Lofoten, the Midnatsol (Midnight Sun) or a new vessel set to arrive in the summer of 2017.

"We need someone who is flexible given the variety of tasks," Henriksen says. "An open, extravert who communicates easily with guests, is structured and can maintain opera-

"We established a full HR organization that encompassed the seaborne side to strengthen it by working heavily on developing an organizational culture that would generate strong business results. We involved the whole organization in developing a new set of values that we've trained all people globally on," says Finnanger.

The Right Stuff

With 12 ships and the M/S Spitzbergen on the way, 2,300 employees and new cruise destinations that include icy Spitzbergen-Iceland-Canada and ritzy Amsterdam-Lisbon, creating a consistent brand experience while "becoming a world expedition (cruise) leader," are Hurtigruten's stated goal. "It's quite a tall order," she admits, but since British investors via local entity Silk Bidco AS bought the company up in 2014, the new Norwegian managerial team has made visible improvements. In a nod to its Norwegian administrative director, ordering a cruise, for one, now looks as easy as booking a flight on Nor-



Credit: Orjan Bertelsen/courtesy Hurtigruten AS

WE ESTABLISHED A FULL HR ORGANIZATION THAT ENCOMPASSED THE SEABORNE SIDE TO STRENGTHEN IT BY WORKING HEAVILY ON DEVELOPING AN ORGANIZATIONAL CULTURE THAT WOULD GENERATE STRONG BUSINESS RESULTS. WE INVOLVED THE WHOLE ORGANIZATION IN DEVELOPING A NEW SET OF VALUES THAT WE'VE TRAINED ALL PEOPLE GLOBALLY ON.

MARIT FINNANGER, SENIOR VICE PRESIDENT, PEOPLE AND ORGANIZATIONAL DEVELOPMENT, HURTIGRUTEN

tions with third parties (including Hurtigruten adventure outfits) shore-side. It might also be in their scope of work to have to maintain (satcoms) with hotels, transport – someone from the (marine) business.” Judging from the from the job ads we read and destination information, other roles might also have to master crafts such as rubber inflatable boats, kayaks or canoes as well as crowd control.

Land of Giants

Hurtigruten has been in the United States for “a few years now.” A little office in New York was moved to Miami before settling in Seattle, “a cruise industry hub and starting point for cruises to Alaska and to the polar regions,” Henriksen says.

While the Norwegian coast is inundated with hundreds of foreign-owned cruise ships on a regular basis, the Hurtigruten here stands out as one of Norway’s strongest brands. People trust the service with their children. Business is constant. In the U.S. market, the situation is reversed, and the company must vie for attention. To stand out, it’ll rely on its niche service. “We are more a destination to explore rather than strictly a cruise to take,” says Finnanger, adding that “We offer cruises, but we focus on the uniqueness of the experience outside the ships as well as inside. Our employees are part of that unique experience, part of the brand we’re building globally.”

To that end, Finnanger and the new company leadership have started building Hurtigruten Academy, for now a virtual school and a type of intranet for learning that’ll launch in December 2016. “It’ll be our learning platform to ensure

we’re attractive as an employer and to help train our people to deliver on the expectations of our customers.” The land and shore “campus” is to make online systems, communication and learning accessible.

Staying Competitive

With ships growing larger to be more profitable, it is hard know Hurtigruten’s financial future. The company has survived with government help for years but is turning a new leaf, one marked by profitability and independence. Still, its journey brings it into the realm of the global giants, and staying competitive might mean adopting some more of the trappings of say, Norwegian Cruise Line Holdings’ of Florida, with its “contemporary and luxury” market dominance. That said, an NCL vessel’s trademark “guest freedom” is mirrored in Hurtigruten’s informal gjestfrihet: The Norwegian word for hospitality is a composite of the words “guest” and “freedom”.

Mimicking NCL anytime soon doesn’t seem likely: as we write, a newly furnished M/S Kong Herald (King Herald) sets sail southward from Trondheim heading for Bergen with new, sleek, metal, stone and wood furnishings. The typically Norwegian design is the start of a 550 million renovation of four 1990’s era ships. First impressions hint of an arty hotel in coastal town Aalesund (one of 34 Norway stops on an 11-day route).

So while Royal Caribbean might float a giant new Harmony of the Seas for 6,300 guests, Finnanger says she hopes Hurtigruten travelers might instead seek deliberate (“disharmony”) akin to the kind experienced by a landlubber using sea legs for



ONSHORE FUN:

HURTIGRUTEN PERSONNEL AT NEKO HARVOUR, ANTARCTICA

Credit: Marsel van Oosten/courtesy Hurtigruten AS

the first time or city feet clamoring toward a walrus colony or Icelandic hot spring.

So, while the cruise giants might employ the trendy “First” mantra for first-time diversions on board ship, it’s also understandable that seeing the Hurtigruten’s “weapons-trained” expedition leaders in action might also be a “first at sea” experience for customers.

“We have expedition teams that really do something for the customer experience. These leaders need the ability to make other people feel seen, heard and understood. If you can do that for your customer and for your crew, then it’s a recipe for success,” Finnanger says.

No Surf-n-Turf

As answer to the famously fun food available aboard, say, the luxurious Norwegian Escape, Finnanger offers this nugget: “On the product and food (staffing) side, we’ll give our customers an amazing experience. On board food is taken locally from the surrounding geography and accompanied by (explanatory) storytelling.” No Bear liver? “No, no bear liver.”

The company’s Norway Coastal Kitchen project succeeded in attracting elite chefs and the best local talent by offering ingredients from the Hurtigruten route: reindeer as you approach northern Norway or lamb while skirting the fjords. Steamer scampi became haute cuisine.

Asked how many types of jobs will make up the Hurtigruten experience, Finnanger finds it hard to answer. “Manning centers administer manning internally and cooperate with on board managers to ensure the right (job) profiles are on duty,” she says, adding, “It’s complicated.” But on the Norwegian coast, employees are 22 days on and 22 off. For the Antarctic and Explorer segment, people are on “longer.” Despite the sea time, Hurtigruten is regularly in the “best employer” discussion locally. Local business sources call it “an extremely solid” place to work.

Asked how running Hurtigruten’s Transatlantic operation will differ from say, running Carnival’s, Finnanger is blunt: “I don’t know Carnival, so I can’t answer. I believe we make a difference in our focus on the development of people and competence at sea with a strong focus on leadership, culture. That’s what we’ve started to focus on over the past year.”

Finnanger was proud to report that two weeks before our talk, Hurtigruten HR hired a VP of Maritime Human Resources to solidify the people focus long-term.



William Stoichevski arrived in Norway in 1999 to lead a media campaign for Norwegian green group Bellona. He later served as regional feature writer for the Associated Press in Oslo. In 2003, he left the AP to begin building, overseeing and writing for a number of print and electronic energy-industry publications in the Norwegian capital. He is currently the editor of Offshore Energy Reporter.



Simulating the Next Big Thing

As simulation technology evolves, the methods and techniques used to train today's mariners are also changing.

By Joseph Keefe

A growing list of regulatory training and competency requirements is further complicating the already crowded 'to do' list for today's mariners and tomorrow's future professionals alike. That's not going to change any time soon. What is changing, however, is the way in which maritime training institutions utilize the latest in cutting edge simulation technologies. New equipment, promising previously unheard of bells and whistles, all interconnected, are making maritime simulation more realistic. A look into the world of maritime simulation tells us how and why.

Kongsberg & CMS

The Center for Marine Simulation (CMS) at the Marine Institute of Memorial University in New Foundland, Canada CMS was conceived in 1991 as a simulation facility to carry out specific industry training and industrial projects designed to reduce risk in offshore operations. The school has been using Kongsberg Equipment for over 20 years. Captain Christopher Hearn, CMS Director explains, "After the tragedy of the loss of the Semi-Submersible Ocean Ranger in the early 1980's, the inquiry into the loss of the rig and its entire crew

Credit: CMS

Interior shot of the CMS Training facilities.

highlighted the need for more realistic and advanced training platforms and technology. The offshore industry and public entities invested in a facility that could create realistic operating conditions that reflected harsh environments like the Grand Banks.” That investment, begun in 1994, now includes over Kongsberg 24 simulators, through which the school develops its own ship models, geographic databases, and undertakes applied research.

Kongsberg Vice President Clayton Burry says that CMS equipment represents the latest and most sophisticated simulators available today. “They have a full range of Kongsberg simulators, including among others: a DNV-GL Class A K-Sim Polaris Bridge on a 6-degree-of-freedom motion base, four part-task ship bridge simulators and a tug bridge, DP training center with both SDP and K-Pos systems, an ECDIS lab, a 2-DOF full mission ballast control simulator and related desktop lab; a full mission K-Sim engine room simulator and desktop lab, and most recently, a new DNV-GL Class A K-Sim Navigation / Offshore simulator sitting on top of an 8,000 kg motion base.”

For CMS, Kongsberg K-Sim technology is especially important. Hearn explains, “Kongsberg has spent several years developing a new simulation technology (K-SIM) with a highly advanced physics engine that could simulate the forces and actions typical of an offshore operation. The new simulator is mounted on a 6 degree motion base that allows for highly realistic movement similar to what these types of ships experience in a seaway. The New simulator is fitted with a Kongsberg KPOS DP system allowing us to carry out Dynamic Positioning (DP) training and operations similar to what people would actually be involved with.”

In the changing world of DP, CMS is clearly not satisfied to be just a training school – rather, Hearn and CMS look to set the standards. “Looking ahead to the future CMS is in discussion with its clients to examine the establishment of a specific offshore Newfoundland DP training scheme through adoption of the DNV DP training standards,” said Hearn, adding, “Under this process CMS would develop its own DP scheme that would be audited and approved through DNV. This would increase the flexibility of services for its client base in terms of the type of DP training they are looking for.”

Simulation is only one part of the equation. Ultimately, mariners training on one system need to be able to operate the same equipment in the real world, said Burry. “From the simulation side, we supply DP simulation training systems that meet both Nautical Institute and DNV-GL standards but ultimately, it is the market that dictates the classification society to which it wants its DPOs certified. And it is the market

that creates demand for new types of DP applications. Beyond the simulation training component, Kongsberg is a dominant player in the supply of real DP systems and the related reference systems that are installed on vessels worldwide.”

Burry insists that the ability to provide both simulation and on board equipment is critical. He asks, “If you are going to invest money to train on a DP system, would you prefer to train on a system you would probably never see on a real ship, or one that you will find on most?” He adds, “This is one of the great strengths we have at Kongsberg. Because we have so many installed DP systems on real ships, and our DP training systems use the exact same consoles and DP software, the training value on a Kongsberg system is incredibly high. Once the DPO completes his or her training, the familiarity with the onboard system is one-to-one. For DP training service providers shopping for a DP training system, the decision is usually a pretty straight forward one.”

Kongsberg has installed equipment on more than 17,000 active vessels. Specifically, Kongsberg Maritime delivers products and systems for dynamic positioning, navigation and automation for commercial vessels and offshore installations, as well as products and systems for seabed surveys, surveillance, training simulators and fishing vessels and fisheries research.

Burry explains further, “If it happens offshore, there is a training requirement for it. The range of offshore operations training is almost limitless now with the introduction of K-Sim Navigation and K-Sim Offshore.” The list of requirements includes navigation and shiphandling, dynamic positioning, platform support, rig moves (towing), anchor handling, buoy loading, tandem loading, heavy lift & pipe lay, subsea vessel operations and more. CMS leverages Kongsberg’s K-Sim Navigation and K-Sim Offshore to get the job done. But, what is K-Sim?

In a nutshell, Kongsberg embarked on a multi-year development initiative to create a whole new simulation technology platform that could handle all the navigation capabilities of its popular K-Sim Polaris technology, while enabling a whole new set of instructor and student station tools that would open a new era of simulation possibilities. The result has been a new generation of ship bridge simulator, including K-Sim Navigation and K-Sim Offshore.

While fulfilling STCW and DNV-GL standards for maritime training, K-Sim Navigation provides structured and cost-efficient methods for building competence. Designed with a contemporary and intuitive user interface, K-Sim Navigation allows instructors to create and conduct exercises more efficiently. K-Sim Navigation’s cutting-edge technology and integration possibility with other Kongsberg simulators provides



“If you are going to invest money to train on a DP system, would you prefer to train on a system you would probably never see on a real ship, or one that you will find on most? This is one of the great strengths we have at Kongsberg. Because we have so many installed DP systems on real ships, and our DP training systems use the exact same consoles and DP software, the training value on a Kongsberg system is incredibly high.”

– Clayton S. Burry, Vice President Sales & Marketing, Americas, Kongsberg Maritime Simulation



Credit: Kongsberg



an opportunity for future expansion and course offerings to meet training requirements and R&D projects.

Some of the more useful features of the new K-Sim technology include improvements in the instructor graphical user interface (GUI), where the instructor can select a point on the planet and zoom into an area of interest to set up a new training scenario. The instructor can play back the exercise from any point and the student can make a change in his or actions and re-conduct the exercise with a full set of different outcomes. The instructor view has been greatly expanded, with a full view of surface and sub-surface objects and even deck equipment. This is particularly useful for subsea operations, and with an integral physics engine, the line dynamics are realistically modeled.

The new DNV-GL Class A K-Sim Offshore simulator on a 6 degree-of-freedom motion base, equipped with both forward

and aft bridges capable of a full range of offshore operations from DP to anchor handling to iceberg deflection (towing) is especially important. In addition to navigation and ballast control room training, for example, they have even conducted research studies into key areas of interest such as seasickness and wind loading on high-rise building structures. Motion offers a unique ability to test the operation performance limits of people and equipment, ranging from navigating in heavy seas, ice-breaking operations and iceberg management. Burry adds, “With the new K-Sim SeaView system, it is becoming more difficult to tell the difference between the simulated ocean environment and the real thing.”

