



WORKSHOP ON THE PROTECTION OF SUBMARINE CABLES

Novotel Hotel, Singapore
14 – 15 April 2011

CO-CHAIRS' PROVISIONAL REPORT

The Workshop on the Protection of Submarine Cables
was jointly organized by



CO-CHAIRS' PROVISIONAL REPORT

BACKGROUND

1. The Centre for International Law (CIL) at the National University of Singapore (NUS) and the International Cable Protection Committee (ICPC) jointly organized a 1 ½ day Workshop on the Protection of Submarine Cables on 14-15 April 2011 at the Novotel Hotel in Singapore. The Workshop immediately followed the 2011 ICPC Annual Plenary Meeting which was held in Singapore from the 12-14 April 2011.
2. The objectives of the Workshop were to increase awareness among Governments in the region about the problems in the protection of fibre optic submarine cables (submarine cables) and to discuss concrete measures that the cable industry, Governments and international organizations can take to protect submarine cables.
3. The Workshop continued the momentum generated by the *Workshop on Submarine Cables and Law of the Sea*¹ jointly organized by CIL and ICPC in December 2009 and by the General Assembly Omnibus Resolution on oceans and law of the sea adopted by the UN on 7th December 2010. The Resolution, for the first time, called upon States to take measures to protect submarine cables which it described as “critical communications infrastructure” and as “vitally important to the global economy and the national security of all States.”
4. The Workshop was co-chaired by CIL Director Robert Beckman and ICPC international legal advisor Douglas Burnett. More than 150 invited representatives from the cable industry, Governments, international organizations and academia attended the Workshop. Government participants included representatives from 9 of the 10 ASEAN Member States, China, India, Australia and New Zealand. Representatives from the UN Division on Ocean Affairs and Law of the Sea (UNDOALOS), the International Seabed Authority (ISA) and the UN Office of Drugs and Crime (UNODC) also participated. In addition, more than 80 delegates who had attended the ICPC Plenary Meeting extended their stay to participate in the Workshop.
5. The Workshop Agenda is attached as Appendix 1. The PowerPoint Presentations presented at the Workshop are available on the CIL Website.²

SUBMARINE CABLES AS CRITICAL COMMUNICATIONS INFRASTRUCTURE

6. Although many people believe that their emails and phone messages are being instantly sent around the world via communications satellites, in fact, more than 95% of our electronic communications are being transmitted via fibre optic submarine cables laid on the ocean seabed. In the past quarter-century, there has been an exponential growth in submarine cables in response to the communications revolution triggered by the internet. As a result, almost every country is heavily reliant on submarine cables for almost all electronic communications

¹ For more information on the 2009 CIL Workshop on Submarine Cables and Law of the Sea, please see <http://cil.nus.edu.sg/programmes-and-activities/past-events/workshop-on-submarine-cables-and-the-law-of-the-sea-on-14-15-december-2009/>.

² For PowerPoint Presentations and Papers presented at the Workshop, please refer to <http://cil.nus.edu.sg/powerpoint-presentations-and-papers-presented-at-the-2011-workshop/>.

relating to finance, commerce, air navigation, sea navigation, entertainment, research and defence.

7. However, submarine cables are subject to a variety of threats, both natural and man-made. Natural hazards such as earthquakes, tsunamis and severe storms can cause significant damage to submarine cables. Man-made causes such as fishing and anchoring activities are also responsible for the majority of submarine cable faults. The damage caused to cables takes a considerable amount of time to repair, disrupting telecommunications for many States, and with the average cost of a cable repair ranging between US\$ 1-3 million dollars.

