The 1884 International Convention for Protection of Submarine Cables Provisions Not in UNCLOS Deserve Attention Now

By Douglas R. Burnett[1]

The United Nations Law of the Sea Convention (1982) (UNCLOS)[2] includes, among its 320 articles, 10 that pertain directly to submarine cables.[3] These articles cover cables seamlessly throughout the territorial sea, in the exclusive economic zone (EEZ), on the continental shelf and on the high seas. But as identified in a 2009 workshop of State parties and the cable industry, legal gaps exist.[4]

UNCLOS provisions on submarine cables by and large evolved from the 1958 Geneva Convention on the High Seas[5] and Continental Shelf,[6] which in turn can be traced directly to the 1884 International Convention for Protection of Submarine Cables (Cable Convention).[7] Several UNCLOS cable articles are direct descendents of similar articles in the Cable Convention.[8] A review of the negotiating history of UNCLOS confirms this fact.[9]

[1] Partner, Maritime Practice Group, Squire, Sanders & Dempsey (US) LLP, International Cable Law Advisor, International Cable Protection Committee (ICPC), Capt., USN (ret.), J.D. University of Denver (1980), B.S. US Naval Academy (1972).

[2] 1833 UNTS 3 (entered into force on 16 November 1994.

[3] Articles 21(c) [*Laws and regulations of the coastal state relating to innocent passage*], 51.2 [*Existing agreements, traditional fishing rights and existing submarine cables*], 58 [*Rights and duties of other States in the exclusive economic zone*], 79 [*Submarine cables and pipelines on the continental shelf*], 87.1(c) [*Freedom of the high seas*], 112 [*Right to lay submarine cables and pipelines*], 113 [*Breaking or injury of a submarine cable or pipeline*], 114 [*Breaking or injury by owners of a submarine cable or pipeline of another submarine cable or pipeline*], 115 [*Indemnity for loss incurred in avoiding injury to a submarine cable or pipeline*] and 297.1 [*Limitations on application of section 2*].

[4] Report on Workshop on Submarine Cables and the Law of the Sea, 14-15, 2009, Singapore, co-sponsored by the Centre for International Law, National University of Singapore, Center for Oceans Law and Policy, University of Virginia, School of Law, China Institute for Marine Affairs, State Oceanic Administration, Netherlands Institute for the Law of the Sea, and the International Cable Protection Committee, at 7. http://cil.nus.edu.sg/programmes-and-activities/past-events/workshop-on-submarine-cables-and-las-of-the-sea-on-14-15-december-2009/

[5] 29 April 1958, 13 U.S.T.2312, T.I.A.S. 5200, 450 U. N.T.S. 82 (High Seas Convention) (Article 26-30).

[6] 29 April 1958, 15 U.S.T.473, U.N.T.S. 7302 (Continental Shelf Convention) (Article 4).

[7] 14 March 1884, TS 380 (entered into force 1 May 1888).

[8] These relationships are displayed in the table below:

UNCLOS Article	Geneva Convention Article	1884 Convention Article
113	27	2
114	28	4
115	29	7

[9] Nordquist, *United Nations Convention On the Law of the Sea 1982 A Commentary*, Vol. III at 267-297 (113.2 - "The origin of Article 113 can be traced to Article II of the" Cable Convention, 113.7(b)); at 272 (114.2 - "The origin of article 114 can be traced to Article

But while several Cable Convention articles were incorporated into UNCLOS, others were not. This paper reviews these provisions and suggests they continue to have practical utility in filling gaps in the UNCLOS legal regime in a world that depends on submarine cables for more than 95 percent of its international voice, data and video communications.

Their contemporaneous relevance stems from the fact that 41 nations are parties to the Cable Convention. The articles are considered by authorities to be customary international law.[10] Additionally, the obligations of the Cable Convention are essentially universally followed by members of the submarine cable industry in the day to day conduct of their business.

Some have observed that the Cable Convention parties include only two members in the region of Asia, Australia and Japan, and question whether the Cable Convention applies to other nations in Asia and Africa. The absence of additional modern Asia and Africa nations was noted when UNCLOS was negotiated. It stems largely from the historical fact that many were not independent nations at the time the Cable Convention was agreed in 1884.[11]

In modern times, the subsequent incorporation of much of the Cable Convention's provisions in the Geneva Conventions and UNCLOS may, to a degree, have made accession to the Cable Convention a moot point to some.

