

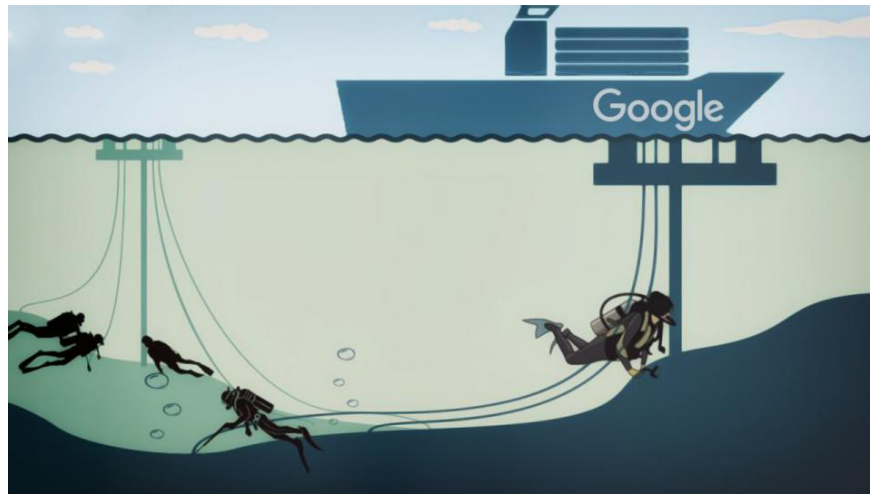
13 unexpected facts about sea cable routes

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Cable lines play a very important role, being like the 'backbone' of the global Internet. Every second there are millions of emails sent, billions of clicks and Internet searches. If all of the world's sea cables are broken, the whole world will be paralyzed immediately.

Here are 13 little-known facts about marine cable routes around the world.

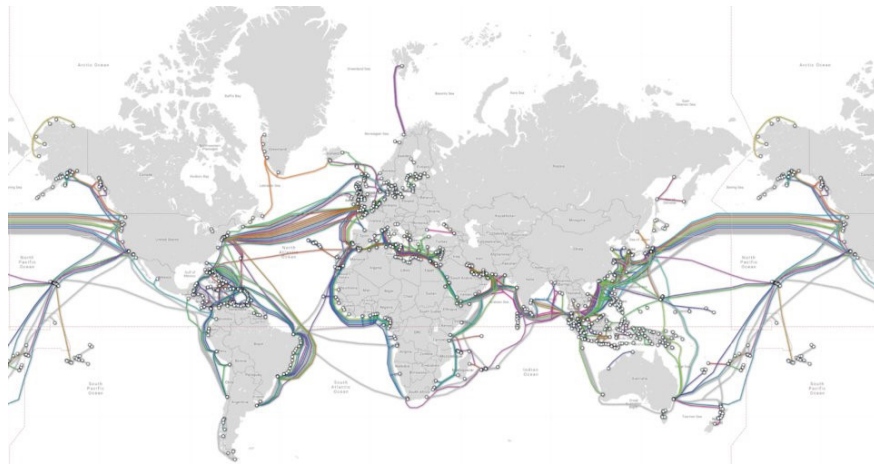
1. Most of the Internet connection on Earth originates from underground cable and sea cable around the world, less than 1% is connected by satellite.



