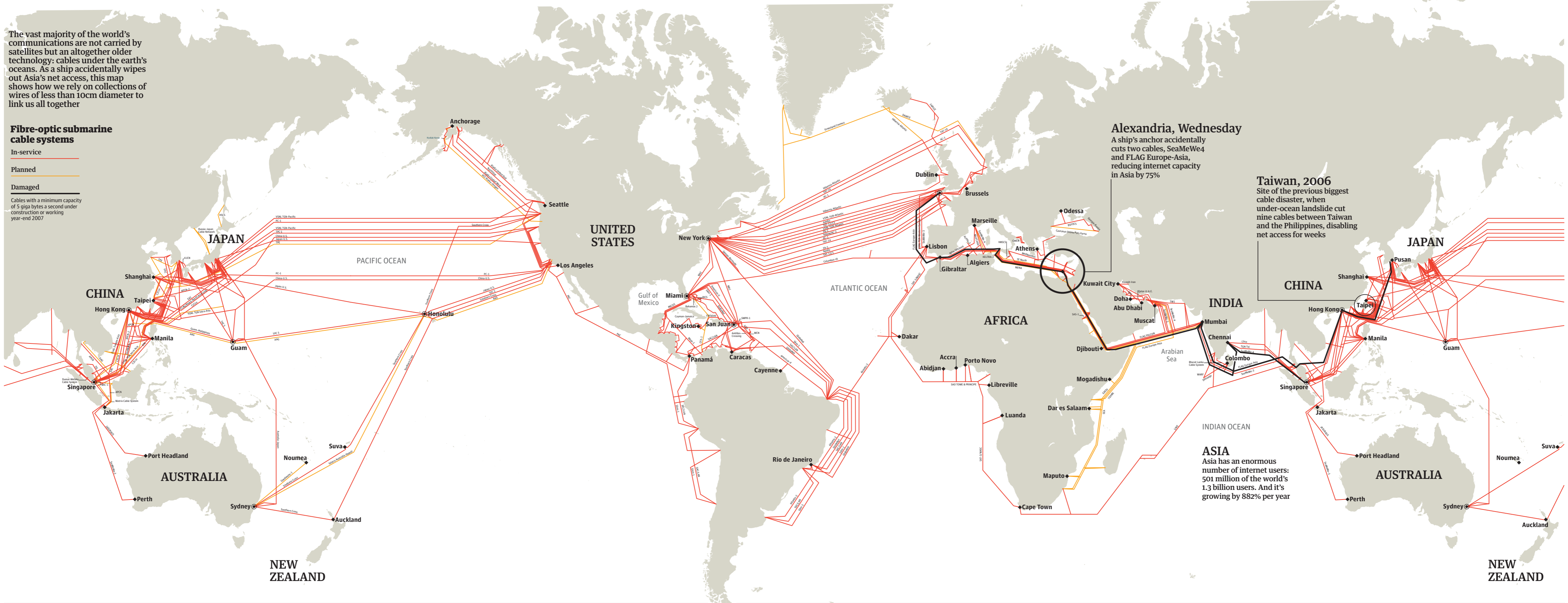


# The internet's undersea world

The vast majority of the world's communications are not carried by satellites but an altogether older technology: cables under the earth's oceans. As a ship accidentally wipes out Asia's net access, this map shows how we rely on collections of wires of less than 10cm diameter to link us all together

**Fibre-optic submarine cable systems**  
 In-service  
 Planned  
 Damaged  
Cables with a minimum capacity of 5 giga bytes a second under construction or working year-end 2007