Cable Convention and UNCLOS Articles

For parties to both UNCLOS and the Cable Convention, the latter's articles that are not directly incorporated into UNCLOS continue in force among those parties since they do not conflict with UNCLOS.[12] So how does this work?

Generally, the Cable Convention articles provide details on how obligations under UNCLOS can be performed. UNCLOS, considered the constitution of the oceans, is more general in its descriptions of rights and obligations, as one would expect in a constitution. The Cable Convention supplies complementary detailed implementing procedures.

IV of the" Cable Convention); at 276-277 (115.2 - "The origin of article 115 can be traced to article IV of the" Cable Convention, 115.7).

[10] Restatement (Third) of the Foreign Relations Law of the United States, §521, comment f, RN 4 (1986).

[11] "The Group of Afro-Asian States now numbered more than thirty, whereas in 1884 there had not been more than five or six independent States in that part of the world. In the days of the 1884 Convention, international law had been largely a matter of concern of western countries. It was important, it should now be applicable and accepted on a worldwide basis. . .," United Nations Conference on the Law of the Sea, *Official Records,* Vol. IV, Second Committee, 30th meeting, Iran, para. 24.

[12] UNCLOS, Art. 311(2), "This Convention shall not alter the rights and obligations of States Parties which arise from other agreements compatible with this Convention and which do not affect the enjoyment by other States Parties of their rights or the performance of their obligations under this Convention."

A sacrificed gear or anchor claim illustrates this point. UNCLOS Article 115 provides that a vessel that sacrifices its anchor or fishing gear to avoid injury to a cable is entitled to indemnity for the cost of the sacrificed anchor or fishing gear, provided that the vessel took all necessary precautions to avoid contacting the cable in the first place. But UNCLOS is silent on how this indemnity procedure should be carried out.

Cable Convention Article 7, upon which Article 115 is based,[13] details the procedure. The mariner must provide proof of the sacrifice in a written statement supported by testimony of the crew, and this proof must be lodged with the consular authorities of the cable owner within 24 hours of the vessel's arrival in the first port after the event.

The Article 7 requirement has been implemented widely by the cable industry by the use of toll-free 24/7 phone numbers, displayed on cable awareness charts distributed at no cost to mariners, that allow the mariner to contact the cable owners while the vessel is at sea or in port.[14] It is an industry custom and practice that an affidavit form of claim statement is then provided for the vessel's master to complete and submit for evaluation. If the mariner is not able to determine who the cable owner is, the coast guard or captain of the port may receive the claim and forward it to the cable owner.[15]

But unlike Article 7, other Cable Convention articles have no direct reference in UNCLOS. The principle articles not in UNCLOS that deserve a modern look are Articles 5, 6 and 10. The utility of these articles should be considered for use in other international instruments to fill current gaps in the UNCLOS legal regime. Each is discussed below.

UNCLOS Articles 5, 6 and 10

Discussion of these articles touches upon cable repair operations that are often not familiar to those outside the industry. In such cases, online references to the PowerPoint presentation "About Cables"[16] or the UNEP/WCMC/ICPC publication *Submarine Cables and the Oceans: Connecting the World*[17] are recommended for complete descriptions and depictions of these activities.

[13] *See* note 7, *supra*.

[14] ICPC Recommendation No. 5, Issue 7A (Standardization of Cable Awareness Charts). Copies of this and other ICPC recommendations can be obtained free of charge from the International Cable Protections Committee (ICPC) upon request (www.iscpc.org).

[15] ICPC Recommendation No. 6, Issue 8A (Recommended Actions for Effective Cable Protection (Post Installation)).

[16] The "About Cables" PowerPoint can be viewed online at www.iscpc.org under "Publications." The presentation includes cartoons showing normal cable ship laying and repair operations.

[17] Carter, L.; Burnett, D.; Drew, S.; Marle, G.; Hagadorn, L.; Bartlett-McNeil, D.; UNEP-WCMC Biodiversity Series N. 31. ICPC.UNEP.UNEP-WCMC (2009) Chapter 3 (Survey, Lay, and Maintain Cables). Copies of this report can be downloaded from www.iscpc.org under "Publications."

