

Eight Myths About Undersea Cables

***And Strategies for Dispelling Them to
Achieve More Reasonable and Rational
Regulation***

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Presenter Profile

Kent Bressie is a partner with the law firm of Wiltshire & Grannis LLP in Washington, D.C., USA. An expert on telecommunications regulation and international trade and investment, Mr. Bressie regularly represents undersea cable operators, wireline and wireless carriers, and infrastructure suppliers in all aspects of their businesses, including communications and environmental permitting, market access and foreign investment, national security and law enforcement, export controls and economic sanctions, corporate and commercial transactions, and the law of the sea.



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Overview

1. Background
2. Myths About Undersea Cables
3. Who Is Misunderstanding?
4. Core Messages and Practical Strategies

1. Background

- **History of misunderstandings and misrepresentations dating to the 1850s**
- **Contribution of misunderstandings to flawed regulations and policies**
- **Insufficiency of legal- and treaty-based arguments as remedy**
- **Need for developing political and economic case for reasonable and rational regulation**

2. Myths About Undersea Cables

Myth 1: Satellites, Rather than Undersea Cables, Provide Most International Communications Capacity

- **Or, undersea cables are an old technology that is being replaced by satellites**



Myth 1 (cont'd)

Misunderstanding

- Undersea cable operators are in some ways victims of the space age, when rockets captured the public imagination and governments started to invest heavily in the development of communications satellites long before they became commercially viable.

Reality

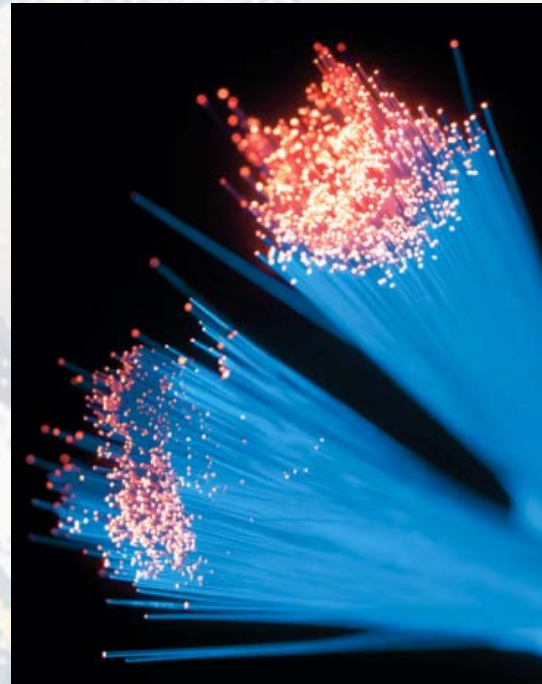
- More than 95 percent of international Internet, telephone, and data traffic is transported by undersea cable, a percentage that continues to increase over time.
- More than 1 million km of fiber-optic cable installed globally.
- Undersea cables are both the old and the new technology, with transoceanic telegraph cables dating back to the 1850s and fiber-optics revolutionizing communications in the 1980s.

Myth 1 (cont'd)

Consequences

- This lack of appreciation of the primacy of undersea cables leads government officials and public to believe that undersea cable-related issues are not a priority and increasingly irrelevant.
- Undersea cable operators, infrastructure providers, and service providers are left out of policy discussions and underrepresented on governmental bodies addressing national security, economic, and environmental issues

Myth 2: Wireless Is Better than Wired



Myth 2 (cont'd)

Misunderstanding

- Undersea cable operators are also in some ways victims of the wireless revolution, where the mobility advantages of wireless devices are overgeneralized to apply to network infrastructure.