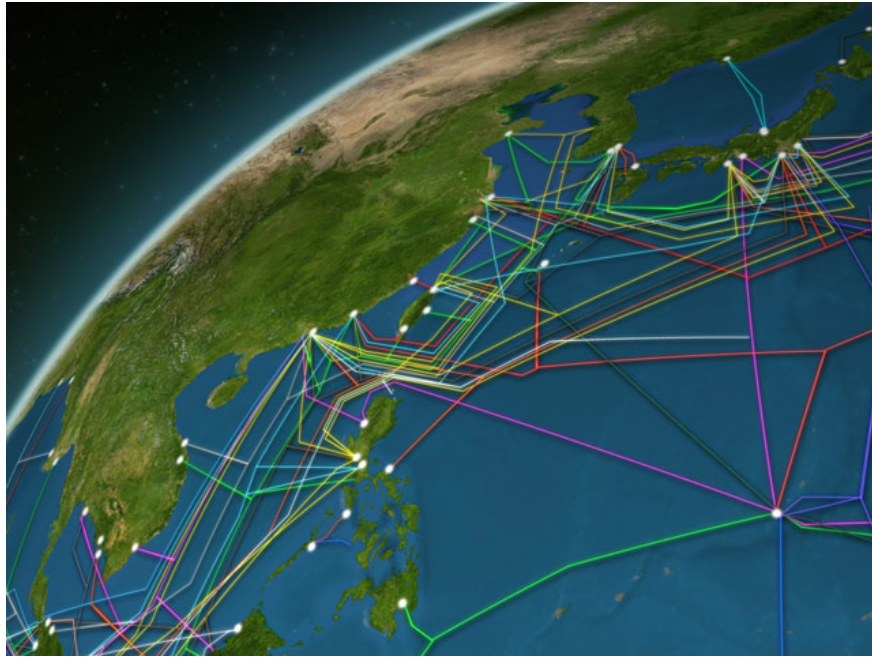
2. Basically, the Internet transmits information between Internet addresses (what devices you are using to connect to). Any information transmitted via the web is transmitted to the Internet data server at data centers around the world. In 2008, there were about 9.5 trillion gigabytes of data going through servers around the world.



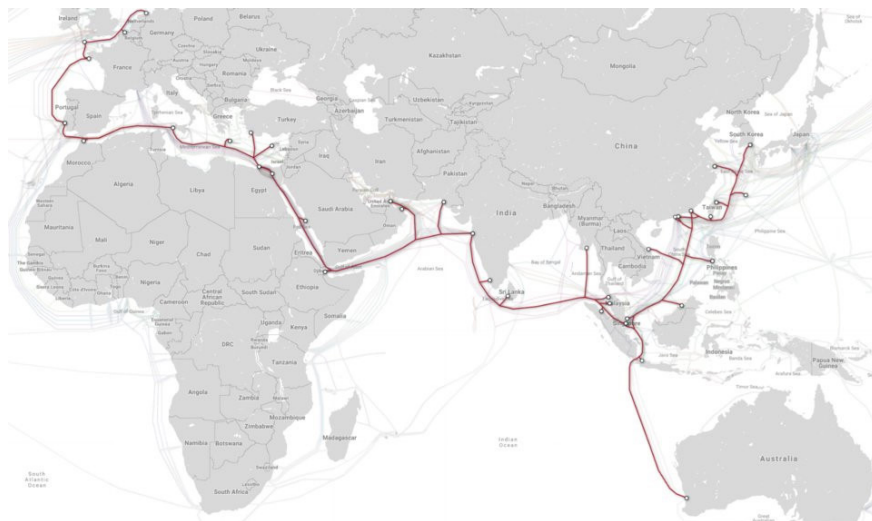
3. Almost all information is transmitted through intercontinental cable routes hundreds of thousands of kilometers below the ocean floor. The entire Internet traffic in the world is almost entirely based on marine cables because they are faster and cheaper than satellites. However, it takes people at least 200 years to finish building marine cable routes across the ocean.



4. The Internet today is built from 300 sea cable routes with a total length of nearly 900,000 km. 97% of intercontinental data is transmitted through these cable routes.