THE LEGAL REGIME GOVERNING SUBMARINE CABLES

8. The legal regime governing submarine cables has its origins in the 1884 Convention on the Protection of Submarine Telegraph Cables (1884 Convention) which contained provisions on the protection of submarine telegraph cables (the predecessor to fibre optic cables). The 1958 Geneva Conventions on the Law of the Sea³ incorporated three provisions on the protection of submarine cables from the 1884 Convention and also contained provisions on the freedom to lay submarine cables. The 1982 Convention on the Law of the Sea (UNCLOS) is the current legal regime governing submarine cables and most of its provisions on submarine cables are taken verbatim from the 1958 Geneva Conventions. For a more detailed discussion on the legal regime governing submarine cables, please see the CIL Website.⁴ For the 1884 Convention, the 1958 Geneva Conventions and relevant provisions on submarine cables in UNCLOS, please refer to *Selected Documents on Submarine Cables* available on the CIL Website.⁵

PROBLEMS IN LAW AND STATE PRACTICE RELATING TO SUBMARINE CABLES

9. There are four major problems in both the law on submarine cables and State practice on submarine cables.
10. First, many States have not enacted measures to protect submarine cables from competing activities both within territorial waters and outside of territorial waters. Neither have they implemented their obligations under UNCLOS to protect submarine cables.⁶ For example, Article 113 requires States Parties to criminalize the breaking or injury of a submarine cable outside territorial waters done willfully or through culpable negligence by their nationals or by ships flying their flag. However, very few States Parties to UNCLOS have passed legislation implementing this provision.

³ The 1958 Convention on the High Seas and the 1958 Convention on the Continental Shelf.

⁴ See for example, Douglas Burnett, "The International Legal Regime Governing the Submarine Cables: UNCLOS and the 1884 International Convention on the Protection of Submarine Cables," PowerPoint Presentation presented at the CIL-ICPC Workshop, 14 – 15 April 2011, available at <http://cil.nus.edu.sg/powerpoint-presentations-and-papers-presented-at-the-2011-workshop/>. You may also wish to refer to Robert Beckman, "Submarine Cables Submarine Cables – A Critically Important but Neglected Area of the Law of the Sea," presented at the 7th International Conference of the International Society of International Law on Legal Regimes of Sea, Air, Space and Antarctica, 15 – 17 January 2009, New Delhi available at <http://cil.nus.edu.sg/wp/wp-content/uploads/2010/01/Beckman-PDF-ISIL-Submarine-Cables-rev-8-Jan-10.pdf>

⁵ This is available at <http://cil.nus.edu.sg/wp/wp-content/uploads/2011/02/Submarine-Cables-Documents.pdf>.

⁶ These obligations can be found in Article 113, 114 and 115 of UNCLOS.

11. Second, there is a need to address the threat posed to submarine cables by international terrorism, which is not adequately covered by the current legal regime governing submarine cables as set out in UNCLOS. A terrorist attack on submarine cable infrastructure could bring the world's financial markets and transportation systems to a screeching halt in a matter of minutes and can cause billions of dollars of damage. And, if the terrorist attack consisted of cutting submarine cables outside the territorial sea limits of any State, there is a reasonably good chance that such acts would not be a criminal offence under the laws of any State.
12. Third, many States have not adjusted their internal laws and administration to respond to the fact that submarine cables are critical communications infrastructure which they have an interest in protecting. In many States, there is no "lead agency" responsible for submarine cables. As a result, there are no clear policies on submarine cables, and there is no national legislation to protect submarine cables from either terrorists or from competing activities such as fishing and anchoring.
13. Fourth, some States in the region have imposed onerous permitting requirements for repairs which take place in territorial waters which can delay repair operations considerably. Similarly, some States have also imposed unreasonable requirements for repairs to cables outside their territorial waters which are inconsistent with the legal regime in UNCLOS and which also causes considerable delay in repair operations. The problems in permitting requirements are also complicated by the fact that there is often no lead agency coordinating the repair permitting process and cable companies have to apply to many different agencies. Such onerous or unreasonable permitting requirements are contrary to the national interests of States, inconsistent with UNCLOS (for repairs outside of territorial sovereignty) and detrimental to the interests of other States served by that cable.

RECOMMENDATIONS FOR COOPERATION BETWEEN GOVERNMENTS AND INDUSTRY AT THE NATIONAL LEVEL

14. All States should appoint a lead agency to coordinate national policy on submarine cables and coordinate the activities of all relevant Government agencies which deal with submarine cables. The lead agency should take such measures as are necessary to ensure that all Government agencies understand the critical importance of submarine cables for the economy and security of the State.
15. The lead agency should be the designated focal point for *all policy issues* relating to submarine cables such as permits for laying and repair of cables, discussions with industry on proposed cable routes, etc. In addition, the lead agency should identify the agency who serves as the contact point for *operational and emergency issues* relating to cables, such as the cutting of a cable or terrorist threats to cables.
16. The lead agency should establish a dialogue with representatives from industry to stream-line the procedures for permits for the laying and repair of cables, etc. The lead agency should also consult with industry in reviewing their national laws, regulations and practices on the protection of submarine cables as well as on the permitting or notification procedures for the laying and repair of cables.

