

Undersea, Under Contest

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Over the past 500 years, no nation or empire has achieved global leadership without mastering the oceans—fielding a global navy and the commercial capability to transport goods, energy, and information around the world. The largest empire in history is a testament to this fact. What held the British Empire together was a series of maritime linkage systems; foremost among them the Royal Navy, the merchant marine, and a worldwide, all-British network of undersea telegraph cables.

The digital age has evolved this concept. Information transport is now more vital than ever, and high-speed access to data and data integrity have emerged among the most critical elements of economic prosperity and national power. Yet while communications technology has dramatically improved, from copper wire to optical fibers, our reliance on physical cables on the ocean floor remains. A mere 550 undersea cables enable over 95% of global data transmission, providing the backbone for the global internet, sensitive government and military communications, and trillions of dollars in daily financial transactions.

Despite their critical role, however, undersea cables are highly vulnerable. International law offers them limited protection, their locations are often publicly documented, and physical tampering is difficult to attribute. These vulnerabilities make them attractive targets for sabotage and espionage, and our increasing reliance on digital communications elevates these risks.

Historically, the U.S. and its allies oversaw much of the world's undersea infrastructure, ensuring the security and neutrality of global data flows. However, since 2015, undersea cables have become an essential element of China's Digital Silk Road initiative and maritime strategy. While some argue the U.S. maintains its dominant position, an analysis of open-source data from the telecom and maritime sectors reveals China's influence over international data flows is significant and expanding:

- (1) HMN Technologies, a Chinese state-owned company founded in 2008, has become the world's fastest-growing undersea cable supplier and ranks fourth globally. While it started with smaller projects for less-served regions, it now boasts massive undertakings like the PEACE cable project, which stretches 21,000 km to link Southeast Asia, the Middle East, and Europe.



- (2) Chinese state-run telecom companies own or have significant stakes in about 20% of all global cable networks. Notably, many of these cables were initially supplied by U.S. or U.S. partner nation firms and reach well beyond China's borders. China Mobile, for example, is a major investor in 2Africa, a 45,000 km cable project encircling Africa, connecting the continent's 1.4 billion people to Europe and the Middle East.



- (3) Maintenance agreements and cabotage laws further increase China's influence. Through firms like SB Submarine Systems (SBSS), a predominantly state-owned joint venture, China has significant physical access to cable networks. In the past twenty years, SBSS has installed or maintained cables spanning 250,000 km—many belonging to U.S. or U.S. partner nation firms. And lately, Chinese authorities have begun ensuring that only Chinese firms using Chinese-flagged vessels manage cables in the South China Sea.



- (4) Chinese state-owned maritime logistics firms operate in nearly 100 overseas ports, with thirty-seven co-located with key cable landing stations. Composed of clusters of cables making landfall at a single point, landing stations are choke points. A physical attack on a single station could have devastating effects, and history has proven these sites to be intelligence goldmines. Still, many have minimal physical security.



China's growing influence over global undersea cables raises serious concerns. First, China's access paves the way for data surveillance and espionage, especially when Chinese laws compel firms to support national intelligence efforts. Second, China's dominance over some cable networks, especially in the South China Sea, provides the power to cripple essential communication lines during conflicts. Third, control over global communications infrastructure allows China to exercise significant economic influence on the global stage. Finally, control over these data highways could be leveraged to dictate the flow of information, shaping global narratives, and potentially stifling opposing voices.

In the face of China's expanding influence over global undersea cables, America must reaffirm its leadership in this sector to ensure a secure and transparent global internet. The U.S. should prioritize enacting the Undersea Cable Control Act as an initial measure. This legislation would prevent Chinese entities from accessing advanced cable technologies, protecting America's technological edge. Furthermore, the U.S. should reinforce its commercial partnerships and expand investment opportunities in the South Pacific, leveraging longstanding ties with partners such as Australia and Japan, ensuring the region's future infrastructure is built upon trusted cable systems.

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