QUEENSLAND BRANCH NEWS

NEWSLETTER of the QLD Branch of the MARITIME UNION of AUSTRALIA

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To be truly radical is to make hope possible, rather than despair convincing - Raymond Williams **No. 180 – 24 May 2019**

Branch Secretary's Report – Gladstone MSIC Change of Hours More Sad Loss of Life
Self Driving Trucks - Automation, Robots and the Future of Work
3D Printers Will Make Better Implants - Bellinger River Snapping Turtle

Branch Secretary's Report *by Bob Carnegie*

Election

THE DEFEAT OF the Shorten led ALP on Saturday night has made our struggles wherever we work just that much harder.

Shipping

In shipping our battles will be even more difficult but life is full of difficulties we must overcome. Next Wednesday I will be leading the Branch in our quest to get back what is rightfully ours but has been taken away from us by the second largest and most profitable mining house in the world.

Linx Gladstone

Linx Gladstone has and still is going through some very tough times as of late. It was my initiative that this very honest meeting was held with all players in our battle to retain jobs in this important regional port. I am a huge believer in going down every path possible to prevent members being made redundant.

"Blind Freddie" can negotiate a redundancy package as a union official. It takes a lot more work and intelligence to save working men and women's jobs and that is precisely what your Queensland Branch is fighting hard to do with Linx in Gladstone.

Involvement in your union

Over the years I have become more and more concerned with apparent apathy of many members today. It's not that the great majority of our members are not good people, they are. But getting members to engage outside their particular workplace is increasingly difficult. The disengagement from both union and political processes by workers is perhaps the most troubling of all broad issues I deal with. We need to find answers.

DP World EBA Talks

DP World Committee members Mick McLennan (Macca), Bill Ross (the big unit) and Aaron Johnston along with Deputy Branch Secretary, Jason Miners spent 3 days in tough negotiations with DP World management in Melbourne. Members report that talks this time were of a more positive nature.

Queensland Parliamentary Inquiry into Sustainable Intra-State Coastal Shipping

The Joint Parliamentary Inquiry report is to come down this afternoon. There will be a special Branch News on Monday outlaying to all members the importance of this report the Branch has worked so hard on.

ETU Delegates Conference

I was proud to be an attendee at the recent ETU Delegates Conference. There was a warm reception of 200+ delegates.

This newsletter has several articles on automation. I hope members read them and understand the fact if we are not organised the future in an extremely bleak one for the blue collar working class.

Gladstone MSIC Change of Hours Update

Gladstone Ports Corporation (GPC) would like to advise of the closure of GPC's Security, Induction and MSIC Office on Monday 27 May to Tuesday 28 May 2019, inclusive.

This closure is to allow for the relocation of the Security Team back to their refurbished permanent office at 44 Goondoon Street.

Authorised by Bob Carnegie, Maritime Union of Australia (MUA) Queensland Branch Secretary
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KEY INFORMATION:

- The Security, Induction and MSIC Office will reopen for business as usual at 44 Goondoon Street from 7.30am on Wednesday 29 May 2019
- For security related matters during the closure period only please call 07 4976 1213
- Business hours will remain as Monday – Friday, 7:30am to 4:00pm
- Contact Details remain the same
- Site Access and Inductions 4976 1350 or induction@gpcl.com.au
- MSIC applications and enquiries 4976 1270 or msic@gpcl.com.au

Maersk Officer Presumed Dead After Falling Overboard

Source: *https://www.americanshipper.com/news/maersk-officer-presumed-dead-after-falling-overboard?autonumber=848479&origin=relatedarticles*

THE SECOND OFFICER of the containership Maersk Patras is presumed dead after a search and rescue mission was called off following the officer falling overboard Sunday morning in the St. Lawrence River in Canada northeast of the Saguenay River junction.

The officer, who Maersk said is from Sri Lanka, fell overboard about 9:30 a.m. local time. A search and rescue operation began immediately but was called off about 8.00 pm local time by the Marine Search and Rescue Centre of the Canadian Coast Guard, which coordinated the operation. Several vessels, including the 2,902-TEU Maersk Patras, supported by airborne assets, were involved in the operation, Maersk said in a statement.

