



# SEATIMES

The Newsletter of the Nautical Professional Education Society of Canada

(Society founded in 1995 by the British Columbia Branch of The Nautical Institute)



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January 2016

**From the Chairman:** I am proud to have been asked to take over as the Chairman of NPESC for the coming year and gladly accepted this position at our AGM.

I have been involved with the Board for the last few years and have enjoyed the opportunity to attend at various functions to make presentations of bursaries and books on behalf of The Society to deserving students.

In addition, I have served on a number of selection committees where we have been tasked with vetting applications, from students attending marine schools in BC, for bursaries and other awards. Throughout all of this I have been very impressed by the calibre of the young men and women that have chosen the sea as the environment in which to follow their career paths whether they be of the engineering or deck persuasion.

It is clear that our future as a viable and safe sea-going nation is in very capable hands and I am glad to be able to be in a position where I can donate my time and efforts to an industry that has given me an exciting, rewarding and varied career both on the ocean and also ashore.

During my time as a deck cadet in the 70's things were very different from the situation that cadets now find themselves, having to navigate through on their way to their first watch keeping certificate and beyond. Back then, the toughest decision I had to make was which of the many merchant shipping companies would I chose to steer me through my apprenticeship. Would it be a tanker company like Shell or BP, a passenger ship company such as P&O, a container company like OCL, a package or bulk shipping company like Blue Funnel, Ellerman City Liners or New Zealand Shipping Company?

I elected to go with the Peninsular and Oriental Steam Navigation Company (P&O), a company that could offer me "all of the above" and allowed me to experience, container ships, reefer cargo ships, dry bulk cargo, ferries, passenger ships, gas carriers, product tankers, crude tankers throughout my cadetship. Throughout this experience I was paid a salary and had all of my education and accommodation (while at school) paid for. Indeed, apart from my uniform, I had nothing to worry about financially and my company made all arrangements for me from allocating school time to providing accommodation and booking examinations.

By the time I got to the point where I was taking my second mate ticket I had served on many, many different types of ships, been sent to and educated at a first class school (South Shields Marine and Technical College) and had a bank account that was in the black.

Fast forward to today where cadets are expected to arrange and pay for their own education as well as seek out a shipping company that will be willing to give them a berth on one of their ships and allow them to gain the seagoing experience essential for them to achieve their goal.

These cadets not only must have the desire and drive to reach their goals but must also have the financial wherewithal to attain them and it is for this reason that there is a real need for external sources to provide some assistance to help overcome these hurdles.

One of the main roles of NPESC is to provide assistance to these students to help ease this burden. Having had a much easier ride at that junction in my career I am only too glad to be able to help in whatever way I can to and being involved with NPESC has given me that opportunity.

Over the coming year it is my intention to work with our Board to seek out other avenues of assistance to further increase



our ability to provide financial support for these wonderful men and women as they “head down to the sea again.... to the lonely sea and sky”

**Richard Smith.** [jrfsmith@mac.com](mailto:jrfsmith@mac.com)

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**NPESC announces new Board for 2015-16:** The Nautical Professional Education Society of Canada (NPESC) held its AGM at the offices of the Chamber of Shipping on Thursday November 26th. At that time the following individuals were elected to the Board for the coming year; Chairman: Richard Smith, Secretary/Treasurer: Joachim Ruether, Director (Past Chair): Captain John Lewis, Director (Past Secretary/Treasurer): Captain Brian Silvester, Directors: Captain David Whitaker, Captain Stan Bowles, Captain Zak Farid, Captain Brian Johnston, Captain Roderick Weir and Captain Raman Mangat.

The NPESC is a registered society in Canada with the goal of furthering the professional education of Canadian mariners. The society works closely with the Marine Campus of BCIT, Camosun College, the Western Marine Institute and other Canadian educational institutions.

The Society is a member of the Coalition of Maritime Organizations on Education, chaired through the offices of the Chamber of Shipping of BC. For more details visit our website at [www.npesc.ca](http://www.npesc.ca).