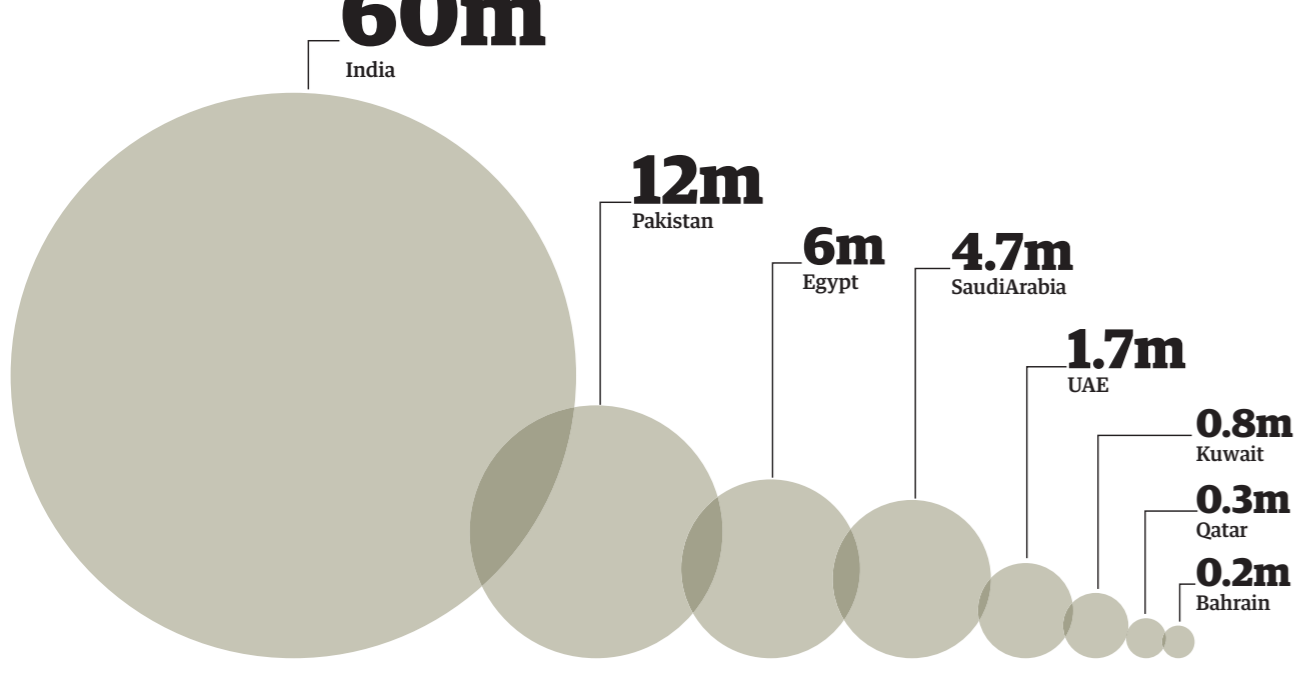


**Alexandria, Wednesday**  
 A ship's anchor accidentally cuts two cables, SeaMeWe4 and FLAG Europe-Asia, reducing internet capacity in Asia by 75%

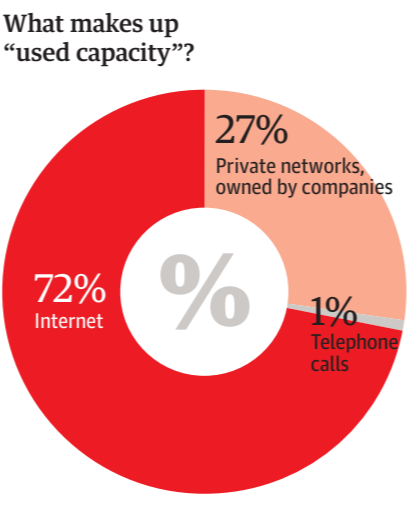
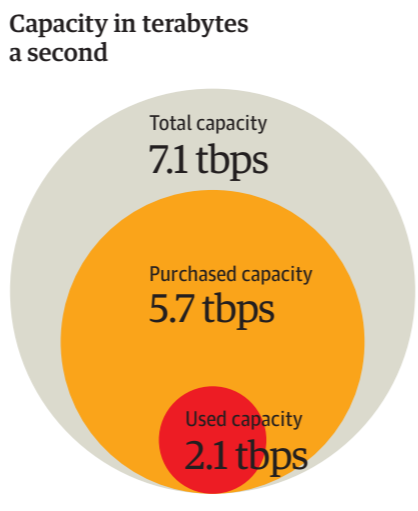
**Taiwan, 2006**  
 Site of the previous biggest cable disaster, when under-ocean landslide cut nine cables between Taiwan and the Philippines, disabling net access for weeks

**ASIA**  
 Asia has an enormous number of internet users: 501 million of the world's 1.3 billion users. And it's growing by 882% per year