"It is with regret we have received the news that the search and rescue operation was unsuccessful and we must conclude that we have lost our colleague," said Søren Toft, COO of A.P. Møller – Maersk in a statement. "It is a tragic situation for the family, and we have offered them our full support. My deepest condolences and thoughts go to them."

Maesrk said it is in contact with the relatives of the second officer as well as the containership's crew, who will receive crisis counselling. Maersk also will fully cooperate with the authorities investigating the incident, it said.

Self-Driving Trucks Begin Mail Delivery Test for US Postal Service

Source: *https://www.itnews.com.au/news/self-driving-trucks-begin-mail-delivery-test-for-us-postal-service-525529*

ACROSS THREE SOUTHWESTERN states the US Postal Service on Tuesday started a two-week test transporting mail across three Southwestern states using self-driving trucks, a step forward in the effort to commercialize autonomous vehicle technology for hauling freight.

San Diego-based startup TuSimple said its self-driving trucks will begin hauling mail between USPS facilities in Phoenix and Dallas to see how the nascent technology might improve delivery times and costs. A safety driver will sit behind the wheel to intervene if necessary and an engineer will ride in the passenger seat.

If successful, it would mark an achievement for the autonomous driving industry and a possible solution to the driver shortage and regulatory constraints faced by freight haulers across the country.

The pilot program involves five round trips, each totaling more than 2,100 miles (3,380 km) or around 45 hours of driving. It is unclear whether self-driving mail delivery will continue after the two-week pilot.

"The work with TuSimple is our first initiative in autonomous long-haul transportation," USPS spokeswoman Kim Frum said. "We are conducting research and testing as part of our efforts to operate a future class of vehicles which will incorporate new technology."

TuSimple and the USPS declined to disclose the cost of the program, but Frum said no tax dollars were used and the agency relies on revenue from sales of postage and other products. TuSimple has raised US$178 million in private financing, including from chipmaker Nvidia Corp and Chinese online media company Sina Corp. The trucks will travel on major interstates and pass through Arizona, New Mexico and Texas.

"This run is really in the sweet spot of how we believe autonomous trucks will be used," said TuSimple Chief Product Officer Chuck Price. "These long runs are beyond the range of a single human driver, which means today if they do this run they have to figure out how to cover it with multiple drivers in the vehicle."

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The goal is to eliminate the need for a driver, freeing shippers and freight-haulers from the constraints of a worsening driver shortage. The American Trucking Associations estimates a shortage of as many as 174,500 drivers by 2024, due to an aging workforce and the difficulty of attracting younger drivers.

A new safety law requiring truck drivers to electronically log their miles has further constrained how quickly and efficiently fleets can move goods.

TuSimple's tie-up with the USPS marks an achievement for the fledgling self-driving truck industry, and follows Swedish company Einride's entry into freight delivery using driverless electric trucks on a public road, announced last week.

The developments contrast with retrenching efforts by robotaxi companies such as General Motors Co unit Cruise, Uber Technologies Inc and startup Drive.ai, which have stumbled in building self-driving cars that can anticipate and respond to humans and navigate urban areas, an expensive and technologically challenging feat.

Price said self-driving trucks have advantages over passenger cars, including the relative ease of operating on interstates compared with city centres, which reduces mapping requirements and safety challenges involving pedestrians and bicyclists.

Automation, Robots and the Future of Work

Source: https://www.rmit.edu.au/news/the-source/automation-robots-and-the-future-of-work

TECHNOLOGY ISN'T JUST changing how we work now; it's shaping who will rise ahead in the workforce of the future.

When even a self-described techno-optimist like Bill Gates calls for governments to establish a "robot tax" to slow down the pace of automation it's clear that fears about how technology could wreck our working lives are reaching a peak. The Microsoft founder is right to be worried.

Automation and digital disruption are predicted to wipe out up to 5 million Australian jobs by 2030 – 40 per cent of the jobs that exist today. Roles that involve little social interaction, creativity and low levels of mobility and dexterity are most likely to disappear.