17. National Governments which currently have no or inadequate legislation on submarine cables should seriously consider using the legislation of Australia⁷ and New Zealand⁸ as models for their national laws and regulations, including the provisions in those laws on the establishment of “cable protection zones” and on meaningful penalties for violations which are sufficient to act as a deterrent. New cable protection legislation should extend protection to international submarine cables used for high voltage power as well.
18. For repairs in territorial waters, national Governments should work with industry to develop “best practices” for the granting of permits for the repair of cables which facilitate rapid repair while at the same time protecting the rights and interests of the coastal State.
19. For repairs outside territorial waters, such as the exclusive economic zone (EEZ) and continental shelf, national Governments and industry should work together in exercising their “due regard” obligations, imposed by UNCLOS under the EEZ regime, by establishing “best practices.” This may include notice and consultation with respect to the repair of international submarine cables, without requiring cable ships to obtain a repair permit or enter port, while at the same time, recognizing the sovereign rights of the coastal to explore and exploit the natural resources on the continental shelf and in the EEZ.
20. National Governments might consider inviting ICPC and CIL to organize “track two” workshops at the national level to exchange ideas on how Government and industry can cooperate with respect to submarine cables. The cable industry could consider the creation of Regional Cable Protection Committees as a way to facilitate such conversations and ideas.⁹
21. National Governments which have extensive fishing in their territorial waters and EEZ in which destructive fishing techniques are employed might consider inviting ICPC, experts from the Food and Agriculture Organization (FAO) and the International Maritime Organization (IMO) to study the problem of damage to cables from fishing activities as well interference by fishing vessels with cable ships engaged in cable operations, and recommend the adoption of regulations or best practices to address the problems.

RECOMMENDATIONS FOR COOPERATION BETWEEN GOVERNMENTS AND INDUSTRY AT THE REGIONAL LEVEL

22. Governments in the region might consider the possibility of establishing a regional body or network to address issues of common concern relating to submarine cables or raising these issues at existing regional forums such as the ASEAN Telecommunications Senior Officials Meeting (ASEAN TEL SOM) and/or the ASEAN Telecommunication Regulators’ Council (ATRC)¹⁰ with appropriate support and/or advice from law of the sea experts in Foreign Affairs Ministries or equivalent agencies.

⁷ Please refer to the Submarine Cables and Pipelines Protection Act 1963 available at <http://www.comlaw.gov.au/Details/C2004C00635> and Schedule 3A to the Telecommunications Act of 1997 at http://www.austlii.edu.au/au/legis/cth/consol_act/ta1997214/sch3a.html.

⁸ Please refer to the Submarine Cables and Pipelines Protection Act 1996 available at <http://www.legislation.govt.nz/act/public/1996/0022/latest/DLM375803.html>.

⁹ See Paragraph 23.

¹⁰ More information on this can be found at <http://www.aseanconnect.gov.my/>.

23. Cable companies which have commercial interests in the region should consider establishing a Regional Subcommittee of the ICPC or a Regional Cable Protection Committee to interface with national Governments and any regional body or network established by Governments. This is because Governments find it generally easier to deal with a coordinated group representing the common interests of the cable industry rather than individual cable companies.
24. The Tripartite Technical Experts Group (TTEG) for the Straits of Malacca and Singapore might consider studying the issues regarding damage to submarine cables from the dragging of ships' anchors and the minimum distance that other ships should keep from ships engaged in cable laying and repair operations. If feasible, the TTEG may wish to consider making a recommendation to the IMO for the adoption of regulations to prevent such damage. The TTEG might also consider ensuring that the location of all submarine cables is clearly marked on all navigational charts, including on the Electronic Chart Data Information System being employed for the Marine Electronic Highway in the Straits of Malacca and Singapore.
25. Governments in the region should consider the possibility of working with industry to share information and develop contingency plans to address the threat of intentional damage to international cables by terrorists, including the establishment of national focal points and the conduct of desk-top exercises and maritime exercises.