Leveraging its Kongsberg equipment and long term relationship, CMS carries out applied research in collaboration with many entities looking at onboard systems, human performance, effects of stress on decision making, improved radar and posi-



Credit: Kongsberg

industry giant. The reasons for this business relationship are no less compelling.

Captain Ted Morley, Master Mariner and Chief Operations officer of MPT, in February explained why. “MPT selected Transas back in 2002 when we built the first privately-owned simulation facility in the country. Transas proved eager to answer our specific needs and responded to our out-of-the-box thinking with regards to simulation applications. They continue to set the standard for simulation with their integration and ability to utilize actual bridge equipment in the simulators. The ability of integrating all three of our full mission bridges, along with our (4) all weather simulators and our engine room simulator, provides an amazing depth to the training scenarios that would not be possible with other equipment.”

Morley’s faith in Transas, over time, has been well-placed. That’s because Transas has hardly been sitting on its hands. The recent Transas Simulation User Conference in Singapore introduced THESIS, the Transas Harmonized Eco System of Integrated Solutions. At that conference, new Transas CEO Frank Coles vocalized his plan to shake up the market with even more innovation. According to Coles, “THESIS is the connected community of the ship, shore office, the ship traffic authorities and academy working together on a cloud based shared data platform to enable smarter operations, safety and navigation.”

The THESIS vision is for all sectors to share data, and enable one another to make better decisions, better operations and better training. Ship operations would be a coordinated evolution, with ship and shore based operations centers working together, on shared information platforms, the ship and office would also work in a community where the ship traffic control would enable better coordination of traffic movements, with decision based tools to enable direction of traffic.

Coles continues, “The fourth element would be training, or what we call the

academy. Simulators and content would be connected – for sharing data and enabling decisions to be tested, but also connected to enable schools to share content and ship models so that the community can learn. All of this training capability can also be shared with the ship. Scenarios can be run on the simulators using ship traffic control, ships and operations centers.” THESIS, in essence, promises a partnership with industry that far transcends simple simulation.

Back at MPT, an ongoing facility expansion has brought MPT’s facilities to an impressive 25,000 square feet with over 15,000 square feet dedicated to simulation alone. An additional 9,000 of existing space is being remodeled with new classrooms, meeting areas, and a conference center. MPT’s four Broward County campuses are all receiving significant technology upgrades allowing

tioning systems to help companies and researchers improve the state of the art. That’s a winning combination for CMS, Kongsberg – and industry itself.

MPT & Transas: Leveraging the Past, Looking to the Future

Fully 3,000 miles to the south of the impressive CMS facility in New Foundland, Canada, Florida-based Maritime Professional Training (MPT) offers equally impressive facilities and services to a similarly international audience. Unlike CMS, however, MPT uses simulation technology provided by Transas, another

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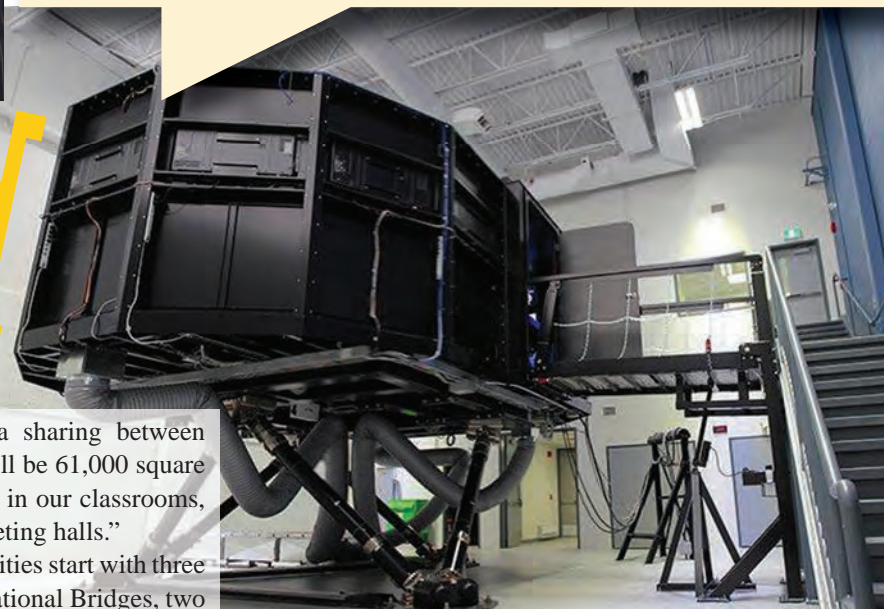
MMA is an AA/EEO/Vet/Disability employer. Members of underrepresented groups are encouraged to apply.



“Looking ahead to the future CMS is in discussion with its clients to examine the establishment of a specific offshore Newfoundland DP training scheme through adoption of the DNV DP training standards. Under this process CMS would develop its own DP scheme that would be audited and approved through DNV. This would increase the flexibility of services for its client base in terms of the type of DP training they are looking for.”

– (Captain) Christopher Hearn, CMS Director

Exterior shot of the CMS Training facilities.



for live streaming and cloud-based data sharing between them. Morley adds, “Our main campus will be 61,000 square feet and able to host 350 students a week in our classrooms, not including the conference center or meeting halls.”

The upgrades to MPT simulation capabilities start with three expanded Transas Class A FMSHS Navigational Bridges, two of which are equipped with DP2 installations. All three bridges have received new consoles, new INS hardware, and new projection technology. The upgrades also include a new Class A ECR Simulator that can be linked to any of the three bridge simulators, providing Ship Resource Management integration training between the engine room and bridge. The ERS will also feature High Voltage equipment for STCW compulsory training and be able to emulate the conditions found on a range of modern vessels.

According to Morley, simulation has changed dramatically in the past 5 years. “Operators are able to utilize simulators for much more than simple regulatory training. Being able to conduct realistic vessel familiarization, port building projects, dredging impact studies, and extremely realistic tug/ship interactions are vital as our ports get more congested and the ships get larger. Simulation is a major component of port safety, from the ship and tug operators up to the VTS controllers,” said Morley.

For example, says Morley, practical assessments are a major component of the STCW Code and are part of the credentialing process. And, he adds, “More and more companies are looking to integrate their company specific SMS protocols

into simulation scenarios; not only as a means of assessing the ability of the mariner, but also as a means of assessing the viability of the protocol itself.”

Like CMS, MPT’s clients have a tremendous impact on the school’s development. “We respond to what their needs and desires are; with that, the NI was the logical choice. We did however create our own training system that builds upon the NI standard. Even in our Induction Course the students have access not only to the DP hardware, but also to integrated ARPA and ECDIS equipment, visual channels, conning controls, autopilot, and ship systems. They learn the basics but they also learn how DP integrates into the bridge systems. This makes them much more competent when they get back to their ship and can therefore assimilate into the workforce that much faster.”

Morley told *MarPro* in February that ISO 9001:2008 certified MPT constantly looks inward for areas of improvement and outward for areas of growth. Like CMS, they are not only trainers, but also, innovators. “Our evaluation procedures and practices have led to several unique programs for both new mariners as well as established mariners. Our programs are efficient and they create efficient mariners; learning not only

Credit: CMS



**Captain Ted Morley, MPT
Chief Operations Officer**

Credit: MPT



“THESIS is the connected community of the ship, shore office, the ship traffic authorities and academy working together on a cloud based shared data platform to enable smarter operations, safety and navigation.”
– Transas CEO, Frank Coles

the skills but the job itself. This effort has led to several innovative approaches that have become standard ‘best practices’ within many of our client companies.”

Relationships Matter

When it comes to maritime training and simulation itself, MPT and CMS have one important thing in common. Longstanding relationships with simulation technology providers has improved training, competency and allowed both institutions to remain at the forefront of their respective specialties. Looking ahead, it is obvious that the evolution of simulation capabilities – for both Kongsberg and Transas – is anything but over. Because of it, maritime training will continue to evolve for the better. No doubt the next big thing is just over the horizon.

Connectivity

Key

to

Recruitment

**Internet Access,
Services Win Workers,
Bolster Retention**

By Patricia Keefe

When you are thousands of miles, and weeks or months out at sea, the next best thing to physically being there, is an electronic connection home, and today, few mariners will board vessels without access to some form of it. “What seafarers want overwhelmingly is a cost-effective way to speak to, and see, their loved ones,” notes researcher Futureautics, adding that with millennials in particular considering access to the Internet as important as access to food and water, “the implications for the maritime industry are likely to be significant.”

Indeed, internet access and cheap global roaming SIM cards top the list of desired amenities in recent surveys of seafarers. And while keeping in touch and up to date with family is most important, shipboard personnel use an array of connectivity applications - social media, Skype, Wi-Fi and email - to handle personal banking and financial needs, shop, make appointments, and to take training classes and certification tests. They also like to keep up with current events and to unwind after their shifts with various entertainment options – scanning the news, watching movies and TV series, playing games and general internet surfing.

Connectivity Fuels Efficiencies

But the value of communications is more than even that, says Brent Bruun, KVH Industries Executive Vice President, Mobile Broadband. “More owners and operators are beginning to look at connectivity as a strategic advantage,” . . . for “getting ready for the Internet of Things, [and for] providing operational updates to the bridge, etc.”

KVH CEO Martin Kits van Heyningen was more emphatic in a recent interview. “The maritime industry needs to change how it thinks about connectivity and its impact on competitiveness and profitability.” The maritime industry has spent the last 20 years trying to limit the amount of data going on and off vessels while the rest of the world has been doing the exact opposite in adopting big data.

But the industry is beginning to realize that the investment in IP satellite systems also enables access to digital applications and methods of digital operation, i.e. safety monitoring, remote diagnostics and repair, system updates, proactive maintenance, etc., that can greatly improve operational efficiencies, says Futureautics. On the job, “crews need to be able to connect with and interact with increasing amounts of



KVH's TracVision satellite tracking application as shown on Apple Computer's iPhone and iPad.

Credit: KVH

data that is coming out not just from the humans around them, but increasingly the ship [systems] and even the cargo itself," adds the market researcher.

The resulting demand for connectivity is so great that Futureautics saw crew usage patterns of most comms service rocket from once a week in 2014 to daily access in 2015, with 60% specifically using the internet daily. Ships with limited or no services are considered dinosaurs, which doesn't bode well for recruiting or retention efforts.

"Connectivity is extremely important," says Elizabeth Ledet, administrative supervisor of the Systems & Advanced Technology Department, Seacor Marine LLC., which uses KVH's V7 VSATs, bandwidth, Static IP addresses, and modems on 13 of their Gulf of Mexico vessels and 23 international vessels.

So much so that, according to Futureautics, 73% of respondents to its survey, "The Crew Connectivity 2015," said the level of connectivity provided onboard affects their employment decisions (See figure 17). That's up from 69% last year. "Of that 73%, 78% said it was a strong or very strong influence on which contract they decided to take," according to the report. It is especially crucial to those with higher IT skills, "precisely the kind of employees ship operators should be looking for."

HR Wake Up Call

"This should serve as a wake-up call to crewing and HR departments," says Futureautics. "It's known as one of the 'Trinity' – pay, rotation and internet connectivity. We are recruiting for the oil majors and major shipping companies, and we simply wouldn't be able to attract the top talent without offering new ships with good communications on board," points out Mark Charman, Chief Executive Officer of recruiter Faststream.

Charman adds that not only will already hard-to-source officers jump ship to better equipped vessels, "the industry will not be able to attract talent from developing countries, where people are being given a choice of shore-based careers in industries where they can return home to their family every night, unless improved connectivity becomes standard across the shipping industry."

Good Spend in a Down Economy

The ability to positively impact crew morale with online connectivity is especially important today given the aftershocks of falling oil and gas prices roiling the maritime sector. For example, Crewtoo's survey reports that seafarer wages have fallen by as much as 40% – the worst some mariners have ever seen. But recruiters and users alike don't expect to see organizations cutting existing services.

It's known as one of the 'Trinity' – pay, rotation and internet connectivity. We are recruiting for the oil majors and major shipping companies, and we simply wouldn't be able to attract the top talent without offering new ships with good communications on board.

– Mark Charman, Chief Executive Officer of recruiter Faststream



Companies already heavily invested in connectivity will keep those systems intact but probably hold off on expanding bandwidth or upgrading the current system, says Gladney Darroh, president and CEO of Piper-Morgan Associates Personnel. “In today’s market, do you continue to gold plate something? Maybe silver-plating works just fine.” It certainly puts a halt to looking into the latest equipment, agrees Ledet, noting that Seacor has made no changes to its existing service levels, which are provided free of charge to crew.

Economic pressures are also forcing companies to both squeeze more use out of, and get a better

handle on, their communications network. A downward trend in connectivity equipment and delivery costs and system size combined with an uptick in subscription service offerings and an expansion in functionality is redefining ship-board operations.

Operational Efficiency Drives Boats

Management used to just blindly throw more bandwidth (i.e. money) at problems; not any more. In addition to divvying up bandwidth between crew and operational apps, with management tools like Bluetide Communications’ Access Management Portal (AMP) application for wireless network management, it’s possible to monitor, from any location or device, network usage and change bandwidth allocations, divert traffic or incoming data dumps to unused channels, or even shut off access, in real-time, at the push of a button. Users can run the application or trust Bluetide to monitor network usage and make requested changes, like Jackson Offshore does. “It lets me focus on other priorities,” says Trent Zimmer, Jackson Offshore’s IT Manager.