Meanwhile, two-thirds of Australians in the early stages of their careers believe their jobs will not exist, or will fundamentally change, in the next 15 years. It's a rapid pace of change that demands an equally rapid rate of adaptability from today's workers. So what can you do to stay ahead of the game and secure your place in the future workforce?

Sophisticated Skillsets

"The winners in the labour market are going to be tertiary educated professionals, with very sophisticated problem-solving, communication and teamwork skills, and the flexibility and curiosity to constantly reskill and retrain," says RMIT University's Dr Alan Montague, a leading expert on skills and the labour market.

"They'll need to be highly creative, have good emotional intelligence and have strong strategic planning skills. In higher roles, their leadership skills will need to be exceptional. The growing number of freelancers, contractors and others that work outside the traditional office space will need a high degree of self-management and organisational skills."

Montague says "tech-creep" is already visible in a myriad of fields, from robots that transport surgical instruments at the Royal Melbourne Hospital to the driverless trains in China, Singapore and Hong Kong.

"But it doesn't even have to be so high-tech. There's a restaurant in Chinatown where you do all the ordering yourself on a digital device and if you pay by card, the only time you see a person is when the food is brought to your table.

"So you can see how this fourth industrial revolution will obliterate whole jobs within the workforce as well as drastically changing the jobs that remain."

Teamwork and communication: two essentials for the future workforce

Indispensable and Irreplaceable

While automation will transform many jobs and eliminate others, human connection will always be needed in people-oriented roles like nursing and allied health, social work, psychology and disability support. In fact, the social service sector as a whole is predicted to boom in coming years.

According to the Future Social Service Institute, disability spending is set to double, while employment in health and social care is expected to grow by 19 per cent – outpacing the rest of the economy.

"But we will see any routine parts of these roles automated," says Dr Huan Vo-Tran, a lecturer in information management at RMIT who researches future skills.

"And as artificial intelligence becomes more nuanced and sophisticated, chat bots and other technology could be deployed for initial triage and to handle some interactions.

"So this will change the way these jobs are performed, and will require people to constantly keep learning how to 'make friends' with the technologies that become part of their everyday working lives."

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The health and social care sector is set for a jobs boom

Tech Creatives

For the tech-minded, the rise of automation and artificial intelligence brings with it a sad irony – IT professionals could currently be working on the exact technologies that will put them out of jobs in the years to come.

But those who can harness their creativity, strategic thinking and communication skills will remain relevant in the 2030 workforce.

Data science and analytics are examples of burgeoning fields that demand both technical and soft skills. These are jobs where maths and stats meet creativity, and Dr James Baglin, senior lecturer in statistics at RMIT, says the roles demand highly skilled professionals who are also effective communicators.

"Analytics and data science professionals will always work in multidisciplinary teams and will often report directly to managers and stakeholders who don't have the same technical backgrounds," he says.

"So to be truly successful, they need to combine excellent communication and interpersonal skills with strong technological knowledge and experience.

"Bringing these soft skills to the table and knowing how to use data to drive decision-making, solve problems and find the insights that will give a business a competitive edge – this is the killer combination."

Take Charge, Skill Up

So you want to take charge of shaping your working life in the face of continuous and unpredictable change. How do you start?

"You need to be disciplined about self-management – learn what you need to do, assess where your weaknesses and strengths lie, and go through the process to improve your skills," Montague says.

Complex data needs both detailed analysis and translation for non-specialists

"Look around for training opportunities that are cost-effective and worth the investment of your time and money. If you want to dip your toe in the water, try a MOOC or a short course.

"To go deeper, postgraduate studies give you the chance to dive right in and engage in high levels of reflective practice, explore complex ideas, be challenged by new thoughts on the direction of your profession, and give you an enhanced foundation to lead those changes into the future.

"If you pursue a diploma or degree, make sure you delve into all the career coaching and support available, which link students with a global labour market hungry for talented graduates.