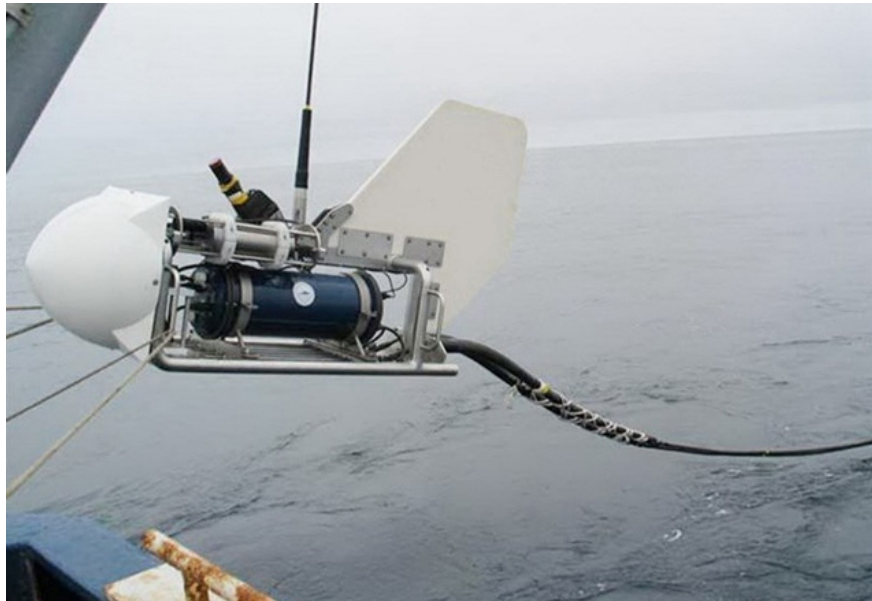
5. The world's longest marine optical cable is the SeaMeWe-3 marine cable, which extends from Germany to South Korea and even further south to Australia. This cable route is about 38,624km long, connecting 39 different destinations along the way.



6. Large-sized cable-laying ships are tasked with building sea cable lines. It will take several months for millions of dollars to build a sea cable. Some cables are buried 7.6 km below sea level to avoid tsunamis, corrosive, accidentally caught in fishing nets .



7. When the cable is in trouble, special ships will pull that cable up, repair and drop it back into the sea. According to the MIT Tech Review data, the Atlantic Ocean alone has at least 50 broken cables each year.



8. Offshore stations are the end point of the sea cable, the next journey is of underground cable lines. Most underground cables often follow the national transport infrastructure such as the main transport axis or the railway.



9. Compared to sea cable, underground cable is much easier to construct and maintain. However, they may still experience problems from natural disasters such as earthquakes.



10. The end of underground cable lines are data centers in isolated, unmarked buildings, away from residential areas, very strictly protected with multiple layers of security checks.



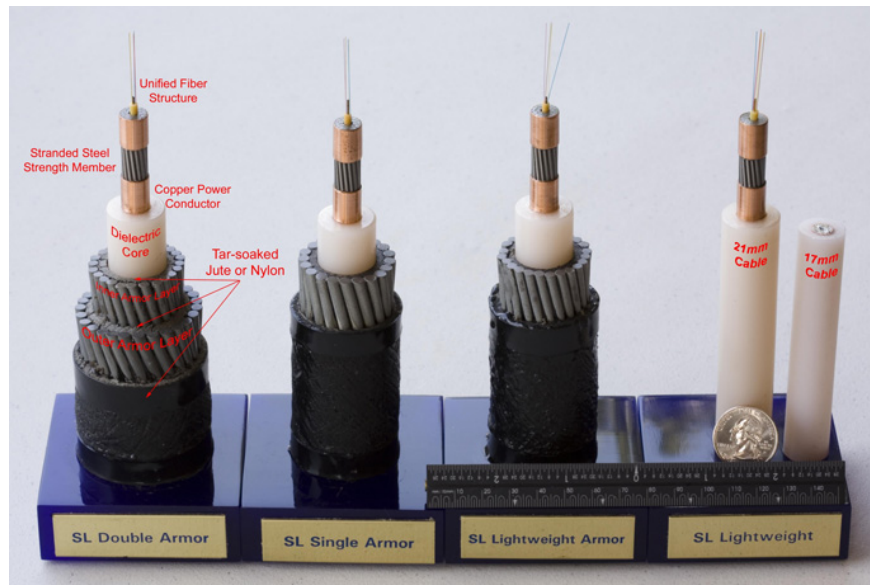
11. Data centers are often located in buildings with ceilings higher than 4 meters because of the huge heat generated. They consume huge amounts of electricity. It takes up to 20 megawatts of electricity to run at full capacity, equivalent to the amount of electricity used by 3,000 households for North Carolina data centers. Apple had to build two 40-hectare solar areas to meet demand.



12. Sea cable routes in the world have a total length of twice the distance from the Earth to the Moon and then wrap around the Earth's wide point nearly 3 times.



13. Under water there are many different types of cables used. They have different thicknesses and diameters. The lightest cable (right) is placed mainly on the deep ocean floor.



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2. Why do sharks like to bite sea cable?

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