**From BC Chamber of Shipping Weekly Newsletter Dec 4<sup>th</sup> 2015**



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**As mentioned above, the Society has a new Board  
– and it also has a new logo.**



**Thursday December 17<sup>th</sup> was a busy day for the Society. There was action of two fronts.** Richard Smith and Joachim Ruether were at the Marine Campus of BCIT to present one of the Bursaries (from funds endowed to the Vancouver Foundation) awarded in the year 2015. This was to Ben Murray, a second year Cadet in the Nautical Sciences Program at the Marine Campus of BCIT. Ben's first co-op term of study was for six months on a BC Ferries' northern route vessel.

Jeff Otto, the Cadet Coordinator at the Marine Campus, supplied this photo and made the following comment: -

*Captain Smith & Captain Ruether,*

*Once again, thank you so much for your support of our Cadets. As I mentioned, your efforts to ensure our Cadets receive your awards is truly a demonstration of the generosity and genuine care*

*the NPESC has towards those at the early portion of their sea going careers. Taking the time to come out and provide some sound advice to the Cadets is appreciated. I have attached a photo from today's ceremony for the newsletter. **Jeff Otto.***

**Meanwhile**, across the Straits at Camosun College on Vancouver Island, Brian Silvester had double duty. He was there to present the second of the two Bursary cheques. This was to Jennifer Scott, a student in the Watchkeeping Mate Program. Jennifer has most recently been employed by BC Ferries on the vessel *Kahloke*, which is on the Hornby Island – Denman Island route.



In addition he had a book to present. At the Society's AGM in 2014 it was decided to present a book on Marine Firefighting to a top student at Camosun College and at the Western Maritime Institute. For Camosun College in 2015 the recipient was Kevin Campbell. Kevin had been in the Watchkeeping Mate Program and was selected because of his dedication to his studies and his overall excellent attitude.

Pictured above are Richard Worrall (Instructor), Jennifer Scott, Brian Silvester, Kevin Campbell and Ivan Oxford (Program Leader).



**Came by SHIP:** Each year, WISTA-UK identifies projects designed to address essential strategic questions facing its industry and members.

In 2014 WISTA-UK wanted to mark its 40th anniversary by taking networking a step further and throwing open its doors to the public. The aim was to encourage young people to think about the maritime industry and consider potential career opportunities within the sector.

From this sole vision and intrinsic purpose the **Came by SHIP** campaign was born. The aim of the campaign is to highlight the importance of the shipping industry in the lives of us all.

The UK is heavily dependent on the maritime industry; over 90% of goods we consume and export come (and go) by ship, but a majority of people have very little understanding of how important and necessary the shipping industry is for our economy.

Merchant shipping is the lifeblood of the world economy and there are an estimated 103,000 commercial ships worldwide. They operate on the high seas, as well as on short distances among neighbouring countries (short sea) or from port to port within the same country (cabotage).

Those involved in shipping are conscious of the invisibility of the maritime industry and society's ubiquitous lack of knowledge has been regarded as generational 'sea-blindness'. If **Came by SHIP** and other similar campaigns are able to inspire young people, then maritime professionals of today will retire with the knowledge that their legacy is safe in the hands of tomorrow's youth.

For all those with a passion for the shipping industry, it is very important that today's youngsters carry on a strong level of enthusiasm and wisdom. Once the "shipping virus" infects an individual, they will inevitably develop a maritime love bug and pass it on to others – then there is no looking back!

So let **Came by SHIP** and WISTA-UK inspire you to inspire others.

**Who is WISTA?** WISTA is an international organisation of women working in the shipping industry. Our members include naval architects, maritime lawyers, ship's engineers, insurance and sale and purchase brokers, claims adjusters and many others working both directly in the industry and providing services to the industry. We organise events such as site visits, seminars, workshops and industry related events where our members have the opportunity of meeting and forming relationships with other professionals working within the shipping industry.