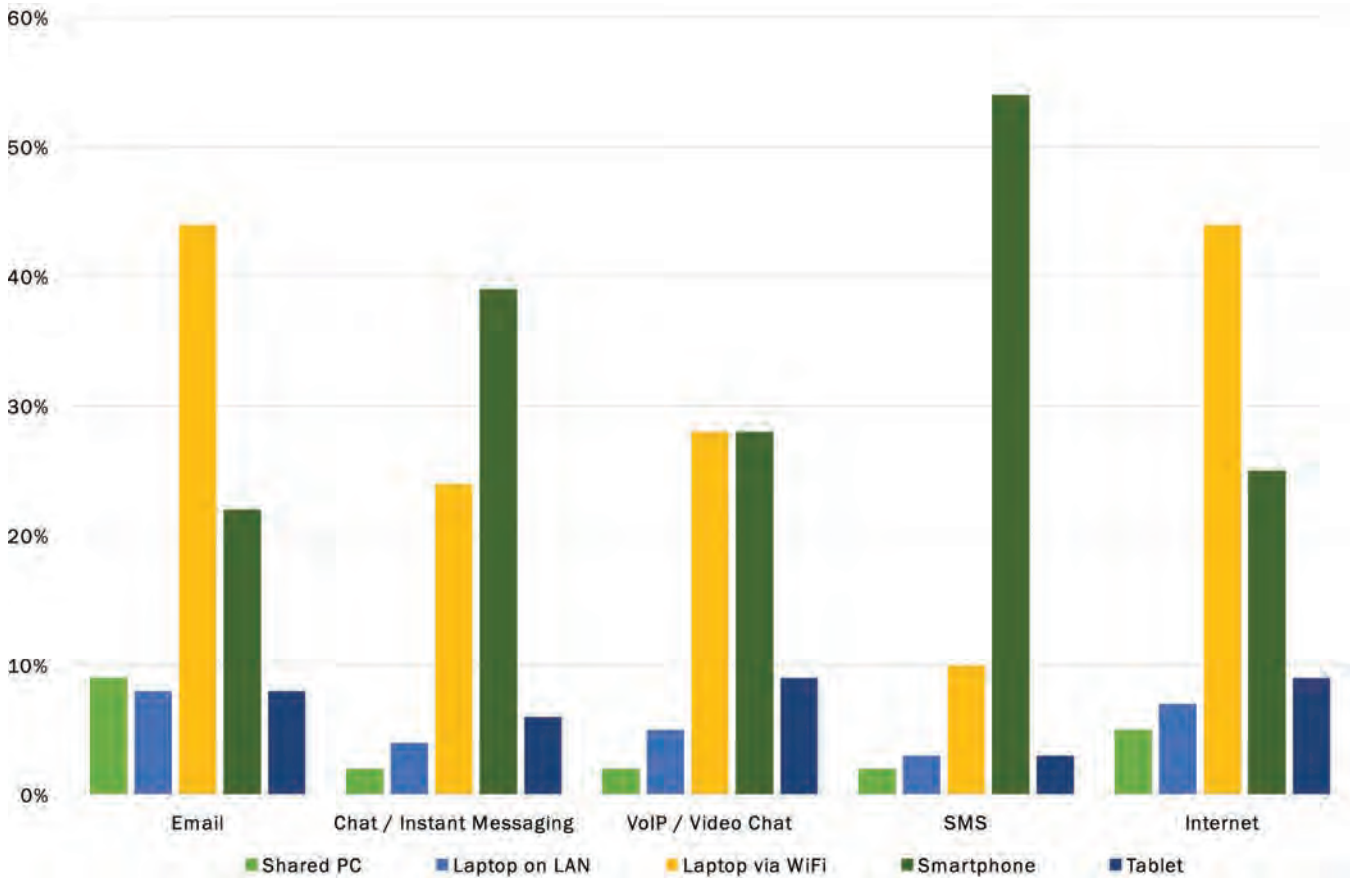
Jackson’s eight vessels access a 1024X512 bandwidth pipe via



AMP provides users with a “fuel gauge” for bandwidth, enabling them to see how much bandwidth is available, how much is being used, by whom, where and for what.

Credit: Bluetide

What Future Services Would You Like to See Made Available?



Credit: "The Crew Connectivity Survey 2015," Futurenautics

VSAT and backup Iridium phones service, WiFi and wireless access points, Bluetide Communications/Hughes modem and below deck equipment, value-added services such as monitoring, and ancillary networks. The company dynamically allocates a percentage of its network to secure (corporate) use and a percentage to crew and guests. "This allows each sector to throttle up to 100% of the available bandwidth, but to never go below its allocation," says Zimmer. "It's a great approach to ensuring crew access doesn't interfere with corporate needs."

At Seacor, IT currently does not keep a close eye on crew usage, but plans to in the future. "Our Liftboat Division is using a system that allows for us to know who is online and we can see what they are doing online. The Marine side has not moved in that direction at this time," says Ledet. The company does use a home-grown device that includes a firewall to restrict certain types of crew's connectivity.

Monitoring Makes an Impact

Reliable, affordable connectivity allows more than just serving up daily information dumps back to shore. It enables meteorological and nautical map updates on a scheduled basis, vessel tracking and safety monitoring. For instance, a camera onboard can provide onshore supervisors - and even clients - with a window into shipboard safety practices, which can be immediately corrected, as well as cargo security and density. Feeding a steady stream of equipment and fuel-related sensor data back to the home office allows for real time analysis, providing the opportunity for timely route, speed and crew schedule changes, equipment fixes or safety and security alerts.

Jackson Offshore is a good example of a company using its connectivity to improve vessel performance. "We have fuel tracking on several vessels that lets us see fuel flow in real time. It's also part of an electronic log system, which captures

**Trent Zimmer,
IT Manager,
Jackson Offshore**

They'll change the amount of bandwidth needed on 24-hour notice – that is almost unheard of in this industry. They let us monitor some of the bigger cost drivers – condition-based maintenance, fuel consumption, full access to generators and engines – so we can see what these are doing in real time. The system sees problems as they happen, so we can be proactive instead of reactive with a skyrocketing problem and save on costs.



a ton of information – fuel flow, oil flow, consumption, temperature, pressure – you can see and make decisions based on that data,” says Zimmer.

From a cost-saving perspective, he is particularly pleased with Bluetide. “They’ll change the amount of bandwidth needed on 24-hour notice – that is almost unheard of in this industry. They let us monitor some of the bigger cost drivers – condition-based maintenance, fuel consumption, full access to generators and engines – so we can see what these are doing in real time. The system sees problems as they happen, so we can be proactive instead of reactive with a skyrocketing problem and save on costs.”

He also uses vessel mapping fairly heavily. “Bluetide has a service - Bluevision - we’ve not seen elsewhere. It gives us the ability to use geo-fences to check on a vessel in real time. If it is in an area it shouldn’t be, we get notified.” Jackson also has just installed a tilt zoom camera that monitors back deck activity. “All the managers have access. It’s useful from both a safety aspect and for clients to see availability of space on the deck,” notes Zimmer.

Power of One

In addition to providing a richer functionality set, communications services are becoming cheaper, and more multi-tasking. More affordable broadband technologies like KVH Industries’ mini-VSAT Broadband 2.0, claim to deliver sufficient broadband capabilities without trashing budgets. KVH

touts its ‘Power of One’ concept, which it describes as single provider, one-stop combination of global satellite connectivity, application engineering, network management, multicast delivery of licensed content and ongoing support.

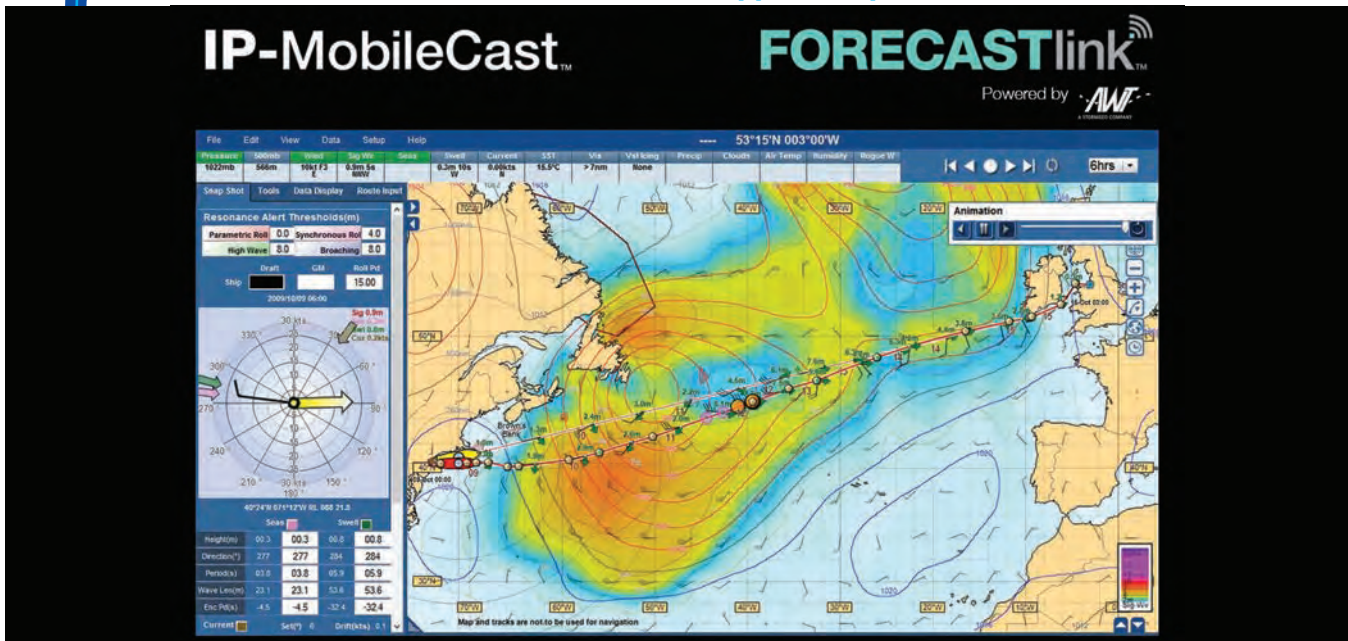
It’s mini-VSAT system utilizes a C/Ku-band satellite network, global private terrestrial and MPLS network for enhanced security; includes an updated and compact TracPhone V-IP series system; usage plan options; and offers faster, more affordable, non-bandwidth-hogging content delivery via KVH’s IP-MobileCast content delivery service. The latter reportedly can deliver up to 500 GB of content monthly to vessels without impacting data speed, airtime plan or network performance.

IP-MobileCast’s multicasting technology enables one transmission to send files via broadband link to a central server on each vessel, which can be then accessed essentially off network by all crew members. The process cuts client costs by taking advantage of the unused bandwidth, and frees up the ship’s network to handle real-time traffic efficiently. This replaces the more expensive and complex process of sending a single transmission per individual device.

Value of Data Exceeds Cost

To think all this started with crew demands for access. “Be honest. We all look at our phones and get on the internet while we are working,” says Ledet. “It was only a matter of time before it moved out of the offices and onto our vessels.” So

KVH's TracVision satellite tracking application as shown on AWT's Forecast link delivered onboard via KVH's IP-MobileCast. pple Computer's iPhone and iPad.



Credit: KVH

it has, opening up opportunities for efficiency that operators could only dream of a few short years ago.

The industry today has the technology to meet the connectivity needs of both crew and company, and the evidence shows, according to Futureautics, that there is “increasingly not simply a moral or regulatory, but commercial imperative, to deliver it.”

As a result, “connectivity today is critical across the board for all manner of activities,” says Zimmer.

Forward-thinking ship companies are moving to start capturing the true value of their investment in IP connectivity. They are beginning to recognize that “the value of data returned to shore far outweighs the cost of the service to do so,” says Robert Hopkins, Jr., Director, IP-MobileCast Services, KVH Industries, Inc. Not surprisingly, this means that going forward, ships will want to connect crews not just to family, but to everything they can, moving better connectivity to the top of not just crew, but operator lists as well.



Patricia Keefe

is a veteran journalist, editor and commentator who writes about technology, business and maritime topics.

NOTICE OF SANCTION AND EFFECTIVE DATE OF AMENDING SCHEME OF ARRANGEMENT

Claim Nos. 5812 and 5813 of 2014
IN THE HIGH COURT OF JUSTICE (IN ENGLAND AND WALES)
CHANCERY DIVISION
COMPANIES COURT

IN THE MATTERS OF OIC RUN-OFF LIMITED

(formerly Ralli Brothers Insurance Company Limited and
The Orion Insurance Company plc)

THE LONDON AND OVERSEAS INSURANCE COMPANY LIMITED

(formerly Hull Underwriters' Association Limited and
The London and Overseas Insurance Company plc)
(both subject to a scheme of arrangement)

IN THE MATTER OF THE COMPANIES ACT 2006

NOTICE IS HEREBY GIVEN that, by an order dated 29 October 2015 made in the above matters (the “**Order**”), the High Court of Justice of England and Wales (the “**Court**”) has sanctioned an amending scheme of arrangement proposed to be made between the above companies (the “**Companies**”) and their respective Scheme Creditors pursuant to Part 26 of the Companies Act 2006 (the “**Amending Scheme**”), which was voted on and approved by Scheme Creditors during six meetings held on 11 December 2014. Unless otherwise defined in this notice, all capitalised terms used in this notice have the same meaning as given to them in the Amending Scheme.

On 11 January 2016, the United States Bankruptcy Court issued an order under Chapter 15 of the United States Bankruptcy Code (the “**US Bankruptcy Code**”) granting recognition to and enforcing the Amending Scheme under the US Bankruptcy Code from 11 January 2016 (the “**US Order**”).

