

From the National Societies

East Australia Region

Commander (CMDR) John Maschke of the Royal Australian Navy (RAN) and chair of the East Australia Region of the Australasian Hydrographic Society was recently elected to the position of fellow within the Spatial Sciences Institute (SSI). John has had a long and varied career in the RAN, predominantly within the Australian Hydrographic Service.

After receiving his education in Sydney, he briefly entered the Australian Public Service in 1973 before joining the RAN on 2nd April 1974. After completing Adult Recruit Training in 1974, John was employed as a survey recorder in the RAN Hydrographic Service until 1977, serving on HMA ships *Moresby* and *Flinders*. In August 1977, he received a commission and graduated in July 1978 from the Royal Australian Naval College. After graduation, he served on a number of naval ships, culminating in the award of naval bridge watch keeping qualifications in the guided missile destroyer, HMAS *Brisbane*. He then became a maritime geospatial officer (hydrography) sub-specialist and returned to the RAN Hydrographic Service in 1980. He was promoted to commander on 1st July 1998.

CMDR Maschke has had a number of varied postings within the RAN. The highlights of these include secondment to the Royal Fijian Military Forces for surveying duties in 1983, executive officer HMAS *Townsville* (1984–1985), undertaking the International Hydrographic Organisation (IHO) Category 'A' hydrographic surveying course at the Royal Navy Hydrographic School, HMS *Drake* (1987) and executive officer HMAS *Flinders* (1988–1989). He commanded a number of HMA ships during the period 1990–2002 including *Paluma*, *Mermaid*, *Flinders*, *Leeuwin* and *Melville*, with a short respite as head of Operations and Surveying at the Australian Hydrographic Office, Wollongong (1998–2000). Notably, John served on *Flinders* as an able seaman and as commanding officer. His posting in command of *Mermaid* coincided with the receipt of the highest RAN hydrographic surveying qualification, charge surveyor. Following his appointment as commanding officer Hydrographic Ship *Red Crew* (in command of HMA ships *Leeuwin* and *Melville* in rotation) during the period 2001–2002, he joined the Defence Imagery and Geospatial Organisation. Currently, he holds the position of head of Doctrine and Futures at the Australian Hydrographic Office.

CMDR Maschke has completed the RAN Staff Course and is a qualified IHO Category 'A' hydrographic surveyor. He is a senior member of the SSI, currently holding the office of chair of the SSI Hydrography Commission and sits on the SSI Board of Directors. He is a member of the Australian Institute of Management, the Australasian Hydrographic Society (currently a director and East Australia Region chairman) and the Naval Association of Australia (current patron of the Illawarra sub-branch). CMDR Maschke has the distinction of having a charted shoal (Maschke Shoal) named after him at the entrance to Hydrographer's Passage off the coast of North Queensland. He was awarded a Masters degree in Maritime Policy in 2000, and is currently a doctoral research student (PhD) at the University of Wollongong.

CMDR Maschke is a founding member of the SSI and in 2004 he was elected to the ACT Regional Committee as a representative of the Land Surveying and Hydrography (LS & H) Commission. John was an active member of the National LS & H Commission Committee and sought to gain a greater voice for the hydrographers within this commission. John embarked on the processes required to meet the requirements for the SSI to create a new commission for the hydrographers. As John has been an active participant in the hydrography community in Australia and internationally, he generated the interest required from his colleagues and was successful in lobbying the SSI Board. Because of CMDR Maschke's efforts, the SSI Board established a Hydrographic Commission in 2005 and CMDR Maschke was elected as the Commission's first SSI board representative.

CMDR Maschke continues to be an active supporter of both SSI and Hydrographic Commission activities and is currently the conference convenor for HYDRO 2007 to be held in Cairns in November 2007.

New Zealand Region

Gary Chisholm of Trimble and Maurice Perwick of Eliot Sinclair and Partners Ltd. cut the 'HydroPro' cake last month to celebrate 20 years' use of the navigation and hydrographic data-processing software (Figure 1). 'HydroDos' software was commissioned by Eliot Sinclair and Partners Ltd. in 1987 from Datacom Software Research Ltd. for the survey of Lyttelton Harbour in the South Island of New Zealand. The system used a Geodimeter 440, manually tracked for positioning, and Navitronics digital sounder for depths. In the early 1990s, a system was developed to use differential GPS for a real-time hydrographic survey and plotting system for surveying the Westport Bar. This system used Trimble 4000 receivers, TSS heave sensors, Odom dual-frequency sounders and Sencon tide gauge with telemetry from Beech Communications Ltd. Eliot Sinclair used a similar system during the development of Chek Lap Kok, the new Hong Kong airport at that time, along with Real-Time Kinetic (RTK)-GPS with on-the-fly for setting out works on the site. RTK-GPS was used in June 1994 for measuring tide offshore along the Canterbury Coast, remote from any tide gauge for profiling the beach. Trimble HydroPro on the Windows platform opened up the world of on-screen graphics to assist in navigation, monitoring of equipment, logging data and colour binning.

Workshop

On Friday 21st November, some 30 members of the Hydrographic Society Benelux (HSB) assembled at the Delft University of Technology for the workshop on the United Nations Convention on the Law Of the Sea (UNCLOS). Specific attention was given to article 76 from various perspectives.