**WISTA-UK is the oldest of all the National WISTA Associations dating back from 1974.** We would like to welcome you to our site and discover who we are and what we do and of course we will be delighted to welcome you as our next member!

In Canada see <http://wista.net/ca> & <http://www.wista.net/>  
For information about the competition see <http://www.camebyship.com/>

Numerous organizations sponsor the competition, including ----->



**GPS – When the guide goes missing:** Brad Parkinson knows a thing or two about satnav. Forty-something years ago, as a newly-promoted US Air Force Colonel, he took charge of an obscure and almost theoretical research program called 621B, and nurtured it into bloom as the first working prototype of what we know as GPS. Parkinson has long since retired from the Air Force but, as Professor Parkinson now rather than Colonel, he is still regarded as one of the fathers of GPS and a world-leading expert on the system.

So when Parkinson says “GPS is not infallible” it’s worthwhile to listen.

In some ways GPS is the victim of its own success. When work began on the development of civilian GPS receivers, they were expected to achieve an accuracy of about 100 metres, and it was hoped they might be commercially viable if the price could be held down to \$10,000 each, the equivalent of \$40,000 today.

But now, cellphone manufacturers pay about \$2 each for one-chip GPS receivers and build them into millions of phones a year. And as the price has fallen, accuracy has improved allowing civilian GPS to be used for all sorts of things that Parkinson and his fellow pioneers never imagine, from tracking pets to monitoring the movements of the Earth’s crust; for timing bank transactions and power-supply switchovers, and navigating every kind of vehicle from bicycles to container ships.

“This blanket reliance on GPS,” says Parkinson, “could leave us vulnerable.” The fundamental problem is that this crucial global utility depends on a constellation of increasingly elderly satellites. The oldest was launched in 1990 with a designed working life expectancy of 7½ years. Nineteen others, in a constellation of 32, are also past their use-by date.

But a bigger problem is that their transmitters are solar-powered and more than 12,000 miles from the Earth’s surface. Of course they use high-gain antenna systems to direct their signals towards the Earth, rather than squirting power uselessly into space. But by the time their 25-watt transmission signals reach ground level, they are so thinly spread as to be barely recognizable over the everyday crackle of background radiation.

It doesn’t take much to block or jam such a tenuous link, or to confuse a GPS receiver by sending misleading signals that are marginally more powerful than the real GPS signals. In the military realm, for instance, in 2011 the Iranian government claimed that an unmanned spy plane had been tricked into landing in Iranian territory by “spoofing” its GPS guidance system into believing that it was in



neighbouring Afghanistan, and North Korea has been waging a series of GPS jamming attacks against South Korea since 2010.

Last year, a professor at the University of Texas at Austin and his grad students fooled the GPS navigation system of a super yacht so the autopilot followed a different course than the crew thought it was on. Of course, they did it with crew's consent, to prove a point.

But you don't have to be a terrorist, a rogue state, or even an academic to dabble in a bit of electronic sabotage.

New Jersey trucker Gary Bojczak wasn't trying to change the world when he plugged a \$20 "privacy protection device" into the cigar-lighter of his truck; he just wanted to stop his boss from checking up on his movements. But his little jammer disrupted the GPS-based navigation system at nearby Newark Airport and cost Bojczak nearly \$32,000 in fines after a Federal Communications Commission enforcement officer caught him.

But, the biggest culprit of all is the sun. Several times a week, sometimes even several times a day, it produces solar flares and coronal mass ejection that hurl billions of tons of charged particles into space a millions of kilometres per hour. When these charged particles hit Earth's atmosphere, they create the spectacular Aurora Borealis; but on a less sunny note they can also distort the path taken by GPS signals as they travel through the atmosphere. At best they can cause errors in GPS fixes or the temporary loss of signal. At worst they could knock out a satellite or two.