Following the issuance of the US Order, a copy of the Order sanctioning the Amending Scheme was delivered to the Registrar of Companies in England and Wales for registration on 14 January 2016. The Amending Scheme became effective for the Companies on that date. All Scheme Creditors are therefore now bound by the provisions of the Amending Scheme.

Claim Forms may be submitted to the Companies either via the Website at www.oicrun-offitd.com or, upon request by the Scheme Creditor, by completing and returning a hard copy of the Claim Form by post. The Website contains important information and guidelines explaining the process for the submission of Claim Forms.

Scheme Creditors are required to provide full details of their claim(s) against the Companies, including any Notified Outstanding Liabilities and IBNR Liabilities, together with all Supporting Information, by completing and submitting a Claim Form, either electronically or (on request by the Scheme Creditor) by post, so as to be received by the Companies by **no later than midnight (English time) on 12 September 2016** (the “**Bar Date**”).

The requirement to submit a Claim Form before the Bar Date applies to all Scheme Creditors other than NNOFC, Opt Out Qualifying ILU Policyholders, Protected Policyholders, Potentially Protected Policyholders, No Notice Individual Creditors and those Qualifying ILU Policyholders who may, in certain very limited circumstances, bring a claim against the Companies after the Bar Date under the terms of the Amending Scheme.

Any Scheme Creditor to whom the Bar Date applies and who does

not return a Claim Form so as to be received by the Companies before the Bar Date, and who has not elected to have its voting and proxy form or any other form that it has submitted (as the case may be) treated as its Claim Form, will be deemed to have accepted the details of its claims (net of any Security Interest and Offset Amount) set out in the Claim Form made available to the Scheme Creditor by the Companies on the Website. Scheme Creditors who have additional Scheme Liabilities (including any Notified Outstanding Liabilities and/or IBNR Liabilities): (i) which are not shown on their Claim Form; or (ii) who do not have a Claim Form, and who, in each case, do not submit details of their claims on their Claim Form before the Bar Date, will receive no payment in respect of those additional claims under the Amending Scheme.

The Companies will make available on the Website a Claim Form for each Scheme Creditor whom the Companies believe has or may have a claim against either or both of the Companies. The Claim Form will include, to the extent known by the Companies details of:

- certain policies held by that Scheme Creditor;
- the Scheme Creditor's Established Liabilities; and
- the Scheme Creditor's Agreed Liabilities.

Each Scheme Creditor will be provided with an individual Website login ID and password, which will enable that Scheme Creditor to access the secure area of the Website containing their Claim Form as prepared by the Companies. Alternatively, Scheme Creditors may request a hard copy version of the Claim Form by post from the Run-off Company.

Any Qualifying ILU Policyholder who wishes (in respect of all Qualifying ILU Policies held by that Qualifying ILU Policyholder) to opt out of the crystallisation and payment provisions of the Amending Scheme must submit an Opt Out Form, either electronically or (upon request by the Qualifying ILU Policyholder) by post, so as to be received by the Companies by no later than the Bar Date.

Any Scheme Creditor which has any questions concerning this notice or the action that it is required to take, or which requires assistance in completing its Claim Form, should contact the Run-off Company using the contact details set out below. Any person who is, or who considers itself to be a Scheme Creditor, and who has not received by post a copy of this notice, an Opt Out Form, a Postal Service Request or a schedule with its individual Website login ID and password, should also contact the Run-off Company using the contact details set out below.

Copies of the Amending Scheme documents can be downloaded from the Website at www.oicrun-offitd.com. Alternatively, hard copies can be obtained, free of charge, by sending a request to the Run-off Company using the contact details below. Further information may be obtained from the Website or upon request from the Run-off Company.

The contact details for the Run-off Company are as follows:
By post: Armour Risk Management Limited, 4th Floor, 20 Old Broad Street, London, EC2N 1DP, United Kingdom
By email: Oiclosurehelpdesk@armourrisk.com
By phone: +44 (0) 20 7382 2020
By fax: +44 (0) 20 7382 2001
Dated 15 February 2016
Hogan Lovells International LLP
Atlantic House, 50 Holborn Viaduct, London, EC1A 2FG, United Kingdom
Tel: +44 (0) 20 7296 2000 Fax: +44 (0) 20 7296 2001
www.hoganlovells.com
Ref: Joe Bannister/Will Beck
Solicitors to the Scheme Administrators

Five Minutes with Transas CEO Frank Coles

In Singapore this past January, Transas launched its newly established Transas Academy, part of the company's THESIS, the *Transas Harmonized Eco System of Integrated Solutions*, during the Simulation User Conference (SimUC).

According to Transas, the main purpose of the Transas Academy is to connect maritime stakeholders and provide them with integrated solutions and high quality content, helping them to bridge the gap between STCW and the required competency level. In February, *MarPro* sat down with new Transas CEO Frank Coles to ask: *what does all this really mean?* As usual, the always candid Coles did not disappoint. In this edition, you can tune in for 'five minutes with Frank.'

The recent Transas Simulation User Conference in Singapore introduced THESIS, the Transas Harmonized Eco System of Integrated Solutions. But, what is THESIS?

It is the connected community of the ship, shore office, the ship traffic authorities and academy working together on a cloud based shared data platform to enable smarter operations, safety and navigation.

Arguably, harmonized integrated marine solutions for ship ops are already here. Give us a garden variety example of what you will do differently.

I don't know of any harmonized marine solutions for ship operations. Ship operations between the ship and shore remain disconnected and decision tools do not exist in a connected world. We are talking about an environment where the ship data collection is connected to the shore decision based analysis environment, where decisions are taken jointly and responsibility is shared. This involves significant connectivity requirements, increased harmonization and an integration of the bridge, engine data on board, with the shore based operations team to enable navigational, operational and administrative decisions to happen seamlessly.



Credit: Transas

Give us your vision for the future of the global maritime technology. You say Transas will 'shake up the market.' How so?

Transas wants to create a platform that provides a community for several key stakeholders to enable a change in attitude to ship operations, navigation and thereby improve safety and safe operations. The vision is for all sectors to share data, and enable one another to make better decisions, better operations and better training. Ship operations would be a coordinated evolution, with ship and shore based operations centers working together, on shared information platforms, the ship and office would also work in a community where the ship traffic control would enable better coordination of traffic movements, with decision based tools to enable direction of traffic. The fourth element would be training, or what we call the academy. Simulators and content would be connected to each other for sharing data and enabling decisions to be tested, but also connected to enable schools to share content and ship models so that the community can learn. All of this training capability can also be shared with the ship. Scenarios can be run on the simulators using ship traffic control, ships and operations centers. We do not intend to force a standard but to enable the community to decide its level of involvement and connectivity.

Transas will collaborate with industry on this new effort. How will you do that? On board, in the classroom, in the simulator or all three?

This is very much all three. The simulator is in effect an empty computer without the models and scenarios built by the schools or manufacturers. To enable and build a comprehensive community we will facilitate the sharing and learning of more complex scenarios and models. This will provide for more advanced training over and above the standard STCW training, and for it to be shared. Alongside this, we will also enable collaboration of the data onboard for running a ship operations center so that the operator has all the data.

How will the Fleet Management ecosystem reduce the administrative load on the ship? Give us a couple of examples.

There is absolutely no reason why the ship types up 6 copies of a crew list, 4 copies of inventory and bond, etc. All of this should and could be done ashore and connected to the ship and the port and the agent, without the master being the secretary or being involved. There are endless examples of paperwork that should be done from ashore, or where the automation of log books, data and engine performance could be done without making this a manual task. A connected ship would enable the menial tasks to be done by a team ashore.

Connecting the ship connected to the ecosystem – the cloud – IS ambitious. It also entails risk – proprietary information exposed to hacking, navigation systems potentially hijacked, for example. Assuming that you can get widespread buy-in for maritime stakeholders, what protections can you build in to protect the integrity of it all?

All technology carries risk. Aircraft communications, drone operations, and any internet based communications. Proper IT procedures will greatly reduce the risks. I am not saying we operate the ship from the shore, but they share data and decision tools, alongside a shared management, the ship continues to be operated from the ship.

Connecting the office, the training facility and a properly created ship traffic control environment is a new way of thinking. It's exciting. But why would the ship need to talk to the training center? Or, is it that the training center will learn from the movements of the ship? What will they accomplish by doing so?

This works in two ways. First the training centers can upload and do on line training to the officers on board. Second, the data from actual events can be used by simulators to greatly

improve realism, correct and train both the intelligence of the simulator and also the courses that can be run. Maybe to some, the immediate question or statement is that nobody will share or cooperate. I am sure there will be some resistance from some. Not all stakeholders have to be open from the start and we have to remember that an airplane takes off up wind. We are providing an ecosystem to remove the insanity, which is in effect making changes so we do not have the same attitude and environment.

You propose addressing the traditional hierarchy on board and between ship and shore. Arguably, the Master and his authority have both been undercut, and yet, you correctly say that criminalizing the seafarer continues unabated despite the loss of on board autonomy. And, you submit that the issue is central to what THESIS and the 'ecosystem' can solve. But, how?

The master is responsible, whether the shore puts pressure on or not. In fact, the shore pressure is there, the added work load is there, the criminalization is there, the single point of failure is under greater pressure, so why not relieve the pressure. Allow the decision to be shared, or at least the tools to be in place to share the discussion and share the thought process, without just underhand pressure from ashore. Share the same decision tools, and then allow it to be a fleet resource decision.

Define Fleet Resource Management for our readers?

The ship and operations room of the owner share the same operations data, weather, charts, etc. They share the routing, and monitoring. With decision tools shared, they can discuss critical issues. Technology removes menial administration tasks into the office and navigation and engine operations become a team approach across the fleet.

As training is set up in an environment with a simulator, the use of real world data to continuously fine tune the models would be a welcome variable. Do you someday envision industry players cooperating with one another, or will data streams remain proprietary?

I see a day when schools work together and with our community because it is happening today. Our data fine tunes our models and live data validates and upgrades the scenarios and models. Whether two simulator companies would cooperate is another story, but I see ship traffic working with ship operations and simulation to develop better realistic models, better training, and to analyze and support a true to life 3D picture of the operations decisions taking all aspects into consideration.

A New Paradigm in *Crew Connectivity?*

Service providers have spent decades delivering services on the basis of a demand model that is in danger of being overtaken by events, writes Trevor Whitworth, Senior Vice President Sales & Marketing, Globecom Asia.

By Trevor Whitworth



Despite some recent suggestions to the contrary, demand for crew connectivity remains a strong driver of the maritime communications market. The Maritime Labor Convention is among the factors encouraging service upgrades and higher spending, but there are other fundamental forces at work and across our industry. Shipowners and operators, managers and crewing agents need to understand what is happening and how to manage this change in a positive way.

The economics of maritime communications are evolving very fast. Solutions providers are seeing this first hand and adapting to the landscape in order to meet new demands. The phone in our pocket and the tablet in our bag or on our desk means we approach communications in a new way. It's an exciting change, one that brings the potential for much better quality of experience, higher mobility and more flexibility.

Despite the challenges of communicating at sea, the demand for access via multiple mobile devices is no different than it is on land. For communications providers, it means some of the traditional ways of approaching contracts will change. In some cases, that's already happened. For shipowners, managers and crew, expectations of greater availability are not necessarily dependent on higher costs or faster bandwidth. Even so, their expectations come with some unintended consequences.

From Too Slow to Very Fast

The background to crew communications has been a slow and steady evolution. From expensive and inconvenient phone

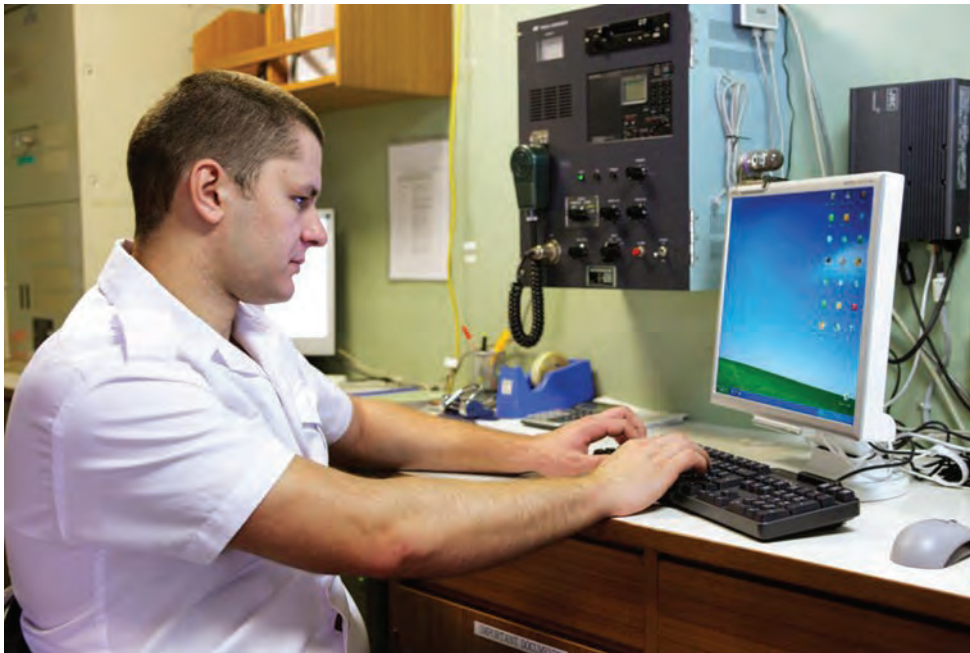
calls to scratch cards for crew phones to access via internet cafes, we have seen increasing demand and usage of voice and data. The next stages moved faster – from limited web browsing to chat, messaging and social media tools which are usually the same as those we are used to on land. As interest increased thanks to the spread of landside internet access, suppliers have found increasingly innovative ways of squeezing the maximum connectivity out of the minimum bandwidth. At the same time, user packages are moving away almost entirely from a pay as you go model to fixed price bundles that only penalize you if you exceed your data limit.