## Internet users affected by the Alexandria accident



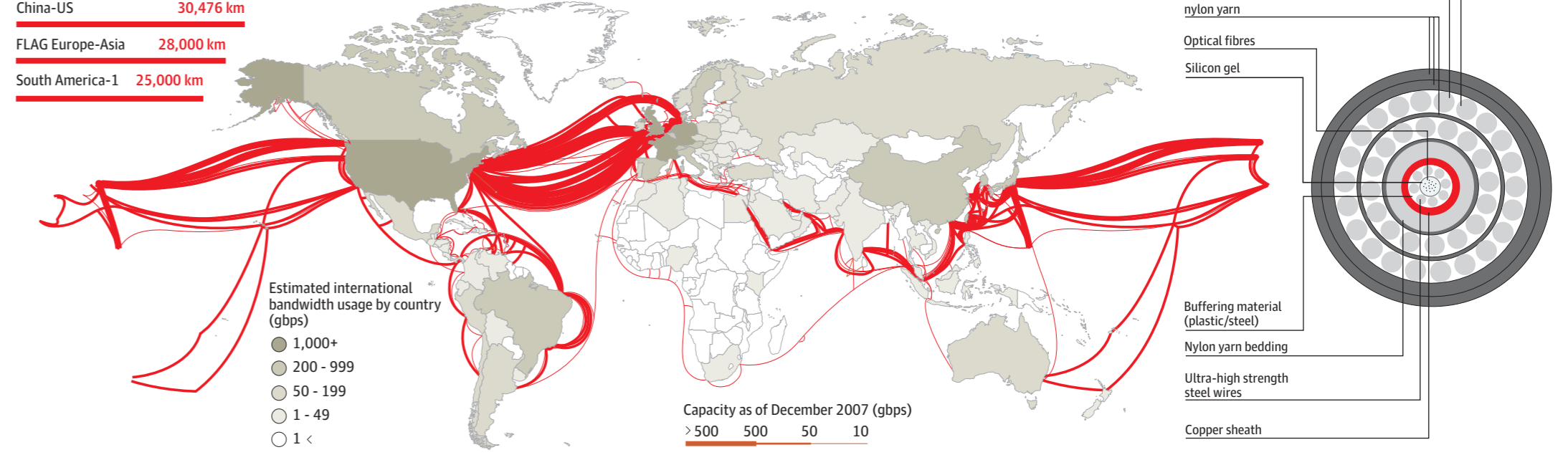
**World cable capacity**  
 Submarine cable operators light (turn on) capacity on their systems to sell bandwidth to other carriers. Carriers buy extra capacity, mainly to hold in reserve. On the trans-Atlantic route 80% of the bandwidth is purchased, but only 29% is used



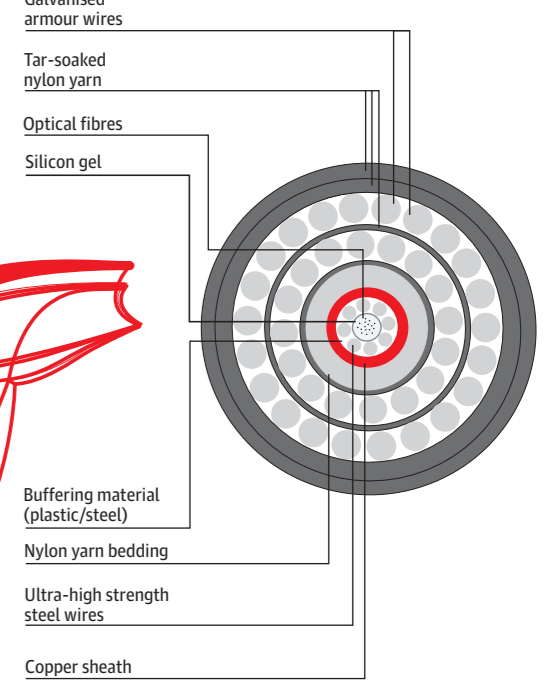
**The longest submarine cables**  
 The SeaMeWe-3 system from Norden in Germany to Keoje, South Korea connects 32 different countries with 39 landing points

SeaMeWe-3	39,000 km
Southern Cross	30,500 km
China-US	30,476 km
FLAG Europe-Asia	28,000 km
South America-1	25,000 km

**The world's cables in bandwidth**  
 The first intercontinental telephony submarine cable system, TAT-1, connected North America to Europe in 1958 and had an initial capacity of 640,000 bytes per second. Since then, total trans-Atlantic cable capacity has soared to over 7 trillion bps



**Cross-section of a cable**  
 Cables of this strength are typically 69 mm in diameter and weigh over 10,000 kilograms a kilometer. In deeper waters, lighter and less insulated cables are used



SOURCE: TELEGEOGRAPHY.COM SUBMARINE CABLE MAP 2008; INTERNET STATISTICS FROM INTERNETWORLDSTATS.COM