"And take full advantage of all the free online training resources that come with university study, such as Lynda.com. They have over 1400 courses, so as well deepening your own professional practice, you can skill up in any areas where you might lack some technical skills and add new strings to your bow.

"To be attractive to employers in the workforce of the future, you'll need to offer multiple skills and, most importantly, demonstrate your commitment to always keep learning."

3D Printers Will Make Better Implants

***Source**: https://www.economist.com/science-and-technology/2019/05/18/3d-printers-will-make-better-implants*

A ROBOTIC LAWNMOWER keeping the grass neat and tidy outside a modern industrial building in Carrigtwohill, near Cork in Ireland, is a good indication that something whizzy may be going on inside. And so it proves. The airy production hall contains row after row of 3d printers, each the size of a large fridge-freezer. The machines are humming away as they steadily make orthopaedic implants, such as replacement hip and knee joints. Even though several hundred employees' cars are parked outside, the hall is almost deserted. Every o often a team appears, a bit like a Formula One pit crew, to unload a machine, service it and set it running again to make another batch of implants.

It is not unusual in modern, highly automated plants to find the workforce distributed like this, with most of them in the surrounding offices engaged in engineering tasks, logistics, sales and so on, rather than on the factory floor. But this two-year-old factory, owned by Stryker, an American medical-technology company, differs from conventional manufacturing in another way as well. It is

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an example of how 3d printing, which a decade ago was seen by manufacturers as suitable only for making one-off prototypes, is quickly entering the world of mass production. For commercial reasons, Stryker keeps some of the details secret. But the factory, the largest 3d-printing centre of its type in the world, works around the clock and is said to be capable of producing "hundreds of thousands" of implants a year.

Those made at Carrigtwohill have a feature that is impossible to create with conventional techniques such as casting and machining. Because 3D printing lays down an object layer by layer, complex shapes with intricate internal structures can be built. Stryker uses this facility to print a special porous surface onto the implants. That surface encourages bone to grow into the implant, which secures it more firmly in place. When combined with the precision of robotic surgical processes the firm has developed, this makes replacements more successful, says Robert Cohen, the company's technology chief.

Replacing worn and damaged body joints with implants is an old idea. The first hip-replacement operation was performed in 1891, in Germany, by Themistocles Glück, using a ball and socket carved from ivory. And Phillip Wiles, a surgeon based in London, carried out the first successful total-hip replacement in 1938, screwing a stainless-steel joint into the patient's bone.

Since then, things have moved on. Cobalt and chromium alloys, along with titanium, are now more commonly employed for implants than steel is. And operating procedures and devices have improved greatly, including the use of hard-wearing ceramic surfaces as bearings. Nevertheless, complications still arise.

One of the commonest is dislocation—with, for instance, the hip ball coming out of the socket because soft tissue has not healed properly. A loosening of the implant over time is also a frequent problem, causing pain and a need for remedial surgery. That, though, should be helped by the implant's porous surface encouraging bone and implant to meld, making such loosening far rarer than it was.

The implants themselves are made by a type of 3D printing called direct-metal laser sintering. The printers are driven by software that takes thousands of digital slices through the design of the object to be manufactured. The process starts by spreading a bed of metal powder onto a special table. A laser then creates the first layer of the object, which can be as thin as a fiftieth of a millimetre, by melting particles of powder in the correct pattern. When this molten metal has solidified the table is lowered and another layer of powder spread. That second layer is then processed. And so on. Once the object is finished it is removed, cleaned and any final machining carried out. Unused powder is recycled back through the printer.

Stryker is not alone in using 3D printing to make implants. Other companies, including DePuy Synthes, the orthopaedics business of Johnson & Johnson, a giant American health-care group, and LimaCorporate, an Italian firm, also print features intended to enhance bone growth on their implants. Generally, devices such as hip and knee implants can be made in such a wide range of sizes with 3D printing that customised shapes are not required. But some bespoke parts are printed, especially for reconstructive surgery in which patient-specific features are necessary. LimaCorporate, for example, is putting a 3D-printing facility directly into the Hospital for Special Surgery in New York, to produce complex, customised implants.