Of course GPS isn't the only navigation system available today. Many current GPS receivers are already capable of using the Russian Glonass system, and the European Galileo system is finally starting to make progress. But relying on them is like carrying a can of gas for your car – useful only in one particular kind of breakdown.

If sabotage or a solar storm disrupts GPS signals, they will disrupt Glonass and Galileo as well. What we need is a back-up system that is completely different.

Instead of a high-frequency, low-powered, satellite system, how about something that is low-frequency, high-powered and land-based? Sounds like Loran in fact. But perhaps an improved, upgraded and modernized version of Loran, promising greater accuracy and reliability than the old Loran C, and with a catchy new name for the iPhone era, such as eLoran.

The idea's not at all far-fetched. South Korea has chosen to protect itself against the increasingly aggressive jamming of GPS by reviving its Loran transmitters, and the UK has already declared part of its eLoran chain operational.

Now, at last, the US is starting to play catch-up. Amongst other things, the 2015 US Coast Guard Authorization Bill reverses its funding cut of five years ago, and puts an end to the teardown of the old Loran C masts and transmitters, in order to leave them ready for a refurb and makeover to eLoran.

Great news, I'd say! **Tim Bartlett. Western Mariner. December 2015.** [www.westernmariner.com](http://www.westernmariner.com) <http://www.nmea.org/>  
*Tim Bartlett is a regular contributor to the Marine Electronics Journal, the official magazine of the National Marine Electronics Assoc.*



**But you can't hack a sextant:** As if the threat of ISIS, China and a reinvigorated Russian Navy were not enough, the [US Naval Academy](#) has reinstated training its Midshipmen celestial navigation in response to the threat of cyber warfare.

Almost two decades after being determined outdated, not only is celestial navigation training being reinstated for Officers, but also training for enlisted ranks is planned for late next year.

The U.S. Coast Guard Academy abandoned its dedicated celestial navigation course 10 years ago although cadets use sextants aboard the barque *Eagle*. But the US Merchant Marine Academy never stopped teaching celestial navigation and in fact helped the Naval Academy rebuild its program.



Interestingly, the Naval Academy never disposed of its original supply of sextants, which will now be recovered from storage. **Sea Breezes, Dec. 7<sup>th</sup> 2015.**

[http://www.seabreezes.co.im/index.php?option=com\\_content&view=article&id=1985:but-you-cant-hack-a-sextant&catid=58:north-american-scene&Itemid=159](http://www.seabreezes.co.im/index.php?option=com_content&view=article&id=1985:but-you-cant-hack-a-sextant&catid=58:north-american-scene&Itemid=159)

**Caution On The Unauthorised And Incorrect Use of ECDIS:** With the advent of technology, the use of Electronic Chart Display and Information Systems (ECDIS) is becoming increasingly popular. While the use of an ECDIS does have its advantages, it can have a negative impact if not used correctly and this is known to be a causative factor in major claims such as collisions and groundings.

Due to the perceived cause of these incidents we would like to draw our Members' attention to Regulation 19 of chapter V of the Safety Of Life At Sea (SOLAS) convention which permits an ECDIS to be carried as part of the on board navigational system, provided it meets the chart carriage requirements as detailed in regulation. The ECDIS must be type approved and in order to do so and it must meet the required performance standards (MSC.1/Circ.1503, ECDIS – Guidance for good practice).



It is important to remember that personnel operating the ECDIS must have undergone appropriate ECDIS training. It is understood that the ECDIS training and certification requirements, as per the 2010 Manila amendments to the STCW code will not be in force before 1st January 2017. It is therefore advised in the interim, that Members should ensure navigating officers on board their ships using ECDIS are trained to existing standards such as the IMO ECDIS model course (1.27).

Notwithstanding the statutory training mentioned above, Members should ensure that navigating officers are familiar with the specific ECDIS model available on board through a familiarisation programme. As far as practicable, it is advantageous that the same

make and model of ECDIS is installed on all fleet vessels to assist this familiarisation process. This would help to reduce the incorrect use of the ECDIS such as not including the correct layers of the electronic chart and helping to ensure that all the data available on the corresponding paper chart is displayed on the ECDIS.