When the first HTS services become available, availability will increase again as new satellites dramatically step up in the bandwidth available to users. There is a lot of interest around HTS – not least because of the large amounts of money invested in it. Some observers are already talking of a bubble, in which a huge amount of potential supply searches for a market that may not be ready or willing to pay for it. And it does seem likely that prices will be higher, at least initially, leading many to question how much take up that truly can be expected by shipping.

Too Many Underserved?

MLC 2006 does not specifically mandate crew communications – though it does specify some of the conditions under which crew should be allowed access. Even so, too many crews are still underserved and MLC provides a convenient tool for them to argue for better access – and for providers to





deliver connectivity in a way that works for owner and employee alike. What MLC has achieved is to raise the profile of the debate about what could and should be available. Beyond this, MLC infers that crew welfare is central to a safe and profitable organization.

Today, crews are becoming much more demanding about their need for access. Only two years ago, most GlobeComm customers were subscribing to low volume 50MB data plans. Today many are opting for four or eight gigabyte plans, even though their business requirements have hardly changed in that time, which is a reflection of increasing demand from seafarers. The fact that many owners are adding to their OpEx in what for many is a dire market further amplifies that metric, and underscores the need to recruit and retain quality crews. At the same time, these growing expectations have to be managed. Where cost used to be the defining factor, access is now the most critical. Mariners want to communicate and they are increasingly creative in the ways that they do it.

A recent survey by Futurenautics for satellite operator Intelsat found that access to connectivity is a key determinant for the vast majority of seafarers when choosing which company to work for. The trend towards 'Bring Your Own Device' is becoming the defining feature of crew communications. Now that gaining access to connectivity is becoming easier, the next most important factor is privacy. This has real impact for solutions providers and employers alike. Facebook, for example, introduces even more demand. Consider that 1.4 billion people use Facebook every day and there are 1.5 million seafarers. It only makes sense that this traffic is rising.

The trouble is, we are not in the Facebook market. There has always been very little enthusiasm on the part of owners to invest

money at a scale necessary to meet seafarer demand. It's simple economics and until the 'disruptive innovators' find a way to provide connectivity for free or very cheaply, the economics appear to be stacked against, plentiful, low cost, high bandwidth communications for crews. Or so you might have thought.

A New Paradigm?

It is no longer just about the cost per megabyte or the monthly cost of communications. The bigger question to ask is whether the market is being overtaken by events. The connectivity that crew require is arguably no more similar to what it was three to five years ago than what it was 20 years ago. All that time, providers have been working towards delivering expensive, asset heavy services and trying to make them into solutions that best fit the need. We do this by applying the squeeze to systems and circuits that are already designed for a low bandwidth environment to extract the maximum service for the lowest cost.

Things have changed. It was never the case that one size fitted all – these days it doesn't even get anywhere close. The advent of cheap smart phones, cheaper tablets and the incredible growth in the use of apps means that users are increasingly swapping 'internet browsing' in the traditional sense in favor of using personal devices to access apps, services, shopping, chat, voice over IP, games and content. And we are doing this on our own devices. All we require is the router and Wi-Fi signal.

That crews are increasingly using apps like Viber, What's App and WeChat and are happy to use their devices to chat, message and surf. And there is a happy coincidence in play here.

We are seeing more and higher quality connectivity becoming available, often at more affordable prices. At same time,



'App Culture' is delivering the desired level of functionality to end users without need for huge amounts of bandwidth. For satellite operators, that may not be all good news. Even for solutions providers, it demands even more creative solutions and services. But for ship and crew managers, there is a clear dividend. You can provide the connectivity that your crew want and can do this perhaps at lower cost than you previously thought.

Seagoing crew's lives can be more connected. That said; as crew have increasingly embraced social media apps, the use of these options can be unsuitable for use over satellite. Such apps can be inefficient consumers of bandwidth because they are designed for land-based networks. As a result,

GlobeComm (for example) has designed and developed our own and I'm sure we won't be the last.

So where do we go from here?

Just as with the spread of the internet ashore, this connectivity is not going to stand still. We are caught in a demand-driven cycle where even the 'new rules' like Moore's Law will soon be overtaken and desire for connectivity will continue to grow.

Safety, Isolation, eLearning & Mentoring

Shipowners and managers also need to be aware of what will change when bringing this new connectivity on board. From across the generational divide, it is easy to criticize young people who spend more time looking at screens than they do conversing, but that is the reality. First-hand experience with crews shows that the on board culture varies from ship to ship. Some vessels are very much team-based, with social interaction strongly encouraged, others are not, even when crewmembers are of the same nationality.

The risk is that by enabling crews to enjoy the same mobile access to the internet as that enjoyed on land, we also increase the isolation that many experience by encouraging them to spend more time interacting with their devices than with other people.

Young seafarers want to do both – they want contact with home but they also want to learn – they want to speak and listen to their peers and colleagues. In an industry already under pressure from growing regulation, increased paperwork and procedures, the need is for greater interaction and better mentoring. Still another more controversial topic is whether, having enabled all this access to your crew's devices, there is actually an argument for restricting it too. Owners must decide what their priorities are, what they will pay for and what

crew must budget for themselves.

There are safety factors: The need to make sure crew get their mandated hours of rest already has some owners restricting time online so that crew can balance internet access with sleep and other non-work activity. Add to this more existential threats – radicalization and cyber security, for example – and some ask whether the shipowner has the right to know what websites his crew are visiting, who they are emailing and what the content of those emails is.

As crew become more and more connected, is there a need to draw a line between the right to privacy and the need for monitoring and perhaps control of access? Too few owners give their crew any kind of cyber security training before enabling internet access but this, together with clear IT and usage policies, are essential.

Looking Ahead

Solving these problems is the next big challenge for service providers and shipowners alike. Perhaps though, the industry will provide an answer of its own. Just as we manage the transition from web surfing and email to social media, there is another wealth of content around the corner – news, sport, movies and other entertainment – all of which the providers are all too keen to sell to crews. How much take up there is of services of this sort remains to be seen, but the bottom line remains that even if the customer is not always right, he is still king.

There is no point in network operators and solutions providers developing new products and services if these are not the ones being asked for. Providers need to listen much more carefully to what seafarers and operators are asking for – and to provide it in the most efficient and cost effective way. Without a doubt, the social media revolution should have taught us to listen to and anticipate the needs of users and not to imagine that solutions providers always know what is best.

Change is already happening around us and the speed of change will only continue to increase. When challenged to be creative, we must be prepared to respond and address these new demands, not just with new services, but with new approaches and a mindset that reflects the new paradigm of crew communications.

*All images courtesy of GlobeComm Asia



Trevor Whitworth, Senior Vice President
Sales & Marketing, GlobeComm Asia.



Credit: ITF Seafarers' Trust

In today's world of fiber optic broadband, 4G mobile networks and app innovation, we have all come to expect the super-fast delivery of our online communications. For seafarers, however, the unique environment of being away at sea for many months at a time challenges this norm. Access to a reliable Wi-Fi connection – both at sea and ashore – for most seafarers is hard to come by. For the ITF Seafarers' Trust, the launch of Shore Leave 2.0 aims to fill a gap in the provision of offline apps for seafarers.

There's an App for That ...

The app, as it was originally conceived, aimed to digitize the Seafarers' Centers Directory published by the International Seafarers' Welfare and Assistance Network (ISWAN). Borne out of an initial idea by the ITF Seafarers' Trust Trustees, the inaugural app – launched in 2012 – was designed to assist seafarers in looking for reliable port-based transport. Once downloaded, seafarers were able to access the contact details of seafarers' centers globally, viewing available facilities as well as providing the contact details for Seafarers Help, the 24/7 helpline available for seafarers in need. The benefits of an offline app were, it seems, readily apparent. After the first download the app was able to function completely offline enabling seafarers to call welfare providers relatively easily.

Shore Leave 2.0, which is available for download on both

Seafarers Trust in Technology

The ITF Seafarers' Trust recently re-released an upgraded version of Shore Leave 2.0, enabling seafarers to access the internet in ports on tablet consoles. Together with Shore Leave, the Seafarers' Trust believes that these initiatives will effect real change, attending to the global welfare of seafarers.

By Henry Norman

Android and iPhone, represents the Seafarers' Trust's new and improved design and aims to build upon the existing 10,000 downloads. Considered alongside similar charity-sector innovations such as tootoot – an app launched by Bullying UK allowing children to report incidences of bullying directly to their place of learning – the app's new reporting feature enabling seafarers to leave reviews of centers visited will play a role in helping funding organizations such as the Seafarers' Trust better identify need and allocate their resources.

App development is a multibillion dollar industry. Just eight years ago Apple's App store didn't even exist, which is perhaps all the more staggering considering the fact that by 2017 the industry is estimated to be worth nearly \$80 billion. In terms of the maritime sector specifically, Futureautics estimates that the combined worth of shore-based and sea-based communications market to be in excess of \$3.3 billion per annum.

The Seafarers' Trust firmly believes that third-sector organizations play an important role in helping realize the power of digital technology in terms of welfare provision. Surveys conducted by the Trust and other maritime welfare organizations repeatedly reveal seafarers' current dissatisfaction with the lack of Wi-Fi in ports and aboard ships. The results of a comprehensive survey by Futureautics research, produced in association with Crewtoo, PTC, InterManager, BIMCO and ISWAN, reveals that 77% of seafarers now take a smartphone aboard.

Initial results of a more recent survey carried out by the Seafarers' Trust shows that while the majority of on-board communication is still undertaken via telephone, instant messaging (WhatsApp, Facebook Messenger, etc.) is increasing in popularity; hindered only by the lack of reliable connection. In lieu of improved Wi-Fi access for seafarers, apps which require no on-going internet connection become more vital – especially considering the findings of the Futernautics survey revealing that on average, seafarers' monthly internet-related expenditure amounts to approximately \$70. The Seafarers' Trust's own survey reveals that over 35% of respondents spend between \$50 and \$100 on communication costs per month. The more that digital technology can integrate with the port services that matter most to seafarers, the more useful offline apps such as Shore Leave 2.0 can become.

Alongside app development, in the coming few months and years, the Seafarers' Trust will be implementing a range of programs and projects seeking to improve connectivity both ashore and at sea, making it easier for seafarers to communicate. Currently in the piloting phase, Onboard Online aims to provide ITF inspectors with a portable Wi-Fi hot spot to be carried with them on inspections. The device will be capable of turning the mess room into a free Wi-Fi zone for the use of seafarers.

The Seafarers' Trust is also in the process of rolling out the construction of unmanned seafarers' centers in ports lacking in existing welfare provision. Working with port authorities, unions and other interested stakeholders, these centers will enable seafarers to access the internet in ports on tablet consoles. Together with Shore Leave, the Seafarers' Trust believes that these initiatives have the potential to effect real change, attending to the welfare needs of the world's population of seafarers.

Since the launch of Shore Leave 2.0 in November, 2015, the Seafarers' Trust has reported a steady increase in the total number of downloads. Like any other charitable organization, however, the Seafarers' Trust's ability to conduct a wide scale promotional campaign over and beyond the use of social media and the Seafarers' Trust own website is of course limited.

Calling all Shipowners

The Seafarers' Trust is therefore calling upon the participation of shipping companies, manning agents, welfare providers and port authorities alike to help them in promoting Shore Leave more globally. While the Seafarers' Trust already has the support from Intermanager, ICS, AMOSUP and the P&I Club West Coast of England to distribute promotional posters on board their member's vessels and facilities, more can be done to help publicize this important tool for seafarers. As Peter Hinchcliffe, Secretary General of the International Chamber of Shipping has stated: *“ICS always welcomes new tools to help seafarers have a proper and refreshing break. This new Shore Leave app will allow them to make the most of their limited free time.”*

“ICS always welcomes new tools to help seafarers have a proper and refreshing break. This new Shore Leave app will allow them to make the most of their limited free time.”

**– Peter Hinchcliffe,
Secretary General of the
International Chamber
of Shipping**



Henry Norman is an ITF Seafarers' Trust Assistant Trust Administrator. He has completed an MPhil in International Relations at the University of Cambridge specializing in labor relations. He is assisting the Trust on a range of projects including improving the Seafarers' Trust's external communication strategy. Established in 1981, The ITF Seafarers' Trust is a charitable organization that financially supports welfare services to seafarers, acting as a catalyst for positive change in the maritime community, and supporting long-term programs that improve maritime workers' health and welfare.

On the WEB: <http://www.seafarerstrust.org>

Workboat Academy: Coming of Age in Challenging Economy



The unique, apprenticeship-based format attracts both quality candidates and employers, changing forever the way North American workboat operators grow loyal talent.

By Joseph Keefe

*All images courtesy PMI / the workboat Academy

At a time when workboat operators perhaps are looking to cut costs, preserve the bottom line and some, merely survive in a deepening down cycle for many sector stakeholders, a curious thing is happening in Seattle – and beyond. A different kind of maritime training scheme has emerged from humble roots and ten years of sweat equity; one which also promises a different kind of officer who possesses the skill sets necessary to hit the ground running from day one. Aptly named the Workboat Academy, the ten-year old school is slowly changing the way North America develops brown water maritime talent.