Article 5

Figure 1: "Fishing vessel intentionally blocking cable ship to stop repairs by dragging its nets into the cable ship path." *Courtesy BT*

Vessels engaged in laying or repairing submarine cables shall conform to the regulations as to signals which have been, or may be, adopted by mutual agreement among the High Contracting Parties, with the view to preventing collisions at seas.

When a ship engaged in repairing a cable exhibits the said signals, other vessels which see them, or are able to see them, shall withdraw to or keep at a distance of a one nautical mile at least from the ship in question, so as not to interfere with her operations.

Fishing gear and nets shall be kept at the same distance.[18]

Nevertheless, fishing vessels which see a telegraph ship exhibiting the said signals, shall be allowed a period of 24 hours at most within which to obey the notice so given, during which time they shall not be interfered with in any way.

The operations of telegraph ships shall be completed as quickly as possible.

Article 5 involves an old problem still very much present in most modern cable repairs: interference with the cable ship by other vessels, principally fishing vessels.[19] In extreme form, this interference includes a documented case of fishermen effectively blockading cable repair ships by circling them with nets to keep them from a repair unless extortion money was first paid to fishermen (Figure 1).[20] Much more frequent,

[18] The official language of the Cable Convention is French. This translation is the official Australian government translation.

[19] The Cable Convention reporter recorded the negotiations on Article 5: "This provision of the draft could be one of the most useful to telegraph companies, whose operations were sometimes made impossible for a very long time by the presence of fishing boats which refused to move away. This is what occurred in 1881, when a cable broke in the North Sea." Louis Renault, "The Protection of Submarine Telegraphs and the Paris Conference (October-November 1882) in Brussels and Leipzig," *International Law Review* (Flanders: Merezbach & Falk).

[20] *Ninety-Four Consortium Cable Owners vs. Eleven Named French Fishermen.* (http://www.iscpc.org/members/Legal/Precedence_Cases/Boulogne_Judgement_Iss_1.pdf) Tribunal de Grande Instance de Boulogne Sur Mer (1st Chamber) 28 August 2009, [File No. 06/00229 DG/LM]. (Judgment in favor of cable consortium cable owners against 11 French fishermen for damages caused by interference in cable repair ship operations by French fishing vessels.) The French court found that the actions of the French fishermen to extract financial payments to allow the cable repair ships to repair a cable fault violated Articles R46 and R47 of the French Civil Code (CDFE), which require fishing vessels to keep all of their equipment and nets at least one nautical mile from the vessel repairing an underwater cable. (Note, this French domestic stature implements Article 5 of the International Convention for the Protection of Submarine Cables of 1884.) The argument by the French fishermen that the cable was laid in French territorial seas without legal authorization was rejected. Instead, the court found that "the measures taken against [the two cable ships] were

especially in Asian waters, are repeated decisions by fishing vessels to not stay out of the path of a cable ship, in many cases up to the point of collision (Figure 2).

Figure 2: "Fishing vessel in unsafe near collision with cable ship engaged in repair"
Courtesy TE Subcom

Impeding a cable ship engaged in a repair, whether by design, negligence or inattention, is a violation of the Convention on the International Regulations for Preventing Collisions at Sea 1972 (COLREGS). Under COLREGS, a vessel engaged in laying or repairing a cable is considered a "vessel restricted in its ability to maneuver."[21] The cable ship is required by COLREGS to show appropriate lights at night and shapes during the day so that vessels in the area are aware of its restricted maneuverability status (Figure 3).[22] Cable ships adhere to these requirements with almost religious dedication. Under COLREGS, other vessels, including vessels engaged in fishing, must stay out of the way of the cable ship.[23]

Figure 3: "Cable ship exhibiting COLREG day shapes for vessel with restricted maneuverability."
Courtesy GMSL

Cable ship operators go to great lengths to advise vessels in the intended cable work area of impending work at least 24 hours before the cable ship's scheduled arrival. This notice is provided to coastal state and coast guard authorities so that appropriate notices to mariners can be issued. This is followed by distribution of notices to vessel operators and fishing associations known to frequent the area. Depending upon the region, an industry contract patrol vessel is dispatched in advance of the cable work to request that fishing gear be cleared from the intended cable ship repair course. Because of lack of coastal state enforcement of COLREGS, compliance results are frequently poor, especially in Asia. As a result, repairs take longer and are more costly.[24] Also, the risk of damage to cable vessels and fishing vessels is ever present.

