European Subsea Cables Association (ESCA)

Subsea Cable Security Frequently Asked Questions (FAQs):

Introduction

The European Subsea Cables Association (ESCA) is an organisation of submarine cable owners, operators and suppliers. The primary goals of ESCA are the promotion of marine safety, protection of the marine environment and the safeguarding of subsea cables from man-made and natural hazards.

The subject of cable security and threats of intentional damage to submarine cables by hostile states is often discussed in the media, and ESCA has put together some frequently asked questions to address some of the issues raised.

It is against UK, EU and International law to wilfully or negligently damage a subsea cable (Submarine Telegraph Act 1885, United Nations Convention on the Law of the Sea (UNCLOS)).

FAQs:

1. *Underwater communications cables can be damaged or disrupted in many different ways. Is malicious sabotage common? If not, what are the more common causes of cable damage?*

   Malicious damage is uncommon. The most common cause of cable damage is through inadvertent contact with fishing gear or ship's anchors. Other less frequent causes include abrasion, equipment failure, and damage arising from natural events such as submarine landslides sometimes triggered by earthquakes in those parts of the world prone to such activity, so less likely in European and surrounding waters. The cause of damage to a cable is usually determined with a high degree of certainty.

2. *Is sabotage from a hostile state, or interference from any other malicious actor a new threat? Or is this issue something ESCA has been aware of for some time?*

   No, historically communication cables have been targeted in times of war to interrupt vital communications (e.g, see: https://www.bbc.co.uk/news/world-europe-42367551). The threat of interference is not new and the question has been raised many times over the last decade. Although intentional sabotage may be viewed as a "possible" threat, cables are at a far greater risk of being damaged

by the very real threat of fishing and anchors, or other natural events and human activities.

3. *How much disruption could be caused by sabotage to subsea cables; is there a significant risk of potential outages to communications and the Internet?*

   This depends on the number of cables impacted versus the number of cables available. For instance coastal European nations and the UK in particular are very well served by multiple cables, whereas small island communities may rely on fewer or even a single cable where an outage can be much more disruptive.

4. *What mitigation efforts are in place to prevent such disruption -- be it from sabotage or other causes?*

   - Network resilience and diversity are the principal safeguards for traffic continuity.
   - Monitoring vessel activity around cables through tracking of identification signals is widely employed. The records provide an evidence base of cause, serving to discourage potentially harmful activity close to submarine cables.
   - Data from the cable awareness project KIS-ORCA is made freely available to fishermen to enable all fishing plotters to be loaded with up-to-date cable position data. This promotes maritime safety to avoid snagging incidents and enables fishermen to avoid submarine cables.
   - Close liaison with government enables the industry to ensure that the issues relating to either accidental or intentional damage are well understood.

5. *Is there greater worry about tapping undersea cables to illegally access communications/data or about damaging cables to disrupt communications?*

   Sabotage to cables is rare in any event, but it is highly unlikely to be possible to 'tap' a submarine cable without immediate detection. Therefore, as a sabotage technique it would be impractical.

6. *Is there heightened awareness and more focus on security (physical and digital) of subsea cables than before?*

   The industry remains aware of the potential for sabotage, however the focus of cable protection is on the real risks of inadvertent or accidental damage. The diversity and resilience of undersea networks seeks to ensure that in the event of sabotage, any disruption would be kept to a minimum.

ESCA February 2022

For any further queries please contact secretary@escaeu.org

https://www.escaeu.org/