

## LESSONS LEARNED FROM THE 1882-1887 PROCEEDINGS TO ESTABLISH THE 1884 INTERNATIONAL SUBMARINE TELEGRAPH CONVENTION

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**Abstract:** In the second half of the 19<sup>th</sup> century, states began to recognize the importance of submarine telegraphic cables and the need to protect them. By 1884, 27 governments met to “secure the maintenance of telegraphic communication” and establish a Convention for the Protection of Submarine Telegraph Cables. These nations drafted, signed, ratified and acceded to the Convention to protect the “Victorian Internet” over the course of ten meetings between 1882 to 1887. These meetings left a series of five proceedings in French, capturing the discussions among the representatives from the signatory nations. This Convention also marked the first-and-last-time developed nations consistently met to secure this critical infrastructure and codify security protections in a legally binding agreement.

This paper is among the first to translate these five proceedings from their native French into a series of lessons learned for English-speaking readers, and in particular, policymakers. Given that these proceedings were the international community’s first focused attempts, writ large, to determine the best ways to protect this vital infrastructure, collectively, they can offer policymakers unique insight on past security considerations and proposals that may benefit the current discourse on their protection. These insights can contribute to ongoing public discussions around data sovereignty, privacy, data nationalism and information protection in times of peace and war.

Accordingly, this paper will address the following questions: what concepts did policymakers tackle and struggle with during these proceedings? How were these issues first addressed by world leaders? What lessons can be learned and which are valuable for policymakers today?

### 1. FROM HISTORICAL BACKGROUND TO CURRENT CONTEXT

Securing cables has been paramount and top of mind ever since cables came to be. In fact, within hours of the first cable becoming operational across the English Channel in 1850, French fisherman caught the cable and cut out a portion, thinking they had found an exotic form of seaweed with a gold core.

In 1858, in the first trans-Atlantic communication ever relayed, U.S. President James Buchanan asked British Queen Victoria “will not all nations of Christendom spontaneously unite in the declaration that it shall be forever neutral, and that its

communications shall be held sacred in passing to their places of destination, even in the midst of hostilities” ?

Not until 1882, almost 25 years, would Buchanan’s question be formally addressed as the proceedings to create a Convention to protect cables began underway.

In that time, there were significant differences between the terrestrial and the submarine telegraphs: the former had cost less to establish and were more easily maintained and restored than the latter; they were sufficiently protected, in times of peace, by positive law; in time of war, their destruction was limited to the countries which were the theatre of military operations

and could result in a global interruption of communications; at peace, recovery could be done very quickly [1].

The protection of submarine cables was, on the contrary, insufficient even in time of peace, because of the very nature of the sea, which was not under any state's sovereignty or jurisdiction; their destruction would also have consequences of exceptional gravity. An example was given in the proceedings: if the cables that connected Europe to North America were to be destroyed, not only would that constitute an attack on very important and respectable property, but also a deprivation for the two whole continents: of a mode of communication that had become a necessity for both individuals and governments.

Thus began an extensive historical process to protect the network [2]:

- As a first step, an international convention was signed in 1863 by France, Portugal, Brasil, Italy and Haiti in order to recognize the neutrality of telegraph lines between the signatories, but it was never applied;
- In 1869, the American government suggested to organize a conference in Washington to discuss an international convention (the draft was transmitted to other States and was welcomed by everyone except by Great Britain);
- The demand for international talks was revived by Norway during the 1871 International telegraphic conference in Rome but was not continued, because it went beyond the scope of the conference.
- Private sector luminaries, such as Cyrus Field, known to be at the origin of several telegraphic companies, and Samuel Morse, vowed that submarine cables be considered at all times as a "sacred thing", "protected by

unanimous consent against any harm or damage";

- At the 1874 Brussels Conference, on the initiative of Russia, land and submarine telegraphs were discussed in order to regulate the use of war, although this was very limited in scope. A new opposition of Great Britain was encountered in focusing on maritime issues in that context.
- In 1879 began a new session in Brussels. The French proposed to set up an international conference on the protection of submarine cables.

The issue of the protection granted to telegraph lines thus occupied public opinion for twenty years, and even called the attention of "statesmen".

Many of these issues still ring true today, maybe more so than ever, as the interruption of traffic flow by cable destruction would not only impact the nations who are connected, but all global network traffic that is transmitted through it. There is therefore a general interdependence, between places around the world but also between maritime and cyber spaces.

Given that these proceedings from the 1880s were the international community's first focused attempts, writ large, to determine the best ways to protect this vital infrastructure [3], collectively they can offer policymakers unique insight on past security considerations and proposals that may benefit the current discourse on their protection

- The first session, during which preliminary discussions for the elaboration of the convention were held, comprised 8 meetings.
- The second session took place later and focused on the missing signature of member-states and the

enforcement of the 1884 convention into national law.

Most of the talks focus on the technical and legal aspects of the convention (severity of criminal penalty, interpretation and wording for each article...). The introducing remarks are, however, meaningful. Among them, the main ideas are the following:

Firstly, the network is viewed as recent infrastructure (last quarter century) worth several billions. The importance of the submarine network for governments and people, allowing for the instant transmission of critical information, is already outlined: weather forecast saving fishermen's lives; legal information permitting cooperation between jurisdictions across the world in order to arrest criminals; commercial communication contributing to developing economic relations between continents and, thus, to establish world peace.

The lack of legal protection is also highlighted, as well as the States' continuous efforts to remedy it since 1863. The principle of an international understanding to safeguard submarine cables was recognized by States through several historical attempts; however, the mission of the conference was to work towards this permanent and unfinished goal.