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part of a concerted attempt to obstruct the operation of underwater cables in fishing areas in return for financial compensation." The court further found "that each [fishing vessel] in question individually contributed to the incorrect interception of the two cable ships and sailors, as part of this action, played a part in an act of personal, even concerted misconduct that gave rise to damages." Damages were awarded against the 11 named fishermen with interest for the delay of several days in carrying out the repairs. But damages do not remove the disruption cause by leaving vital international cables broken for weeks.

[21] Rule 3(g)(i), COLREGS.

[22] Rule 27, COLREGS.

[23] Rule 18, COLREGS.

COLREGS Rule 18 simply requires that vessels “keep out of the way of” the cable ship. No objective distance to measure keeping out of the way is provided. That is a problem for cable repair ships engaged in repairs; other vessels can come as close as the want to the cable ship as long as there is no physical contact. Cable Convention Article 5 in contrast states that the “keep away” distance is one nautical mile. One nautical mile is objective – it can easily be determined by radar by the cable ship, the other ship or coastal state enforcement vessels. As a result, it is easy for coastal states to enforce.

Figure 4: "Fishing vessel, ignoring 1 nautical mile safety margin, with nets entangled on cable, interrupting cable repair." *Courtesy SBSS*

The distance of one nautical mile is reasonable for at least two reasons. A cable ship engaged in laying or repairs at one to six knots has a cable running from its bow or stern to the seabed as it is navigating. The length of cable suspended between the cable ship and the seabed varies according to the ship speed, water depth, currents and weather. This lengthy underwater cable catenary is not visible from the surface. By the same token, a fishing vessel may have its nets, long lines or dredges extending invisibly underwater over significant distances. By keeping the fishing vessel and its nets one nautical mile away from the cable ship, the risk of collision or entanglement with the cable ship and the cable it is working on is minimized (Figure 4).

Finally, the cable ship’s presence is relatively fleeting. It is gone as soon as the cable is repaired and re-laid, so any inconvenience to fishing vessels is brief. The compelling logic of this practical solution is well recorded in the Cable Convention *trauvex preparatories*. The British Indies delegate gave very compelling justification for the companies’ claims on this subject when he said:

> In Paris, I am normally able to move about freely in the streets, but as soon as these streets, or the gas or other pipes beneath them, are being repaired, I must take another route or find my way without causing harm to the personnel or equipment employed n the work, which are entitled to protection above all else. The same is true for cables which are being repaired. The sea is free, but if cables are being repaired, the ships and men entrusted with their operation have the utmost right to protection. [25]

[24] Burnett, D., “Recovery of Cable Ship Cost Damages From Third Parties That Injure Submarine Cables,” 35 Tulane Law Review 103, 108-109 (Winter 2010), provides useful information on cable ship repair costs, which average US$1-3 million plus per repair, with cable ship costs varying between US$45,000 and US$75,000 per day.

[25] Renault, L., “The Protection of Submarine Telegraphs and the Paris Conference (October-November 1882) in Brussels and Leipzig,” *International Law Review* (Flanders: Merezbach & Falk).

One possible solution to address the inadequate current situation is to simply amend COLREGS Rule 18(c), which relates to fishing vessels, with the following addition based on Article 5:

> *(iii) If the vessel restricted in her ability to maneuver is a cable ship, the fishing vessel and its gear shall keep one nautical mile away.*

Given the active precedent of Article 5 of the Cable Convention, such a change would enjoy the full support of the cable industry as well as the parties to the Cable Convention.

Article 6

> **Vessels which see, or are able to see, the buoys showing the position of a cable when the latter is being laid, is out of order, or is broken, shall keep beyond a distance of one-quarter of a nautical mile at least from said buoys.**
>
> **Fishing nets and gear shall be kept at the same distance.**

Article 6 reflects the necessity of using a repair buoy in a cable repair. Again, the need indentified and the solution in the Cable Convention remain valid.[26] The cable ship initially arrives at the fault location and retrieves the damaged cable. The damaged end is cut and the cable end is tied off to a buoy (Figure 5). The cable ship then proceeds to locate the other damaged cable end. That end is cut and a new cable section is spliced into place. The cable ship then returns, laying the spliced cable to the repair buoy location. There it retrieves the initial buoyed end and carries out a second splice to complete the repair (Figure 6).[27]