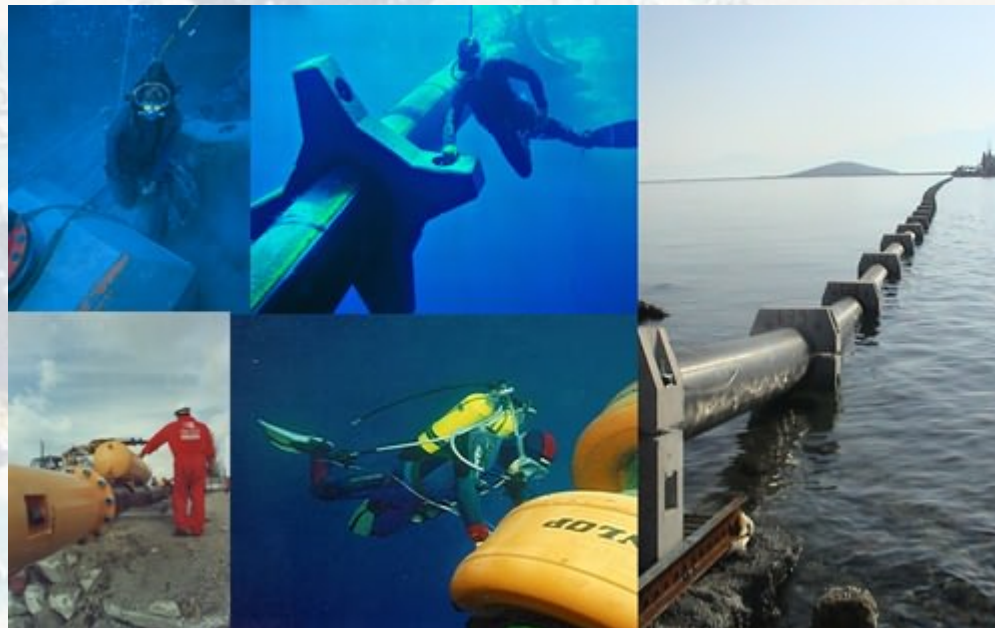
Reality

- For long-haul capacity, fiber-optics offer greater capacity, reliability, and adaptability.
- Undersea cables are also enablers of the wireless revolution, providing critical backhaul for virtually all terrestrial wireless networks.

Consequences

- Similar to those associated with Myth 1.

Myth 3: Undersea Cables Are Huge, with a Diameter of Half a Meter or More



Myth 3 (cont'd)

Misunderstanding

- Most government officials and the public have no knowledge about the appearance, scale, or components of undersea cables.
- Most assume that undersea cables resemble pipelines used to transport oil and gas.

Reality

- Unarmored undersea cables have the diameter of 17-21 mm (roughly that of a garden hose) and consist mostly of materials designed to protect the optical fibers at the core or conduct power.
- Even the most heavily armored cables have 40-50 mm diameter.

Myth 3 (cont'd)

Consequences

- This lack of understanding about the scale and components of undersea cables contributes to inappropriate assumptions about
 - the environmental impact of undersea cables, and
 - the invulnerability of undersea cables.

Myth 4: Undersea Cables Have Something To Do with Submarines



Myth 4 (cont'd)

▪ **Misunderstanding**

In many languages, undersea cables (or submarine cables) share terminology with submarines—watercraft capable of operating below the water's surface.

- Arabic (غواصة / الغواصة الكابل)
- Dutch (onderzeese kabel / onderzeeër)
- French (câble sous-marin / sous-marin)
- Hindi (पनडुब्बी केबल / पनडुब्बी)
- Italian (cavo sottomarino / sottomarino)
- Portuguese (cabo submarino / submarino)
- Russian (подводный кабель / подводная лодка)
- Spanish (cable submarino / submarino)
- Swahili (manowari cable / manowari)
- Thai (สายเคเบิลเรือดำน้ำ / เรือดำน้ำ)
- Turkish (denizaltı kablosu / denizaltı).

Myth 4 (cont'd)

Reality

- Undersea cables and submarines wholly distinct
 - Submersible vessels are sometimes used in the installation and repair of undersea cables.
 - Historically, submarines have been used in undersea cable espionage.

Consequences

- Fundamental confusion about what an undersea cable is.
- Suggestion that undersea cables are military tools.

Myth 5: It Takes Many Years to Install an Undersea Cable



Myth 5 (cont'd)

Misunderstanding

- Even sophisticated regulators assume that the development horizon for a new undersea cable is closer to that for a commercial satellite—10 years.
- Part of this misconception results from a lack of understanding of how undersea cables are installed.
- Many government officials and the public assume that undersea cables are installed by divers working on the sea floor, rather than by cable ships on the surface.

Myth 5 (cont'd)

Reality

- In fact, a trans-Pacific system can be installed in about 6 months, with a total project time from conception to commercial launch of as little as 18 months.

Consequences

- Government policymakers and regulators lack a sense of urgency in dealing with undersea cable-related matters, which can greatly delay deployment (e.g., missed weather windows) and jeopardize financing.

Myth 6: Installation and Operation of Undersea Cables Is Harmful to the Environment and Marine Life

Myth 6 (cont'd)

Misunderstanding

- Cables are often grouped with other marine industrial activities that use toxic materials, pollute, and injure marine life, including oil and gas development and other vessel operations.
- In many countries, commercial fisherman have succeeded in characterizing undersea cables as “dirty industry” in order to protect their own commercial interests, when in fact commercial fishing itself is far from environmentally benign.
- Dated information about telegraph-era entanglements with marine mammals

Myth 6 (cont'd)

Reality

- Although subject to extensive environmental reviews, the impact of undersea cable projects is essentially benign.
- Undersea cables are made from non-toxic materials that present little risk due to leaching. In fact, in some cases, disused cable has been incorporated into artificial reefs. Marine life gravitate toward cables.
- Cable installation and repair, including route clearance, plowing, jetting, and grappling, are far less damaging than other marine activities such as trawling, and are also one-time or occasional activities.
- Cable ships cause no more air pollution than other vessels and pose none of the pollution risks of oil and gas development or the commercial cruise-ship industry.
- Commercial fishermen are far more likely to injure marine life.