RECOMMENDATIONS FOR COOPERATION BETWEEN GOVERNMENTS AND INDUSTRY AT THE GLOBAL LEVEL

26. Governments in the region should consider taking the lead to bring the gaps in the legal regime to protect cables to the attention of the international community, including the UN Secretariat and the ITU, in order to enhance awareness and mobilize support to protect submarine cables.
27. Governments in the region should work with each other and with the ICPC to bring the gaps in the legal regime for the protection of cables to the attention of the international community at the UN by proposing paragraphs for inclusion in the omnibus resolution of the UN General Assembly on Oceans and Law of Sea (LOS Omnibus Resolution) and by adding the protection of submarine cables to the list of issues to be addressed by the Interim Committee of Parties to UNCLOS.
28. With regard to the protection of cables, States in the region should recommend language in the LOS Omnibus Resolution specifically urging all States to enact new legislation or update existing legislation to ensure the implementation of their obligations under Article 113 of UNCLOS.
29. Governments in the region should also take the lead in proposing the adoption of a new UN terrorism convention to make it an international crime among States Parties to intentionally destroy or damage international submarine cables or submarine cable infrastructure.
30. Governments in the region should also consider working together and with the ICPC to initiate action at the IMO for the adoption of measures: (1) to require all ships to keep a defined distance from working cable ships and cable repair buoys and to adopt IMO regulations to this effect; and (2) to prevent damage to cables from ships' anchors that are not properly secured prior to navigation.

31. Governments in the region and ICPC should also consider bringing the threat to cables from certain fishing practices such as bottom trawling to the attention of the FAO.

Robert Beckman, CIL

Douglas Burnett, ICPC

20 April 2011

APPENDIX 1

AGENDA

<u>Time:</u>	<u>DAY 1:</u>
13:00 – 13:30	Registration for Workshop
13:30 – 13:45	Welcome Remarks by Associate Professor Robert BECKMAN, Director of the Centre for International Law (CIL) and Dean VEVERKA, Chairman of the International Cable Protection Committee (ICPC)
13:45 – 15:15	Session 1: Background on Submarine Cables <u>Chairman:</u> Associate Professor Robert BECKMAN, Director, CIL <u>Panelists:</u> <ol style="list-style-type: none"> 1. Lionel CARTER, Marine Environmental Advisor, ICPC, <i>Natural Causes of Cable Faults: Hazard Occurrence, Trends and Case Studies</i> 2. Ian DOUGLAS, Managing Director, Telecoms, Global Marine Cable Systems Ltd. <i>Submarine Cable Faults Caused by Maritime Activities</i> 3. Douglas BURNETT, Legal Advisor, ICPC, <i>The International Legal Regime Governing Submarine Cables: UNCLOS and the 1884 International Convention on the Protection of Submarine Cables</i>
15:15– 15:30	Coffee Break
15:30 – 17:00	Session 2: Repairing Submarine Cables <u>Chairman:</u> Douglas BURNETT, Legal Advisor, ICPC <u>Panelists:</u> <ol style="list-style-type: none"> 1. Stephen DREW, Marine Liaison Manager, TE Subcom, <i>Problems faced by Industry in Subsea Cable Repair</i> 2. Associate Professor Robert BECKMAN, Director, CIL, <i>Best National Practices for the Repair of Submarine Cables</i> 3. Alasdair WILKIE, (Hibernia Atlantic) Chairman, UK Cable Protection Committee (UKCPC), <i>Best Regional Practices: The United Kingdom Cable Protection Committee</i> 4. Claus NIELSEN (TDC), Chairman, Danish Cable Protection Committee (DKCPC), <i>Best Regional Practices: Submarine Cable Maintenance by the Danish Cable Protection Committee</i>
17:00	Close of Day One
17:30 -19:30	ICPC Sponsored Event
<u>Time:</u>	<u>DAY 2:</u>
9:00 – 10:30	Session 3: National Solutions for the Protection of Submarine Cables from Competing Activities <u>Chairman:</u> Associate Professor Robert BECKMAN, Director, CIL