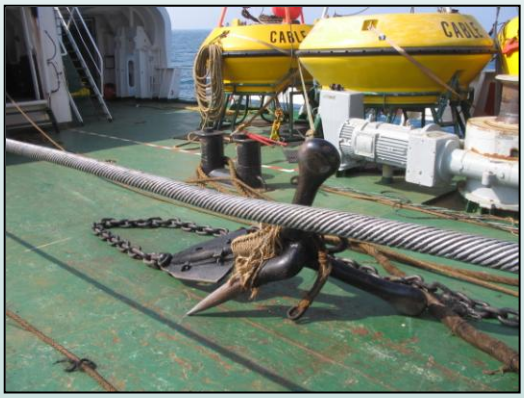

Figure 5: Cable repair buoys on cable ship deck." *Courtesy BT*

[26] Recording the debate on Article 6, the report noted: "The protection for buoys is a quarter of that accepted for vessels, but it is important to point out that this zone exists in the case of both laying and repairing cable. The Post Office delegate pointed out that the use of marker buoys is often indispensable to vessels responsible for laying cables. Sometimes, the dimensions of a cable are such that up to four ships are needed to carry it, the various sections being submerged in succession. It is only with the aid of buoys thrown out in the middle of the ocean that these sections can be located and raised in order to be welded to each other. This indicates the importance of preventing these buoys from being interfered with or damaged." Louis Renault, "The Protection of Submarine Telegraphs and the Paris Conference (October-November 1882) in Brussels and Leipzig," *International Law Review* (Flanders: Merezbach & Falk).

[27] *See* notes 14 and 15, *supra.*

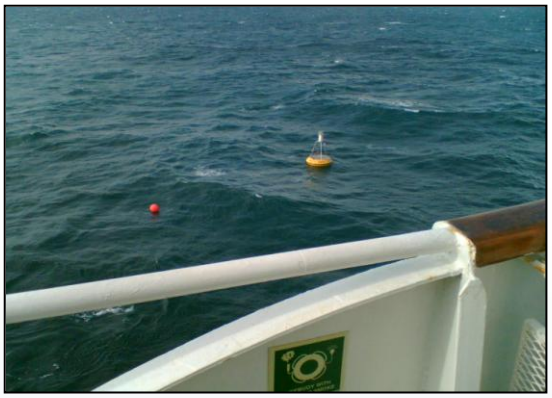

Figure 6: "Cable repair buoy placed by cable ship." *Courtesy BT*

Under Article 6, vessels and fishing nets and gear are to be kept one quarter mile away from the buoy to avoid entanglement and damage to the cable. This requirement continues to be a valid step in carrying out a cable repair as expeditiously and safely as possible.

Again, the best solution would appear to be a simple amendment to the COLREG Rule 18(c) that relate to fishing vessels by the addition of a new section based on Article 6 in addition to the earlier 18(c)(iii) suggestion:

> *(iv) If vessel observes a cable repair buoy, the fishing vessel shall keep the vessel and its gear one quarter of a nautical mile away.*

From the above examples, a simple amendment of the COLREGS could carry into modern practice the objective standards found in Articles 5 and 6.

With Article 10, no similar easy solution presents itself.

Article 10

> **Offenses against the present Convention may be verified by all means of proof allowed by the legislation of the country of the court. When officers commanding the ships of war, or ships specially commissioned for the purpose by one of the High Contracting Parties, have reason to believe that an infraction of the measures provided for in the present convention has been committed by a vessel other than a vessel of war, they may demand from the captain or master the production of the official documents proving the nationality of the said vessel. The fact of such document having been exhibited shall be endorsed upon it immediately. Further, formal statements of the facts may be prepared by said officers, whatever may be the nationality of the vessel incriminated. These formal statements shall be drawn up in the form and in the language used in the county to which the officer making them belongs; they may be considered, in the country where they are adduced, as evidence in accordance with the laws of that country. The accused and witnesses shall have the right to add, or to have added thereto, in their own language, any explanations they may consider useful. These declarations shall be duly signed.**

Article 10 deals with the vital task of obtaining evidence of violations for the civil and criminal penalties required to be implemented by Member States for Articles 2, 5 and 6.[28] It was reported as a stipulation by the parties negotiating the Cable Convention.[29]

Article 2 is incorporated in UNCLOS Article 113. Article 113 expanded cable protection by proscribing not only conduct that injures the cable, but also conduct that "is liable to interrupt or obstruct" communications.[30] Importantly, this change allows for the first time the ability to prevent faults in the first place in addition to holding wrongdoers responsible for actual faults they cause.