Toothsome

Doctors were among the first to use 3D printing, employing body scans to produce anatomical models of organs, which can help them plan operations. That and other medical use has grown rapidly. According to a recent report from Wohlers Associates, a consultancy, the medical and dental use of 3D printing was worth more than $1bn in 2018, 11.5% of the entire market in 3D-printed goods and services.

Much of this work now involves large numbers. Align Technology, an American firm, prints 17m plastic orthodontic aligners, an increasingly popular alternative to orthodontic braces, every year. Millions of metal copings, used to make dental crowns and bridges, are being churned out by 3D printers owned by companies such as Renishaw, a British engineering firm.

Wohlers reckons it is only a matter of time before firms start printing ceramic material directly onto the copings, to make complete replacement teeth. Researchers are also coming up with new ways to print tiny scaffolds onto which human cells are grown. These structures can be used for drug testing or, potentially, to grow complete organs for transplant (see article). Making body bits with 3D printers is turning into a big business.

Critically Endangered Bellinger River Snapping Turtle Makes A Comeback

Source: ***https://www.abc.net.au/news/2019-05-23/rare-endangered-bellinger-river-turtles-returned-to-wild/11141358?pfmredir=sm&sf213185848=1&smid=Page***

THE RELEASE OF 10 critically endangered turtles back into the only place they are found on Earth has helped to secure the species' future.

Key points:

- Ten critically endangered Bellinger River snapping turtles have been returned to their natural habitat in the Bellinger catchment, which is the only place they are found on Earth
- Over 90 per cent of the turtle's population of approximately 4,500 was wiped out in 2015 due to a virus outbreak
- The program to help the Bellinger River Snapping Turtle is part of the NSW Government's $100 million Saving our Species Fund

New South Wales Environment Minister Matt Kean said it has provided a lifeline for the Bellinger River snapping turtle — one of the world's rarest turtle species, after a

freak virus wiped out about 90 per cent of the population in three months.

"Before the disease outbreak, we estimate there were up to 4,500 of these freshwater turtles living in the Bellinger Catchment — the only place they're found on Earth," Mr Kean said.

> "Sadly 90 per cent of the animals were wiped out in 2015 because of the virus.

"About 20 virus-free turtles were able to be collected from the river for a captive breeding program at Taronga Zoo in an effort to try to secure a future for this species and improve the environment for our future generations."

Photo: *Bellinger River Snapping Turtle hatchlings. (Supplied: Paul Fahy)*

The program to help the Bellinger River Snapping Turtle is part of the NSW Government's $100 million Saving our Species Fund.

In the first year of the captive breeding program, 22 healthy turtles hatched, with another 31 healthy turtles hatching last year.

Photo: *One of the turtles that was affected by the disease. (Supplied: The Office of Environment and Heritage)*

No cure for the virus, but 'this is hope'

Environmental group Ozgreen confirmed that the return of nine of the ten turtles had been successful — a figure that has boosted the community's confidence in the future for the species.

Ozgreen manages Riverwatch, a program that has been monitoring the health of various rivers, including the Bellingen, on a monthly basis, for two years.

While a cure has not yet been found for the virus that initially wiped out most of the turtles, Ms Lennox said the next challenge is to rehabilitate the vegetation along the river's edge.

"That's the key to the success of restoring the river health and the return of the turtles," she said.

"Once we get that done I think we've secured the future of this river.

"Which is prob the healthiest river on the east coast as it is, but we need to keep it that way."

Photo: *Conservationists say that the return of the turtles to their Bellinger river habitat gives them hope. (Supplied: Paul Fahy)*

The region's State MP, Melinda Pavey, said the local community has been helping with a citizen science project at the river.

She said the Bellingen Riverwatch volunteers have been regularly monitoring water quality to help the NSW Government with its work.

"This project in the Bellinger River shows that, with strong community support and partnerships, we can make real positive change to our threatened species," Ms Pavey said.

"The team will be closely monitoring the 10 turtles we've released back into the Bellinger River, with the hope of releasing many more in the future."

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