If paper charts are the primary means of navigation on board the vessel, then it is imperative that all navigation, including, but not limited to, chart work, passage planning and position fixing is carried out using the paper charts. The primary source of navigation, whether paper charts or an ECDIS, should be kept updated at all times in accordance with SOLAS Chapter V/27.

If a non-type approved ECDIS is discovered fitted on board a vessel, it is strongly recommended that the ECDIS be decommissioned to stop unauthorised usage. The prohibited use of these systems must further be emphasised by displaying prominent notices upon the equipment to show it is not to be used for navigation. Such measures should also be included in the shipboard navigation procedures.

Further details on the requirements of ECDIS can be found on the IMO website following the link [www.imo.org](http://www.imo.org). **4 December, 2015**

<http://www.shipownersclub.com/caution-on-the-unauthorised-and-incorrect-use-of-ecdis/>



SHIPOWNERS

**US Coast Guard and GPS: Inspections and Compliance Directorate.**

January 19, 2016 Safety Alert 01-16

**Global Navigation Satellite Systems – Trust, But Verify Report Disruptions Immediately**

Do you know what equipment relies upon the U.S. Global Positioning System (GPS) signal? How would you respond if you lost the signal? This past summer, multiple outbound vessels from a non-U.S. port suddenly lost GPS signal reception. The net effect was various alarms and a loss of GPS input to the ship's surface search radar, gyro units and Electronic Chart Display & Information System (ECDIS), resulting in no GPS data for position fixing, radar over ground speed inputs, gyro speed input and loss of collision avoidance capabilities on the radar display. Fortunately, the vessels were able to safely continue their voyage using radar in heads up display, magnetic compass and terrestrial navigation. Approximately 6nm later, the vessels' GPS units resumed operation. Although the vessels had back-up systems to allow a safe transit, the consequences could have been severe. These types of events highlight the potential detrimental impact to navigation caused by GPS interference or jamming and the importance in understanding how your vessel's or facility's equipment could be impacted by a loss of GPS signal.



For more, read <http://rntfnd.org/2016/01/19/uscg-issues-safety-alert-gpsgnss-trust-but-verify/>

Also read <http://rntfnd.org/2016/01/11/christian-sci-monitor-why-gps-is-more-vulnerable-than-ever/>

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**ITF Seafarer Apps for Mobiles and Tablets: -**

The ITF Seafarers Trust have just produced an App entitled "Shore Leave," an offline App that seafarers can download for free to access information on all bona fide global Seafarers Centres and to store contact details onto their smartphones. Seafarers can then get in touch with chaplains and ship visitors with just a couple of clicks



**ITF SEAFARERS' APP:** Find out if your ship is ITF approved, communicate with ITF Inspectors and affiliated maritime trade unions directly or contact the ITF Helpline if you need help.

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[Download the Shore Leave App for Blackberry >>](#)

<http://www.itfseafarers.org/seafarer-apps.cfm>



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**Your Society.** Do you wish to make a financial contribution to the Society? Is it time for you to renew your membership? The Annual Membership Fee remains at \$40.00 but any amount that you can donate will be greatly appreciated.

Please make your cheque payable to the **NPESC** and mail it to: -

**Nautical Professional Education Society of Canada,  
3648 Glenview Crescent, North Vancouver, B.C. V7R 3E8**

**Thank you.**

Contributions to the NPESC are tax deductible. Charitable Registration # 1039049-20



Articles or comments for inclusion in future editions

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Nautical Professional Education Society of Canada.  
Founded in 1995 by the BC Branch of The Nautical Institute.



of Seatimes can be sent to me at [whitknit@telus.net](mailto:whitknit@telus.net)  
Sincerely, David Whitaker FNI