But UNCLOS is silent on how evidence of infractions of Article 113 are to be obtained. This is a significant gap because violations are likely to occur on the high seas with no witnesses but the crew of the culprit vessel. AIS is now becoming a useful tool in identifying culprit vessels, but its use is limited and, in most cases, it may not alone be sufficient evidence. So Article 10 continues to be instructive.

Under Article 10, the commanding officer of a warship is authorized to board a vessel on the high seas suspected of damaging a cable. The warship commander may demand that the ship's papers be exhibited and conduct an investigation at sea to determine whether the ship may have been involved in a violation of Articles 2, 5, and 6.[31] The commander must make a report of the boarding and evidence found. The suspect vessel's crew is to be shown a copy of the report and provided with the opportunity to make a signed statement that becomes part of the report. The report is then available for use in national courts where Cable Convention infractions are decided.[32]

[28] Article 2 of the Cable Convention: "The breaking of a submarine cable willfully or by culpable negligence, and resulting in the total or partial interruption or embarrassment of telegraphic communication, shall be a punishable offense but the punishment inflicted shall be no bar to a civil action for damages. This provision shall not apply to ruptures or injures when the parties guilty thereof have become so simply with the legitimate object of saving their lives or their vessels, after having taken all necessary precautions to avoid such ruptures or injuries."

[29] The report recorded the stipulation: "Infractions of this convention may be recorded by any means of proof accepted by the legislation of the country in which the court to which the case is submitted sits. Moreover, reports may be drawn up by officers commanding warships or vessels specially commissioned to that effect by one of the noble contracting parties, whatever the nationality of the vessel on board which the infraction is committed. These reports shall be drawn up in the forms and language of the country to which the officer drawing them belongs, and will have, in the country in which they are referred to, the same force as those made by officers who are nationals of this country…. Moreover, Mr. Asser pointed out that, because of the difficult in recording the infractions mentioned in this convention, the testimony of officers of the respective navies shall be valued highly. What would be the use of gathering this testimony if it was not also to be acknowledged as having probative force?" Renault, L., "The Protection of Submarine Telegraphs and the Paris Conference (October-November 1882) in Brussels and Leipzig," *International Law Review* (Flanders: Merezbach & Falk).

[30] UNCLOS Art. 113.

[31] Cable Convention, Article 12.

[32] Cable Convention, Articles 8, 9, 11 and 12.

There is only one recorded case where Article 10 was used.[33] But it illustrates the merits of a boarding procedure where a warship or coast guard vessel encounters on the high seas a vessel suspected of injuring a cable or is engaged in conduct likely to injury a cable.

In 1959 five transatlantic cables linking the United States and Canada to the United Kingdom and Ireland were sequentially cut over a two-day period. Aerial observations located a Russian fishing trawler in the vicinity of the faults. The aircraft dropped a note advising the trawler that it had cut cables and to cease trawling in the vicinity of the charted cables.

Pursuant to Article 10 of the Cable Convention and US domestic law, a US Navy warship intercepted the trawler and carried out an unarmed boarding of the vessel. The Navy boarding officer advised the fishing vessel master of the reason for the boarding and reviewed the ship's papers which were found to be in order. The boarding officer then compared the ship's logs to the cable break locations and confirmed in each case the trawler was over the cables at the approximate date and time of the faults. The boarding officer also observed that the ship's trawling gear had sufficient reach to contact the cables and that the catch aboard the ship consisted of bottom-dwelling species. Also observed were broken sections of trawling cable that were consistent with parting under sudden strain. The visit lasted 70 minutes. The boarding office made appropriate entries in the trawler's logs. The damaged cables subsequently recovered by the repair ship showed that they had been cut to allow nets to be released.

In this case, the boarding was allowed because both nations involved were parties to the Cable Convention. The procedure employed followed the letter and spirit of the Cable Convention.

Hostile Attacks on Cables

Under UNCLOS, boarding of vessels by warships or coast guard vessels outside territorial seas is restricted. A vessel reasonably suspected of engaging in piracy or refusing to show its flag can be boarded.[34] Similarly, vessels can be boarded with flag state consent. An argument can be made that Cable Convention parties have already consented for visits by warships of other parties. But these nations constitute a small number of the world's merchant and fishing fleets. The sobering conclusion is that UNCLOS approaches may not be available in the case of suspected hostile acts involving submarine cables, especially in the case of terrorists.