According to Workboat Academy Director Marja Pietersom, the first Workboat Academy program started in 2006 at the Pacific Maritime Institute (PMI) in Seattle with the guidance of the Pacific Marine Towing Industry Partners, with the goal of providing a hybrid approach of Hawsepipeline and Academia. “The results have been astonishing,” says Pietersom.

Back in 2006, the traditional Maritime Academies – then as now – were of course producing licensed mariners. But, says WBA’s director, at that time, those graduates were not necessarily interested in working on a towing vessel, nor were the majority of academies catering to the towing industry. Beyond this, those graduates who did stick their toes into the murky world of brown water were, through no fault of their own, largely and

at first unprepared for what they were about to be tasked with.

Over time, that part has changed as the traditional academies shifted gears to provide curriculum to better reflect the true nature of the U.S. merchant marine – one which reflects the fact that as many as 39,500 of our collective 40,000 merchant hulls can be classified as brown water, shallow draft tonnage. And, while they (the one federal and six state maritime academies) now produce workboat mates and engineers in good numbers and with much improved quality, these schools now find themselves competing with the Workboat Academy. And, for very good reason.

In the Beginning

The Pacific Marine Towing Industry Partners (PMTIP) was formed, which was a non-partisan collaboration between business, education, labor, government, the Seattle-King County Workforce Development Council and Economic Development Council. As a result of this collaborative effort, the nascent Workboat Academy initially received tremendous local support to identify issues and work towards finding a solution to the impending workforce shortage issue in the Workboat Industry.

Graduates of the Workboat Academy are provided an STCW Officer in Charge of a Navigational Watch endorsement, a Mate 500 or 1600 GRT Oceans License (Depending



on sea-time) and an able seafarer endorsement.

Pietersom explains, “At that time, the median age of Deck Officers was early/mid fifties and there was a very real concern to fill the upcoming slots with capable, well trained mariners. The Workboat Academy has grown over the 10 years of its existence, but more importantly has gained the respect of companies and mariners.” That happened, in part, because of a different demographic of candidates being sought and catered to by the WBA. But, in the end, insists Pietersom, it was the method of bringing these students along that has made all the difference.

After the success of the pilot program and the first full program of Workboat Academy-Seattle at Pacific Maritime Institute, the Workboat Academy expanded to include PMI’s sister campus in Baltimore; Workboat Academy-Baltimore started in 2007 at the Maritime Institute for Technology and Graduate Studies. Workboat Academy-Baltimore, like WBA-Seattle, focused primarily on the Towboat Industry.

In order to effectively serve the three coasts, and responding to growing industry demand, WBA searched for a training facility in the Gulf of Mexico in 2012. The Workboat Academy at the new Houston Marine facility in Kenner, Louisiana was eventually inaugurated. That’s not to say there haven’t been some bumps along the way. There were.

According to Pietersom, WBA-New Orleans focuses on the

Offshore Supply Industry and was very successful until the downturn in the oil patch. She told *MarPro* in February, “We have temporarily suspended enrollment, but are looking forward to starting the next program when the oil Industry picks back up again.”

Apples & Oranges

After 2002, it became more difficult for mariners to climb up the hawsepipe because of many reasons – regulatory changes and pressures not the least of them. At the same time, the median age in industry had climbed to the mid-fifties. Pietersom explains further, “There was a genuine concern, especially in the Towboat Industry, that the knowledge from the experienced Mates and Masters who were close to retirement was not being passed on to a younger generation.” Out of these concerns, the idea of the apprenticeship program was born.

Pietersom continues, “All of industry was involved; Companies, Governmental Organizations, Labor, Maritime Associations, Schools, etc. We feel fortunate that our Partner Companies are much vested in the education of their cadets and are in support of this program; they continue to be on our Program Advisory Committee (PAC).”

This is not your grandfather’s maritime school. The Workboat Academy’s program length is 28 months. The apprentice

alternates between academic and sea phases throughout the program. An intensive hybrid vocational program, blending classroom learning with simulation and on the job training with a company who selects the apprentice, it is also an intensively competitive program, which yields measurable results.

- *Along with the change in how candidates are taught, the program also caters to a much different demographic than the typical maritime academy. According to Pietersom, the program is well suited for candidates who:*
- *are not interested in a 4 year college;*
- *have gone to college, but are not happy in their chosen field;*
- *have worked on yachts and recreational vessels and now want to pursue the professional route;*
- *have been in the service and want to transition into the Maritime Industry.*

Those candidates also tend to be a bit older than typical maritime academy cadets, who sometimes enter school as young as 17 years of age. Pietersom insists, “We have found that retention clearly starts with selection, so our selection process is a key difference between us and a State Academy. We have been very successful with recruits who transitioned from the Military into our program. These man and women understand what life on the water entails; they understand chain of command, being away from home and usually have a base of maritime knowledge acquired during their time in the NAVY, USCG or ARMY. In our Baltimore program, close to 50% of our cadets are veterans.” In other words: the perfect example of a successful military-to-maritime transition.

Apprentices go through a rigorous interview process, both with the academy and the Partner Company. Once the cadets are selected by a Company they remain with that company for the duration of the program. A sense of loyalty also then develops. “90+ % of our apprentices remain with their Part-

ner Company upon successful completion of the program. The Partner companies train the apprentice on workboat specific elements right from the start,” adds WBA’s Director.

Participating Partners, Measurable Metrics

The PAC meets yearly and assesses that the program is addressing the ever increasing demands in the wheelhouse. Many Partner Companies’ suggestions have been implemented over the years. Ten years after its humble inception, Pietersom says that more than 40 Partner Companies are involved, divided over the three U.S. Coasts, as well as the Great Lakes. She adds, “As this is a 500-1600 GRT program, our Partner Companies are primarily operating Tugboats, Offshore Supply Vessels, Research Vessels and Salvage Vessels.”

These last ten years have seen measurable growth, with WBA averaging 12 apprentices on three campuses in each class, each catered to by faculty that maintain a student-instructor ratio of about 12-1. Simulator based ratios are further reduced to 6-1. Ultimately, however, enrollment is entirely dependent on available billets in industry.

2012 WBA Graduate Cameron Northrop, now working for OSG, told *MarPro*, “The apprenticeship relationship between the cadet and partner company allows both parties to get to know each other and grow together. The schedule of the program is excellent and the order of classes is logical. I went straight from License Prep to sit for my license; two days after getting my license, I was sailing as a full time employee.”

Beyond the military-to-maritime aspect of the program, WBA has the same issues as everyone else when it comes to attracting a more diverse student body. Pietersom laments, “We have seen a small increase in women entering the program, especially on our Seattle campus. Each class of 12 has had at least one woman enrolled. Unfortunately, we are not as diverse as I would like to see; it seems challenging to attract minorities to our Industry.”

The apprentice aspect of the program, combined with a mature and focused student body, and guided by a curriculum that more closely identifies with the so-called ‘European model,’ has produced a solid generation of mariners. Pietersom explains, “During the final simulation exercise, we invite Partner Companies to observe the students during their final SIM exercise, for which they write the voyage plan and execute the voyage solo in the tug simulator. In order to put metrics to their performance, we recently put the cadets towards the end of their studies through our Navigational Skill Assessment Program (NSAP). In our last NSAP, the majority of our cadets performed as well as some of above-average scoring Deck Officers (from other sectors).”



“

At that time, the median age of Deck Officers was early/mid fifties and there was a very real concern to fill the upcoming slots with capable, well trained mariners. The Workboat Academy has grown over the 10 years of its existence, but more importantly has gained the respect of companies and mariners.

”



– Workboat Academy Director
Marja Pietersom

Just Over the Horizon

As 2016 kicks into high gear in a choppy business climate, further dragged under by the sagging fortunes of the offshore oil & gas industry, WBA is hardly sitting still, waiting for the next rebound. To that end, Seattle Central College, Seattle Maritime Academy, the Maritime Institute of Technology & Graduate Studies-Pacific Maritime Institute and the Workboat Academy have received a \$5 million American Apprenticeship Innovation Grant from the U.S. Department of Labor to help build a new apprenticeship program.

According to Foss, through the grant, more 150 engineers will be trained over the next five years, both in Seattle and Baltimore. Notably, the engineering program will mirror Workboat Academy’s deck apprenticeship. Engineering cadets will blend time in the classroom with simulation, and apply this knowledge to real work aboard vessels. The candidate’s license will depend on the type of partner company vessels and the routes where cadets gain sea time as an apprentice.

“This partnership exists to respond to the growing need for more trained marine engineers,” says Scott Merritt, Senior Vice President, Harbor Services. “Working together, we aim to train hundreds, if not thousands, of new apprentices in the maritime and advanced manufacturing fields.”

Marja Pietersom adds, “In the first year of the program, we will train approximately 4 of Foss apprentices, but as mentioned earlier, there were many companies involved in receiving this grant, who were part of the original PMTIP since 2006. Some of those operating companies in addition to Foss Maritime Company included Western Towboat Company, Crowley Marine Services, Dunlap Towing Company, Sause Bros., Harley Marine Services and Kirby Offshore Marine.”

Partner Companies who joined the

Workboat Academy over the years have also pledged similar support towards this effort and will each take between two and six apprentices during the first year – 2017, according to Pietersom – the new program will be up and running.

2016 is and will be a difficult and exciting year. With the oil prices at an all-time low and some vessels laid up due to the petroleum crisis, it becomes harder for Partner Companies to justify taking an apprentice. Those partners, nevertheless, remain effusive in their praise. Dale Sause, with Sause Bros., a staunch supporter of WBA, said “It is our contention that graduates of the PMI program entering our fleet may be the most well-rounded and thoroughly prepared mates available to the industry today.”

Pietersom therefore remains optimistic. “We are fortunate that many of our Partner Companies feel that this is the right time to train new mariners, but not all are able to do so. The effects have been hitting our Partner Companies in the Gulf of Mexico the hardest and some had to close their doors.” On the other hand, if the barriers to entry in this sector weren’t enough to prevent the WBA from standing up more than ten years ago, then it is likely that today’s economy also won’t stop it from not only surviving, but also thriving – and continuing to innovate.



MARITIME SCHOOLS & TRAINING CENTERS



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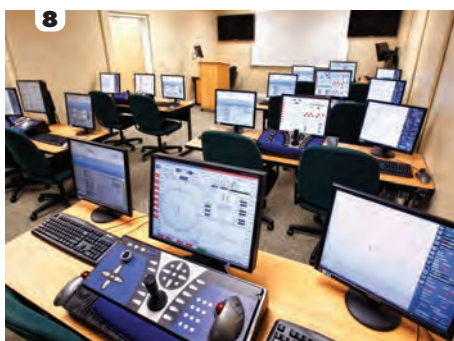
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Deciding which training facility is better than another isn't necessarily an apple-to-apples exercise. That said; we ask: *what constitutes a Top Maritime School?* In terms of resources – the backbone of any successful school now includes some sort of simulation – and when it comes to the current job market, the measurement of the quality of mariners and maritime professionals often depends upon the increasingly popular use of “assessments.” These assessments in turn frequently depend on sophisticated simulators. But, training and education goes far beyond that. Using your own set of metrics, see where your school stacks up against the lineup we've chosen below.

1. FURUNO INS 2. Inland Logistics & Marine Institute 3. WEBB Institute 4. PrimeServ 5. Sea School 6. SUNY Maritime 7. U.S. Merchant Marine Academy 8. MPT 9. Maine Maritime Academy 10. IRClass Academy 11. Delgado Maritime & Industrial Training Center 12. MITAGS-PMI



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Delgado Maritime & Industrial Training Center

13200 Old Gentilly Road
New Orleans, LA 70129

Date founded: 1978
Website: <http://www.dcc.edu/academics/workforce/maritime-fire>
Name of Director: Rick Schwab
Annual Throughput: 9,000

Focus of Training: Fire /Safety /Radar Navigational /Leadership /Basic Medical. Many courses approved by the U.S. Coast Guard to assist mariners in obtaining, maintaining, and upgrading their licenses, both limited and unlimited.

Simulators: The current facility houses two wheelhouse simulators that provide tandem exercises for participants. In the new Training Center, which opens April 1, 2016, there are 3 full mission simulators which will all have the capacity to run in tandem. All simulators will be used for Inland, Offshore and Dynamic Positioning scenarios, providing the most up-to-date software available.

Make (OEM) of simulators: Transas Marine

Other Information: The Delgado Maritime Facility was selected to be the Louisiana Community College to join the Federal

TAACCCT Grant Consortium for Mississippi River waterways, to provide federally funded training to licensed mariners.

Biggest Success: Delgado's high quality instructional staff and program delivery has led to worldwide recognition of our facility. The school stays abreast of all industry trends to allow licensed mariners to maintain or upgrade their workforce positions.

Current Projects: After 12 years of anticipation, the final result is visible: a state-of-the-art training center, with expanded programs and much-needed parking. All equipment received upgrades, including classroom training tools. April 1, 2016 marks the Grand Opening of this 19,000 sq. ft building. The current fire field will also receive an expansion to offer more maritime and industrial fire fighting programs.

Images courtesy Delgado



IRClass Academy

52A, Adi Shankaracharya
Marg, Opp. Powai Lake
Powai, Mumbai 400 072, India

Date founded: June, 2014
Website: www.irclass.org
Name of Director: U.R.P. Sudhakar
Annual Throughput: 320 (in 2015)

Focus of Training: Maritime Professional Development – Beyond Seafarer (STCW) Competencies, Facilitation of seafarers in making the transition to shore-based positions and roles. Awareness building about the maritime sector, Facilitation of lateral entry of personnel into the maritime sector, Provisions of Regulation 2.8 of MLC 2006 that emphasize "...promotion of opportunities, both on board and ashore, for further training and education of seafarers," Upcoming regulations and implications for maritime industry, Facilitation of transfer of new technologies and Interface between maritime policy development and implementation.