Finally, the participants refer to The Hague conference - focusing on electricity - where the assembly adopted a resolution stressing that the importance of the permanence of telegraphic communications was highly recognized by States and that governments should have to take efficient measures to protect submarine cables for the future.

## 2. LESSONS LEARNED

Nine lessons for today emerged from our reading of these old proceedings:

**Lesson 1.** The undersea network must be seen as a common issue: its utility in the

telegraphic age was already recognized, as it could benefit everyone – companies, governments and individual –, introducing dual and public/private dimensions during the discussion. That rings truer than ever in the optic fibre age;

**Lesson 2.** Multilateralism in the processing of international information and communication technology issues appears more efficient than in some other fields (the International Telegraph Union was for example the first technical intergovernmental organization to be created). It encouraged the discussion on protecting the undersea network. At a time when the crisis of multilateralism is heightened, intergovernmental discussions on the topic of Internet and its physical aspects could save this model of cooperation;

**Lesson 3.** National interests, however, seemed to be the main obstacle to the establishment of an international convention protecting transnational infrastructures. In the 19th century, freedom of action to be preserved in time of war was viewed as the centerpiece of national interests; Since 2014 States have shown new expressions of interest on the network (such as the presence of Russian ships near undersea lines, as mentioned by the media; disclosure was made of the National Security Agency tapping them...);

**Lesson 4.** Historically, Great Britain was the principal opponent to the goal of common protection, supported mainly by the United States of America and by France: as a leader on the network, the British Empire wanted to preserve its dominance; Nowadays new American private actors are entering the market, enhancing the US position on the sector and on the Internet... Could that impede a new global discussion on the undersea infrastructure?

**Lesson 5.** In comparison to other types of infrastructure, the undersea network is specific: it must be divided into segments. In

1884, a distinction was made between the high seas, national waters and the territorial part of the network. These distinctions impacted the subsequent discussion. This segmentation still prevails in the current legal status of submarine cables (and even more complex with the Economic Exclusion Zone and the Area) and thus still appears relevant in relation to the actual physical characteristics of the network and future evolutions on maritime spaces and activities;

**Lesson 6.** In the apprehension of risk analysis on the telegraphic network, a distinction was made between natural and human damages and between accidental or voluntary damages to the system, in order to enhance their protection. It emphasised the need to share data on the causes of damage between actors and showed the proportion of voluntary damages versus accidental damages encountered. Facing new issues (terrorism, piracy, cyberattack...) and new technologies (autonomous underwater vehicles, remotely-operated underwater vehicles...), a new convention may focus on such a typology at the logical or the physical level, and may require better information sharing. Moreover, the proportion of accidental damages versus voluntary damages doesn't appear to have changed, suggesting improvements in the protection against different types of damages;

**Lesson 7.** There was already evidence for the increasing number of maritime activities on sea and of cables on the seabed, anticipating new difficulties; the current trend calls for an equal amount of attention. The development of offshore activities or the commercialisation of autonomous vehicles may have interactions with submarine cables. It can also point to environmental issues.

**Lesson 8.** In the high seas, the relevance of the flag state versus the *hostis humani generis* (piracy) status was also questioned to improve the protection of cables. With some

case of piracy put in light, we can expect a new debate on how to improve the protection of lines and cable ships in the high seas and the enforcement of infractions (for example through the cooperation of the navies).

**Lesson 9.** Whereas only 27 governments met in 1884 to protect submarine cables, 157 States are now signatories of the United Nations Convention on the Law of the Sea (UNCLOS) [4], which included most of the features of the 1884 Convention [5] (noting that the US are not). However, Nations concerned by the preservation of the network (economically or socially) are ever more numerous. As nations are required to provide criminal and civil sanctions for negligent or intentional actions which cause injury to a submarine cable, it is necessary 1) to expand the number of States Parties concerned by the protection of submarine cables and 2) to conscientiously follow the implementation of protection measures, as was done during the 19<sup>th</sup> century by the French administration, notably to harmonize the national level of protection regimes.

### 3. CONCLUSION

Nation States need to address cable security formally with representatives, given that its importance has continuously increased. In particular; keeping open the option to cut submarine cables in wartime has weakened the community's ability to protect these systems in their entirety and allowed for nations to exploit weak security for military gain/advantage.

Nation States also haven't grown much since these day with protection of critical infrastructure and cyberspace; but they need to lest they fall into similar international agreements that don't have teeth and let nations decide when or where they can harm these vital systems.

The 1884 Convention then, aside from being weak with little enforcement, shows the

problem of keeping exploitation and military advantage codified in a legal regime. The Convention has been in force over 125 years and it has not worked well to protect these systems globally as it was designed.

To address this gap, new types of governance or initiatives may be introduced. Could a model based on the 2018 Paris Call for Trust and Security in the Cyberspace be relevant to ensure the specific material layer of the cyberspace?

[1] V. Perdrix, « Les câbles sous-marins et leur protection internationale », Thèse pour le Doctorat, 1903.

[2] V. Perdrix, « Les câbles sous-marins et leur protection internationale », Thèse pour le Doctorat, 1903.

[3] Conférences internationales pour la protection des câbles sous-marins, Procès-verbaux, Paris, 1882 et 1886-1887.

[4] United Nations Convention for the Law Of the Sea, 1982, Montego Bay.

[5] Convention for the protection of Submarine Telegraph Cables, 1884, Paris.