That same day, a decision was taken by the International Court of Justice in The Hague about the conflict situation between Suriname and French Guyana over the exact location of the sea-bound border between the two countries. For both countries in particular and in general, it is important to have a legal right to claim parts of the sea for exploration and exploitation of mineral resources often worth millions to billions of dollars. As such, the first speaker Mr Alex Oude Elferink, from the law faculty of the University of Utrecht, outlined the background of the UNCLOS treaty and the various definitions that are the basis for the international jurisdiction on claiming parts of the sea. A total of 155 countries, of which about 80 have seaward borders, participate in the UNCLOS. Alex outlined the specific part of article 76 that defines the way borders can be established and specifies that countries are encouraged to indicate before 2009 whether they claim their legal rights to extend their sea border based on a complex set of technical criteria. He described the various lines and zones, such as the baseline, territorial and exclusive economic zone, followed by the continental shelf. He also gave some examples of well known and lesser known international conflicts and the impact of claims: suggestions such as position flags on the sea bottom and, in more critical situations such as recent military disputes, in Middle East waters.

The second speaker was Mr Robert van der Poll from Fugro Pelagos. Robert again outlined at high speed and with great enthusiasm the various sea border definitions and the impact on countries that are expected to have a chance under article 76 to significantly extend their seaward boundaries. He used the CARIS LOTS software package, the development of which he was involved with, and his portable database on this subject with a wealth of information consisting of articles, maps, satellite images, survey bathymetry and seismic sub-bottom data to visually outline the various definitions, techniques and implications. Robert has worked for more than 90 countries to help them resolve their legal "do's and don'ts" of this topic. Despite what might appear to be a boring subject, Robert managed to enthuse the participants with an adventurous and exciting story with lots of pictures and related anecdotes. Not in the least by mixing his presentation with some hilarious examples of his worldwide activities in most countries, and his mix of Canadian and his old family language, Dutch.

The third speaker was Mr Leendert Dorst from the Hydrographic Office of the Royal Netherlands Navy. He and Ina Elema are involved in advising the International Court of Justice in The Hague in their work on resolving international conflicts. Leendert started close to his own country and outlined the sea border established between The Netherlands and Belgium, and The Netherlands and Germany. Remarkably, Germany has a small piece of sea, which is not based on geodetic, mathematical calculations, but on the 'principle of equitability'.

Also remarkable was his explanation of the impact of redefining the tidal reference level in The Netherlands. Practically speaking, there were some problems with a Dutch fishing trawler that located itself legally in territorial waters one week and outside territorial waters the next week. How to explain that to people!

Leendert closed his sharp presentation with, of course, the situation in The Netherlands Antilles and the recently settled situation in Suriname and Guyana in which he himself was involved.

HSB chairman Rob Luijnenburg, who was also workshop organiser, thanked the speakers on behalf of the Society and everyone was directed towards the after-party.?

HYDRO 2006 – One Year on

It is exactly one year since the successful Antwerp event, HYDRO 2006. All administration wrap-up work has been done and the book is closed. Only the good memories remain. On behalf of the organising committee and as former chairman, I would like to, once again, thank all volunteers involved. The HSB board thanked the organising committee at the AGM in February 2007. We also expressed our gratitude personally to the families of the members of the committee who have passed away, Cor Don and Rob Berlijn, who we will always remember in our community.

The international co-operation between the International Federation of Hydrographic Societies (IFHS) and the International Hydrographic Organisation (IHO), established at the conference, is running well. To mark this, a lively remembrance was established in the form of a 2-year adaptation programme of the five seahorses of Antwerp Zoo. A plaque is located at the entrance of the Zoo's aquarium hall. The HYDRO 2006 committee wishes all the best to and success for the Cairns organisation and advises of course that the budget of the next European conference will continue the adaptation period for the 'IFHS-IHO seahorse family'.

Hydrographic Society Russia

Some members of the Hydrographic Society Russia (HSR) are also active members of other public organisations. For example, HSR member rear admiral (ret.) Konstantin Shopotov is the president of the society Memory of the Baltic. This Society solves the task of reconstructing the forgotten pages of victories of the Russian Navy. For this, underwater archaeological research is carried out with the aim of searching for and examining sunken ships – memorable objects of Russian history and culture. The functions of chief and supervisor of studies of underwater archaeological expeditions have also been carried out by Konstantin Shopotov. The 1989 underwater archaeological expedition found and investigated 23 memorable objects, and a databank and scientific archive were created and replenished. On the basis of underwater finds of the expedition in Vyborg, the museum Underwater Archaeology was created.

The area of action of Memory of the Baltic is not limited to the Baltic Sea. During the last meeting with HSR members, rear admiral Konstantin Shopotov talked about a previous action that took place in Alaska. The action was dedicated to captain Alexei Chirikov (1703–1748), the commander of the Russian boat St Pavel. It is important to remember that St Pavel was in service together with the St Peotr, which was under the command of captain-commodore Vitus Bering. Their task was to decide a problem "... how far America is from Russia ...". However, during navigation, the ships lost sight of each other and Alexei

Chirikov was the first to reach the coast of north-west America, at Cape Bartolome, on 15th July 1741. It was a great geographical discovery.

By invitation of the science centre, Alaska–Siberia members of the Memory of the Baltic, together with scientists of Juneau University, have made 180 miles of inspection on boats near the west coast of Alaska along the St Pavel route from 3rd August to 13th August 2007. The conditions of navigation for discoverers, the correctness of their decisions and the greatness of this feat have been appreciated. On 9th August 2007 in Pelican, a settlement on Chichagof Island, participants of the expedition established a memorial plaque brought over from Saint Petersburg, Russia. In the afternoon on 8th August in Lituya Bay – where on 13th July 1786, 21 seamen from the ships Boussole and Astrolabe of the Jean-Francoi La Perouse expedition were lost – a wreath with a ribbon and a memorable inscription were lowered onto the water.

Rear admiral Shopotov promised to inform HSR members of the latest archaeological finds made in the Baltic Sea in 2007.

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