Simulators: Survey Simulator – Five simultaneous users at a time for four vessel types (Bulk Carriers, Tankers, Container Vessels and MODU), used for imparting training to aspiring Technical Superintendents on Survey and inspection of hull, Understanding of

Class requirements, Typical structural defects, Reporting formats, Preventive measures, Safety aspects, the Role of shore-based managers in preparing for surveys, Maintaining hull/ coating conditions, Interpretation of findings from inspections, and steel renewal estimates.

Other Equipment: Moodle-based Learning Management System 'IRClassRoom' for delivery of e-learning courses being customized and installed (from June 2016 onwards).

Simulator Particulars: DNV-GL certified
Biggest Success: The Expert Panel Discussion on Maritime Professional Development in India and the Executive Management Course in Ship Superintendency.

Current Projects: Customized training solutions for shore-based managers and the development of E-learning courses.

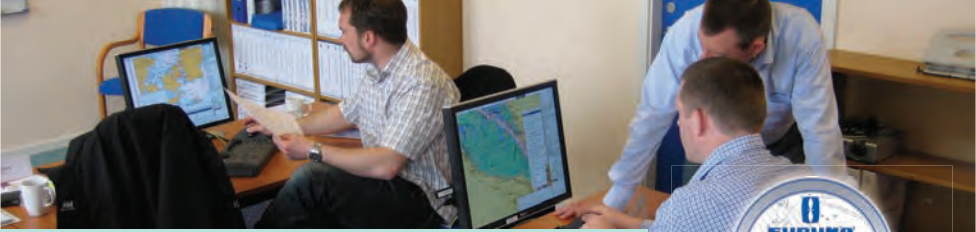
Images courtesy IRClass

MARITIME SCHOOLS & TRAINING CENTERS



FURUNO INS Training Center

Hammerhlmén 44-48, DK-2650
Hvidovre, Denmark



Date founded: November 1st 2005
Website: <http://www.furuno.com/en/merchant/training/>
Name of Director: Mr. Mads Friis Soerensen
Annual Throughput: 4,200 navigators via multiple facilities



Focus of Training: Navigators, shore based staff (DPA, superintendents, new building project managers, pilots) and representatives from maritime authorities. The school employs real equipment combined with simulation to create the most realistic training environment as possible, where equipment and systems react realistically to any change in conditions.

Simulators: Two full mission navigation simulators featuring ship handling, ice navigation, SAR, etc. and one part task simulator for ECDIS training.

Other Equipment: Computer Aided Training (NavSkills CAT) based on cloud technology for distant learning providing the same support tools as class room training through online instructors in Asia and Europe available to the trainee any time during the training course. The CAT system is developed by FURUNO INS Training Center as an improved distant learning system to CBT.

Make (OEM) of simulators: ARI and JMS

Biggest Success: Development and distribution of NavSkills CAT distant learning system. Today 270 workstations are

in operation worldwide and more than 10,000 navigators have been trained and certified through this system since it was launched in July 2012. Another big success is the establishment of FURUNO's NavSkills training network, which is based on cooperation with local training centers around the world through a service agreement between FURUNO and the training centre. The concept includes assessment of new training partners, education of instructors including refresh training, annual audits and provision of training materials and syllabus from FURUNO. The training policies and courses are identical in all locations and hence the shipowner does not have to be concerned about the outcome of the training provided. FURUNO has trained and certified more than 20,000 navigators in 14 locations using this concept.

Current Projects: Ongoing development of new training courses for shore based staff, authorities, pilots and wind mill service vessels including a new Bridge Resource Management training course, which will introduce completely new methods.



Images courtesy FURUNO INS



West Kentucky Community & Technical College Inland Logistics & Marine Institute

631 Marine Way
Paducah, Kentucky 42003

Date founded: 2009

Website: www.westkentucky.kctcs.edu & www.logisticsandmarine.org

Name of Director: Dr. Barbara Veazey

Annual Throughput: Number of students 686

Focus of Training: Academic disciplines include; English, Mathematics, Natural Science, Social Science, Heritage/Humanities, Business, Computer Literacy, Criminal Justice (Homeland Security), Culinary Arts, Logistics, Marine Technical (Nautical Science, Engineering), and under Workforce Specialized training; Marine Technical courses (deck & engineering), Leadership, Culinary, Financial management, First Aid/CPR, Firefighting, Radar/ECDIS navigational training, OSHA safety training, Confined Space, Hazardous Material handling, Marine welding.

Simulators: 8 Radar/ECDIS trainers utilizing Transas/Rosepoint navigation programs, 2 Amatrol Pneumatic/Hydraulic trainers, 11 Amatrol Electrical systems trainers, 1 EMD propulsion engine, 1 Caterpillar diesel generator, 1 Cummins diesel generator

Other Equipment: Multimedia online course enhancement (3D, interactive) and onsite training production.

Other Information: Named One of the Top Three Community Colleges in America by the Aspen Institute in 2015 the Inland Logistics and Marine Institute is an off campus

facility located in downtown Paducah, KY. The Inland Logistics and Marine Institute offers programs that cater to the Maritime Industry serving the inland waterway system. Programs offered include an Associate Degree in Applied Technology in Marine Technology with multiple tracks including Marine Culinary Management, Marine Engineering, Marine Logistics Operations, and Wheelhouse Management. ILMI also offers an Associate of Applied Science degree in Logistics and Operations Management which focuses on all modes of transportation. All programs are offered 100% online. In addition to the academic degree programs, ILMI offers specialized training to support the maritime industry. These courses can be tailored to meet a specific company needs.

Biggest Success: Online academic degree program.

Current Projects: Additional online format for all existing courses called Learn on Demand that allows more flexibility in enrollment and completion. Continued development utilizing interactive and 3D technology for enhancement of all existing online courses is ongoing.



Images courtesy Inland Logistics & Marine Institute

MARITIME SCHOOLS & TRAINING CENTERS

Maritime Institute of Technology & Graduate Studies

692 Maritime Blvd /
Linthicum Heights, MD 21090
Date founded: 1972
Annual throughput:
4,215 mariners (2015)

Pacific Maritime Institute

1729 Alaskan Way South /
Seattle, WA 98134
Website:
<http://www.mitags-pmi.org>
Name of Director:
Mr. Glen Paine

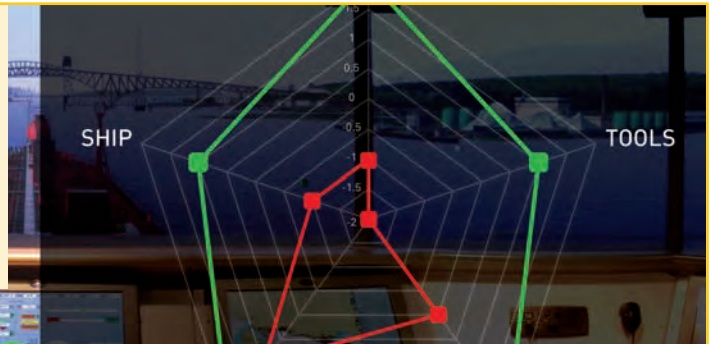


Image courtesy MITAGS-PMI

Focus of Training: Deck and Engine Training and Assessment for all license levels.

Simulators: Baltimore Campus has Two DNV Class A Full Mission Ship Simulators, One DNV Class A Full Mission Tug Simulator, and One Full Mission Engine Room Simulator. Seattle Campus has One DNV Class A Full Mission Simulator, Two Class A DNV Tug / OSV Simulators, and One Full Mission Engine Room Simulator.

Other Equipment: Twelve Station Radar, ECDIS, AIS, ECS, ARPA Lab
Make (OEM) of Simulators: Transas

Other Information: MITAGS-PMI, with over twenty years of maritime simulation experience, delivers an effective advantage to terminal designers, ship designers, coastal engineers, pilots and tug operators. An in-house team of modelers and shiphandling experts can support extensive maritime research solutions to some of the most demanding of operational research challenges.

Biggest Success: The Workboat Academy, a two-year vocational training path to become an officer on a Towing or OSV

Vessel. The program is classified as a Department of Labor Apprenticeship. Students earn a wage while they are at sea and are employed during the program. This provides 100% employment rate to our students during and after the program. The Navigation Skills Assessment Program (NSAP) is a risk-based measurement tool to assess a mariner's performance in the simulator, focused specifically on the core skills required of licensed deck officers as defined by international standards and industry best practices. The program is offered in four locations with two more expected to come on line in 2017.

Current Projects: Through close collaboration with the Seattle Maritime Academy, MITAGS-PMI is in the process of developing an extensive engineer curriculum / apprenticeship model from Wiper to Licensed Engineer. The school is also creating the Engine Skills Assessment Program (ESAP) and working hard to meet the current stop-gap training requirements of MEECE, ERM and Leadership.



MARITIME COLLEGE STATE UNIVERSITY OF NEW YORK



State University of New York Maritime College

6 Pennyfield Avenue
Throggs Neck, NY 10465

Date founded: 1874

Website: www.sunymaritime.edu

Name of Director:

RADM Michael J. Alfultis

Annual Throughput: 1,860 students

Images courtesy SUNY Maritime College

Focus of Training: Bachelor of Engineering and Bachelor of Science degrees are offered in multiple disciplines. Unlimited deck/engine licenses are offered, as well as an Associate's degree in applied science in marine technology and small vessel operations and Master of Science in International Transportation Management, and Maritime and Naval Studies.

Simulators: Bouchard Transportation Company, Inc., Tug and Barge Simulation Center contains one Kongsberg Class A ATB simulator. This center is expanding this month to include two DMV Class Bs, which will be linked to the Class A and allow students to practice interactions between the ATB and either conventional or tractor tugs. SUNY Maritime also has three other Class A TRANSAS bridge simulators, two 10-station electronic navigation simulation classrooms, 15 stations in the tanker simulation classroom and a classroom equipped with about dozen GMDSS stations.

Make of Simulators: Kongsberg and TRANSAS simulation systems

Other Information: SUNY Maritime is home to several cutting-edge labs in engineering and the sciences. Its focus on applied learning goes beyond the summer sea term. All cadets pursuing their Coast Guard licenses attend internships with industry for non-license students and hands-on work through partnerships with industry in senior capstone design projects

Biggest Success: SUNY Maritime alumnus Scott Kelly is currently on a year-long mission aboard the International Space Station. Kelly credits the time he spent on SUNY Maritime's training ship for the skills and abilities that helped him to become a NASA astronaut.

Current Projects: The Bouchard Simulation Center is receiving two additional DMV Class Bs to allow for tandem exercises between tugs and barges.



MAINE MARITIME ACADEMY

Maine Maritime Academy

Pleasant Street, Castine, ME 04420
Date founded: 1941

Website: mainemaritime.edu

Name of President: Dr. William J. Brennan

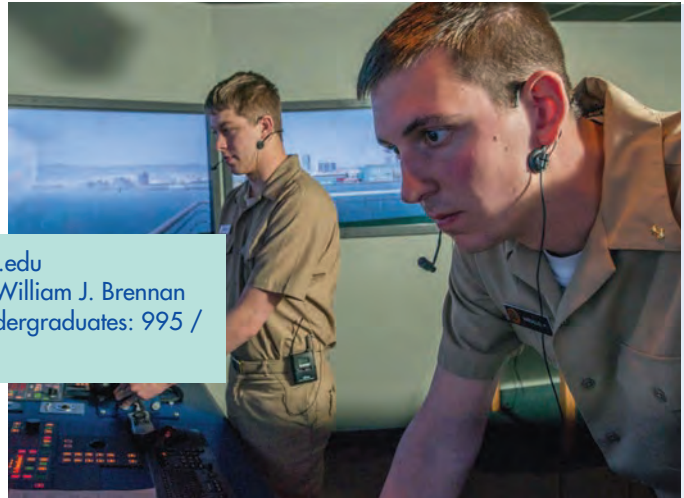
Annual Throughput: Undergraduates: 995 /
Graduate Program: 37

Focus of Training: Bachelor of Science and Associate of Science degree programs; unlimited and limited license programs for Unlimited 3rd Mates, Unlimited 3rd Assistant Engineers, 200-ton Mate Near Coastal and 500-1600 ton Mate Near Coastal licenses.

Simulators: Transas Navi-Trainer Pro: full mission shiphandling and navigation simulator with four navigation bridges. All 4 bridges can be controlled independently and can interact with each other under a common scenario; a common scenario with all bridges representing different vessels interacting with each other; or multiple scenarios and vessels. Transas Azimuth Stern Drive (ASD) Simulator: provides 4 reverse tractor tug models and accurate replicas of a standard ASD tug Transas Electronic Navigation Lab: 14 stations used primarily to teach radar navigation, collision assessment and avoidance techniques using radar (Radar Observer's Endorsement) and Electronic Chart Display and Information System (ECDIS) training. Other simulators include a GMDSS lab, a Transat Dangerous Liquid Cargo Simulator, an OSG Tanker Lab and a Power Plant Simulator.

Biggest Success: Part of what makes a Maine Maritime Academy education exceptional is its focus on real-life, hands-on, traditional training. MMA provides fundamentals and basics in training and education as preparation for focused work and training on modern technological tools and simulators. Students train using simulators and other technology; they also use the machine shop, welding lab, seamanship lab and spend time aboard both large and small vessels on the water.

Current Projects: Ice Simulation Module: this is currently available for the Transas Full Mission Bridge Simulator. Associate Professor of Marine Transportation Ralph Pundt is developing the model courses for ice navigation, working with a DHS grant, for the Coast Guard and the IMO that will be used for advanced and continuing education. MMA also just installed THX surround sound in the two main bridges, and updated the sound systems in the two representing smaller vessels. Recent upgrades also took the simulator from projection to LCD displays. The school hopes to offer DP both C and B Nautical Institute-approved courses by the spring of 2017.