Myth 6 (cont'd)

Consequences

- Undersea cable-related activities are grouped with other industrial activities that use toxic materials, pollute, and injure marine life; contributions to misunderstanding that commercial fishing is environmentally benign and that in the case of disputes, commercial fishing interests should be favored.

Myth 7: Most undersea cable damage results from shark bites and technical malfunctions



Myth 7 (cont'd)

Misunderstanding

- Fascination with sharks and basic awareness of shark sensitivities to electricity results in a belief that cables are shark magnets.

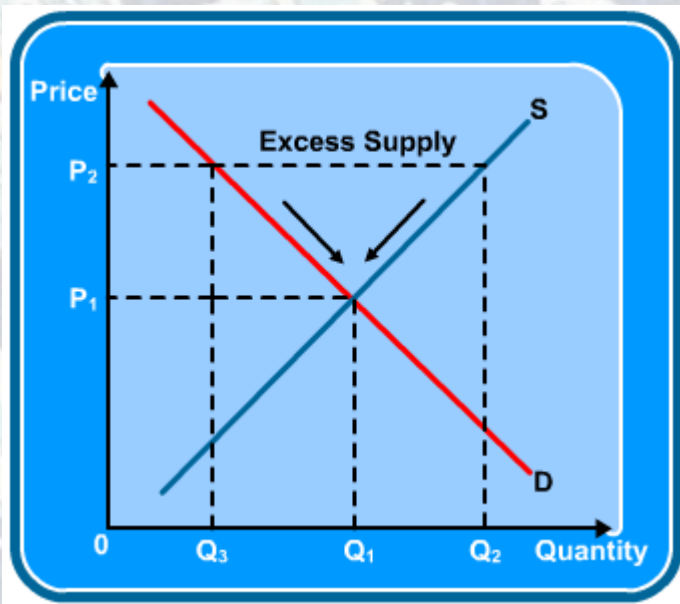
Reality

- Although shark bites do occur infrequently, commercial fishing and shipping/anchoring activities account for the vast majority of faults and damage to undersea cables.

Consequences

- Real threats to undersea cables discounted and escape effective regulation or penalties.
- Protection-zone and exclusion-zone proposals lack support and resources.

Myth 8: An excess of undersea cable capacity means that no new construction will be needed for many years.



Myth 8 (cont'd)

Misunderstanding

- Market collapse in 2001-2002 led many to believe that there was a demand mirage and that routes had been overbuilt for decades to come.

Reality

- Although there is little trans-Atlantic activity, there is significant new construction in Africa, South and East Asia, the Pacific, and the Caribbean.
- YouTube, video applications, and Internet content continue to grow exponentially.

Consequences

- Assumption that market is dormant results in harms similar to those for Myth 1.

3. Who Is Doing the Misunderstanding?

- Legislators
- Communications regulators and policymakers
- Environmental and land use regulators
- Trade negotiators
- Taxation, customs, and immigration authorities
- Public at large
- Others

4. Core Messages and Practical Strategies for Educating Policymakers, Regulators, and the General Public

Core Messages

- Primacy of undersea cables in carrying telephone, data, and Internet traffic
- Appearance, capacity, reliability, and scalability of undersea cables
- Rapid deployability of undersea cables
- Benign environmental impact of undersea cables
- Principal threats to undersea cables: commercial fishing operations and anchors
- Continuing and escalating demand for undersea cable capacity

Practical Strategies

Be Proactive

- Don't wait until there is a problem before starting to explain the undersea cable business and technology.

Practical Strategies (cont'd)

Develop and disseminate statistics, studies, and real-world illustrations to support primacy of undersea cable infrastructure, its importance to national security and the economy, and its benign environmental impact.

- In some cases, this data is used only within the industry.

Practical Strategies *(cont'd)*

Get Government Officials and Commercial Partners Out in the Field

- Tour a cable ship
- Tour a cable station

Practical Strategies *(cont'd)*

Use Props to Illustrate the Business

- Cable samples
- Cable maps

Practical Strategies *(cont'd)*

Use Treaty and International Law Arguments Carefully

- Know your context
- Be aware that such arguments can be seen as an affront to national sovereignty

Practical Strategies *(cont'd)*

Use Current Events as Educational Opportunities

- Earthquakes
- Cable cuts

Practical Strategies *(cont'd)*

Capture the Public's Imagination

- Museum exhibits
- Television programs
- Strategies for reaching younger generation, including social networking (e.g., Facebook), YouTube, and video games

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