	<p>Panelists:</p> <ol style="list-style-type: none"> 1. Dean VEVERKA (Southern Cross Cables Limited), Chairman, ICPC, <i>Sharing the Seabed with Competing Activities</i> 2. Michael JERKS, Assistant Secretary, Critical Infrastructure Protection Branch, Attorney-General's Department and Adam CASON, A/g Senior Executive Lawyer, Infrastructure and Digital Economy Services, Department of Broadband, Communications and the Digital Economy, Australia, <i>The Australian Government's Approach to Submarine Cable Security</i> 3. Mike MCGRATH, Technology Operations Manager, Telecom New Zealand, <i>Steps taken by the New Zealand Government and Industry to Protect Submarine Cables</i>
10:30 – 11:00	Coffee Break
11:00 – 12:30	<p>Session 4: Regional Co-operation for the Protection of Submarine Cables from Competing Activities</p> <p>Chairman:</p> <p>Douglas BURNETT, Legal Advisor, ICPC</p>
	<p>Panelists:</p> <ol style="list-style-type: none"> 1. Robert WARGO, (AT&T), President of the North American Submarine Cable Association (NASCA), <i>The Role of Regional Cable Protection Committees in the Protection of Submarine Cables</i> 2. ANG Joon Ping Joshua, Director (Submarine Cables) SingTel, A New Regional Cable Protection Committee 3. Adam CASON, Senior Executive Lawyer, Infrastructure and Digital Economy Services, Department of Broadband, Communications and the Digital Economy, Australia, <i>The Work of APEC TEL</i>
12:30 – 14:00	Lunch
14:00 – 15:00	<p>Session 5: Global Action for the Protection of Submarine Cables from Competing Activities</p> <p>Chairman:</p> <p>Associate Professor Robert BECKMAN, Director, CIL</p>
	<p>Panelists:</p> <ol style="list-style-type: none"> 1. Mick GREEN, (British Telecom) Vice-Chairman, ICPC, <i>Using IMO Rules and Regulations to Protect Submarine Cables</i> 2. Ahmad NORDIN Bin Ibrahim, Principal Assistant Director, Marine Department, Malaysia, <i>The IMO and Anchor Damage in the Singapore Straits</i> 3. James A. R. MCFARLANE, Head, Office of Resources and Environmental Monitoring, International Seabed Authority, <i>The ISA, ICPC and Submarine Cables</i>
15:00 – 16:00	<p>Session 6: Global Action for the Protection of Submarine Cables from Terrorism and Piracy</p> <p>Chairman:</p>

	Douglas BURNETT, Legal Advisor, ICPC
<u>Panelists:</u>	
	<ol style="list-style-type: none"> 1. Associate Professor Robert BECKMAN, Director, CIL, Terrorism, Piracy and the Protection of Submarine Cables 2. Vipon KITITASNASORCHAI, Counter Terrorism Officer, UN Office on Drugs and Crime (UNODC) Regional Centre for East Asia and the Pacific, International Law on Counter-Terrorism and the Protection of Submarine Cables 3. Serguei TARASSENKO, Director, UN Division for Ocean Affairs and Law of the Sea (UNDOALOS), Protection of Submarine Cables: The Role of the United Nations
16:00 – 16:30	Coffee Break
16:30 – 18:00	Session 7: The Way Forward – (No Presentations)
<u>Chairman:</u> Associate Professor Robert BECKMAN, Director, CIL	
<u>Panelists:</u> <ol style="list-style-type: none"> 1. Daren TANG, Senior State Counsel, International Affairs Division, Attorney-General's Chambers, Singapore 2. Mr ONG Tong San, Director (Competition & Market Access), Infocomm Development Authority, Singapore (IDA) 4. Michael JERKS, Assistant Secretary, Critical Infrastructure Protection Branch, Attorney-General's Department, Australia 5. Serguei TARASSENKO, Director, UN Division for Ocean Affairs and Law of the Sea (UNDOALOS) 6. Douglas BURNETT, Legal Advisor, ICPC 	
18:00	Close of Workshop