Images courtesy Maine Maritime Academy

MARITIME SCHOOLS & TRAINING CENTERS



Maritime Professional Training

1915 S. Andrews Avenue
Fort Lauderdale, FL 33316

Date founded: 1982

Website: www.mptusa.com

Chief Operations Officer: Capt. Ted Morley

Annual Throughput: 12,000+ students

Focus of Training: All license levels from 6-pack to Unlimited Master, engineers from DDE to Unlimited Chief, also all ratings for deck and engine including USCG approved AB-Deck and AB-Engine (QMED) programs. Over 170 approved courses and programs for USCG, MCA, MI, and Nautical Institute training- including all STCW requirements.

Simulators: Navigational simulators include (3) Class A Navigational Bridge FMSHS comprised of (2) 240 degree HFOV DP2 equipped and (1) 360 degree HFOV. (4) All Weather navigational simulators with full INS and single visual channels. Also, (1) Class A FMECRS, integrated with any of the 3 bridge simulators- able to utilize steam, slow and medium speed diesel, gas turbine, or diesel electric; and either conventional, azipod, or z-drive propulsion as well as high voltage systems. (1) Class A LCHS for product, crude, petro-chemical operations.

Other Equipment: (12) station ECDIS lab, with Navi Sailor 4000 ES6 ECDIS units, conning, single visual channel, Sperry Bridgmaster E ARPAs. (16) station Radar/ARPA lab with Furuno 2865 arpas and Sperry Bridgmaster E ARPAs. (6) station Dynamic Position Lab with (6) MT DP1 consoles, single visual channels, ECDIS, full conning controls, and Sperry ARPAs at each station. (6) station Engineering TecSim Classroom for system integration and peripheral systems training. Also, fully operational ASME Steam Turbine Power Plant System for operational training on Section 1 power boilers and steam turbine operations. A fully operational Engineering Training Department including Carrier Transicold refrigeration training; engine labs for Caterpillar, Detroit Diesel, Cummins, and MTU; fully equipped machine shop for Metal Fabrication and Craft Skills; fully equipped (12) station welding lab featuring MIG, TIG, and arc welding equipment. The MPT Waterside Facility featuring Palfinger Marine/Ned Deck Marine lifeboat davits and single point slew-arm rescue boat davits with TELB and SOLAS rescue boats. The Marine Tech Fire Academy, an over 10 acre facility for STCW Basic Fire and Advanced Fire Fighting Training, as well as land based firefighter training. The facility is additionally equipped with much more in way of training aids, too numerous to list here.

Make (OEM) of simulators: Transas, MT, Sperry, Furuno, ABB, Turbine Technologies

Biggest Success: Continuing to provide clients and students with cutting edge training that not only meets the regulatory requirements, but also meets the needs of the industry. This approach allows students to see a measurable improvement in their abilities, job skills, safety, and efficiency.

Current Projects: Main campus undergoing a renovation and expansion bringing total training square footage up to 61,000 sf. Upgrades to technology, student virtual access, and classroom equipment are all underway. Recently completed upgrades to the MPT training fleet including the purchase of (2) new lifeboats, (4) new rescue MOB boats, and (2) additional FRCs. MPT also just completed a comprehensive review and updating of Emergency Response Procedures for a major cruise line client as well as a Job Safety Analysis project.



Images courtesy MPT

PrimeServ Academies Denmark

Teglholmegade 35 /
2450 Copenhagen SV /
Denmark

School Head:
Tommy Rand Mølau

H. Christoffersensvej 6
4960 Holeby
Denmark
Founded: 1969
Langerak 74
9900 Frederikshavn
Denmark
Annual Throughput: 3,000

Website: www.mandieselturbo.com/0000956/PrimeServ/PrimeServ-Academies/Low-Speed-Two-stroke.html



Focus on Training: The academies are a part of the MAN global Academy network which covers 13 academies world-wide today. Engine training focuses on MAN products which include 2-Stroke Engines (Copenhagen), 4-Stroke Engines (Holeby), Turbochargers (Global academy network), Propellers (Frederikshavn), and Turbo Machinery (Global academy network).

Simulators: The school's simulators are built so that they reflect exactly the same components as found on board vessels. These include ME Control System Simulators and ME Troubleshooting Simulators, both of which can be linked to the ME Simulator in order to simulate real saturation onboard the vessels. Others include ME-B Control

System Simulators, ME-GI Control System Simulator, ME-LGI Control System Simulator, Diesel Switch – Save Change over, Alpha Lubricator Simulators, Maneuvering Simulator, SaCoSone Simulators, New Engine type Simulator, Classic Engine type Simulators, Alphasonic 2000 Simulator and Alphasonic 3000 Simulator.

Biggest Success: Increased growth in the number of students (by 160%) in the period 2012 to 2015.

Current Projects: The school is just now in the process of expanding the existing academy in Copenhagen with a second engine hall and two additional teaching rooms, expected ready for use in 2nd half 2016.



Image courtesy PrimeServ



Sea School, The Law School of the Sea

8440 4th Street
St. Petersburg, FL 33702

Date founded: 1977
Website: www.SeaSchool.Com
Executive Director: Robert Arnold
Annual Throughput: 13,000+ at multiple locations

Image courtesy Sea School

Focus of Training: Deck Licenses OUPV through Master 1600 Ton STCW - Basic and Advanced endorsements up to unlimited Workboat Cooking School

Simulators: Seven (7) simulators used for RFPNW, TOAR, ECDIS, RADAR/ARPA, GMDSS, BRM, Ship Handling, Numerous systems are linked. Live HD streaming video of Simulator in use.

Other Equipment: On campus gravity davits for convenience of students. Numerous simulators positioned in a variety of locations to meet the STCW certification needs of mariners.

Make (OEM) of Simulators: V-Step-Nautis, Kongsberg, SIS, Nau-

tilus, BCG, Transas, Polaris, Octopus.

Other Information: Sea School's Director sits on the National Offshore Safety Advisory Committee (NOSAC) to advise USCG and DHS regarding offshore safety matters.

Biggest Success: A full-time Offshore Cooking School located on a super clean 12-acre live-in campus near Mobile, AL is the ultimate in one-stop training.

Current Projects: Sea School has 70+ USCG approved courses with new offerings monthly including online courses. SeaSchool.com is constantly being updated with news, upcoming classes, and new locations.

MARITIME SCHOOLS & TRAINING CENTERS



U.S. Merchant Marine Academy

300 Steamboat Road
Kings Point, NY 11024



Date founded: September 30, 1943

Website: www.usmma.edu

Superintendent: Rear Adm. James A. Helis, USMS, Ph.D.

Annual Throughput: 231 (undergraduate) / 4 (graduate)

Focus of Training: Graduates earn a Bachelor of Science degree, an unlimited U.S. Coast Guard license (Deck or Engine), as well as an officer's commission in one of the U.S. Armed Forces. Graduating midshipmen can apply for an active duty commission in any branch of the U.S. Armed Forces, National Oceanic and Atmospheric Administration (NOAA) Corps, or Public Health Service, and fulfill their service obligation by serving five years in any one of these branches. A Master of Science in Marine Engineering is offered on the graduate level.

Simulators: The Academy's ten simulators are used extensively in all academic majors and contribute toward a total of 30 days of sea-time for deck officer majors. These include the Full Mission Visual Bridge Ship-Handling Simulator (VBSS), A GMDSS Simulator, Integrated Navigation Labs, a Radar Simulator, an ARPA Simulator, an Electronic Chart Display Information System (ECDIS) Simulator, a Machinery Control Simulator (Medium Speed Diesel), Steam Simulation (laptop based), a Dangerous Liquid Cargo/LNG – The Liquid Cargo Handling Simulator, a NAVIS PowerStow simulator and a NAVIS Sparks Terminal Operating System.

Other Equipment: The Academy's 25 laboratories include full

scale equipment for midshipmen to gain practical experience on. The 176-foot long training vessel T/V Kings Pointer is propelled by two combined 2,900 horsepower diesel engines, has a 6,000 mile range and a maximum speed of 15 knots.

Biggest Success: Graduates include presidents and CEOs of major maritime companies, chief engineers, plant managers and admirals. USMMA graduates earn among the highest salaries in the nation. The Kings Point Scholar program challenges selected midshipmen to go beyond their normal courses of study and research topics of further interest. Working with a faculty mentor, these projects are the successful culmination of many hours of research on an approved topic outside the required curriculum, providing additional depth to the midshipmen's educational experience.

Current Projects: The Academy is inaugurating an elective class in towing, commencing spring of 2016, for those considering employment in the towing and barge industry. The Academy recently acquired a tugboat, and is in the process of acquiring a barge for towing training. Since 2010, USMMA has appropriated over \$87 million in capital improvements, and the capital investment plan projects another \$79 million over the next five years.



Images courtesy U.S. Merchant Marine Academy



Webb Institute

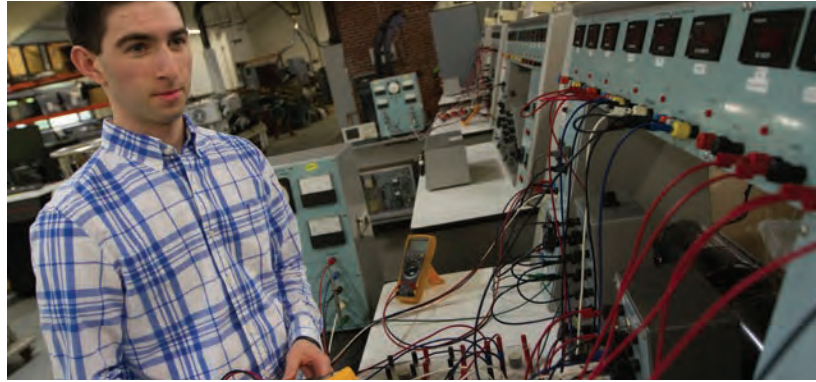
298 Crescent Beach Road
Glen Cove, NY 11542

Date founded: 1889

Website: www.webb.edu

Name of Director: R. Keith Michel

Annual throughput: 90 students



Focus of Training: All students graduate with a dual BS in Naval Architecture and Marine Engineering.

Simulators: The school does not employ simulators.

Other Equipment: A Robinson Model Basin, Edinburgh Designs circulating water channel, which includes a LaVision particle image velocimetry (PIV) system. A Marine Engineering Laboratory has Diesel Engines, Gas Turbines, a Steam System, Emission Testing Equipment, and Pump Testing Laboratory. The Structures Laboratory features a Southwark Emery Universal Testing Machine (200,000 lb capacity), a Tinius Olsen Charpy impact test apparatus, and an Instron Tensile Testing Machine with environmental chamber. The Materials Laboratory features a Brinell Hardness Testing Machine and a Metallurgical Microscope. An Electrical Engineering Laboratory includes DC and AC single and three phase power modeling and testing equipment.

Other Information: The US Navy ONR sponsored research as part of the Atlantic Center for the Innovative Design and Control of Small Ships.

Biggest Success: Over 125 years of excellence in educating naval architects and marine engineers for the marine industry, while also providing full-tuition scholarships to all students and 100 percent job placement rate. 74 percent of living alumni gave to Webb last year.

Current Projects: Re-establishing Webb's research department to serve government and commercial clients. Webb's Summer Engineering Academy (SEA) for middle and high school students will launch in July of 2016. The school is planning \$12M in capital improvements to campus facilities.



Images courtesy Webb Institute

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Sector: Marine Finance & Insurance

Tech: Internet & Entertainment @ Sea: Keys to Crew Recruitment & Retention

Top 20: Maritime Schools & Training Centers

BONUS DISTRIBUTION:

Cruise Shipping

March 14-16, Ft. Lauderdale, FL

Port Security Conference

March 22-24, Tampa, FL

CMA Shipping

March 21-23, Stamford, CT

AWO Spring Meeting

April 19-21 Washington, DC

IADC Annual Meeting Drilling Conference

March 2016, Fort Worth, TX

New Orleans Barge Fleeting Assoc.

April 26, New Orleans

OTC 2016

May 2-5 Houston, TX

Q2 - MAY

ENERGY TRANSPORT & SUPPORT

MARPRO RECRUITER: OFFSHORE ENERGY JOBS

Market: Floating Production Systems: Life aboard an FPSO

Sector: Cyber Security: Are your employees exposing you to new threats?

Tech: Safety Equipment & Systems

Top 20: Software Solutions & Remote Monitoring Systems

BONUS DISTRIBUTION:

Marine Money Week

Jun 21-23, New York, NY

Posidonia

Jun 2-6 Athens, Greece

American Assoc of Petroleum Geologists

Jun 19, Denver, CO

Q3 - SEPTEMBER

SHIPBUILDING, REPAIR & MAINTENANCE

MARPRO RECRUITER: ENGINEERING & IT CAREERS

Market: ECDIS & Software: Big Data's impact on mariners

Sector: U.S. Boatbuilding Exports Surge

Tech: Marine Heavy Machinery

Top 20: Shipyard Employers

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SMM

Sep 6-9 Hamburg, Germany

SNAME

October 2016

SHIPPING INSIGHT

October 2016

Q4 - NOVEMBER

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Market: Emerging Business: Wind, Decommissioning & More

Sector: Firefighting Training, Tools & Techniques

Tech: Dynamic Positioning: Schooling a new generation of mariners.

Top 20: Vessel Owning Companies

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December 2016, New Orleans, LA

ASNE DAY

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Sea The World