[33] The Novorossiisk, Dept. of State Bull., Vol. XL, no. 1034 at 555 (April 20, 1959). (www.iscpc.org/members/Legal/Precedence_Cases/Precedence_Case_File_12.pdf) Press release: The Embassy of the United States of America refers to the Ministry's note No. 17/OSA, dated March 4, 1959 concerning recent breaks in certain transatlantic submarine telecommunication cables and the consequent visit to the Soviet trawler *Novorossiisk* by a boarding party from the *USS Roy 0. Hale*, which was the subject of the Embassy's aide memoire of February 28, 1959.

[34] UNCLOS, Article 110.

Modern examples of successful attacks against fiber optic submarine cables by terrorists[35] and pirates[36] are a matter of public record (Figure 7). *The Economist* magazine recently observed that "cutting the fibre-optic cables that connect a country to the world, might seem easy" because "the pipes are vulnerable" to ship anchors.[37]

While UNCLOS may address piracy in the context of cables as property under Article 101(a)(ii)[38], it is silent on terrorism. So are other international instruments if the hostile actions involve international submarine cables outside territorial seas.[39]

Figure 7: "Pirates photographed by cable repair ship on the high seas taking out active fiber optic cable-one of three hostile actions against two separate international cable systems carried out by multiple vessels."

The fact remains that hostile attacks by terrorists and pirates against modern submarine cables outside territorial seas are likely not defined as a violation of international law. This is a vulnerability that needs to be addressed now. The present piracy debacle in which pirates continue to gain with little fear of consequences for their actions against a disorganized and unprepared international community is a lesson that should be proactively applied to avoid the same result with submarine cables and the cable ships that maintain them.

This security gap needs to be filled. Hopefully the gap filler will not distinguish between pirates and terrorists and make both accountable for their actions against cables regardless of whether they act for private gain or political purposes.

Whatever the international legal solution to the security gap, however, the need for obtaining evidence on the high seas remains just as it did in 1884 when the diplomats and other experts[40] so carefully crafted

[35] Newspaper report of June 11, 2010 reporting successful attack by New Peoples Army on the beach manhole joint of an international submarine cable system (Philippines-Japan). www.journal.com.ph/index.php/provincial/11461-reds-bomb-cagayan-globe-site-disarm-cop-guards.pdf

[36] Green, M. and Burnett, D., "Security of International Submarine Cable Infrastructure: Time to Rethink?" *Legal Challenges in Maritime Security,* Center for Oceans Law and Policy (2008) at 557. (Analyzing depredations in March 2007 by Vietnam-based pirates on the high seas against two international cables systems, TVH (Thailand, Vietnam Hong Kong system) and APCN (Asia Pacific Cable System).)

[37] *The Economist,* "Reaching for the kill switch", February 11, 2011 at 67.

[38] *See* note 29, *supra. See also* Beckman, R., "The Piracy Regime under UNCLOS: Problems and Prospects for Cooperation," awaiting publication.

[39] *See, i.e.,* the 1971 Convention for the Suppression of Unlawful Acts Against the Safety of Civil Aviation (Montreal Convention) and the 1988 Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA Convention).

[40] The diplomatic conventions that led to the Cable Convention included diplomats, engineers, naval officers and fishers who in two summers wrestled with the implications of the then radically new technology of the submarine telegraph cable and its impact on the world. Louis Renault, "The Protection of Submarine Telegraphs and the Paris Conference (October-November 1882) in Brussels

Article 10 and arrived at their practical solution. In that sense, a modern international legal solution should include attention to the problem of obtaining evidence on the high seas of threatened and actual hostile actions against submarine cables. Flag state consent is more likely to be obtained speedily when the procedures are spelled out by the international community.

In summary, the practical and effective utility of established international legal precedents embodied in Article 5, 6 and 10 of the Cable Convention should be considered to fill gaps in the UNCLOS legal regime and to meet the modern challenges to the protection of international submarine cables.

Contact:

Douglas R. Burnett
douglas.burnett@ssd.com
+1.212.872.9820

and Leipzig, *International Law Review* (Flanders: Merezbach & Falk). In many ways, this effort is similar to modern challenges brought about by fiber optic cables and the Internet they make possible.