

# James Abela ELT

## **Asia's Internet Meltdown - Script**

Asia relies on a few fibre-optic cables to carry all of the Internet traffic and a lot of the region's telephony. These undersea cables pass through Taiwan to connect Japan, China and Korea to Southeast Asian countries such as Singapore and Malaysia. The quake at the end of December 2006 broke six cables and damaged a seventh. There were only three cables left that could connect Taiwan to the outside world and it meant that South East Asia was unable to use the route to connect to the US through Japan.

This may not sound like a lot, but it was enough to stop Internet services, cut phone lines and even interrupt financial transactions. Emergency measures were taken to improve the situation for high-priority traffic, but that left most home-internet connections at a speed that would have seemed slow in 1997, not 2007!

On a personal level it meant that I couldn't check my email for several days, use Internet telephony to talk to my family in England or update my Website easily. The good news for my Website readers is that because the Website is hosted in the UK, it was accessible to European and American readers and was considerably faster than American based sites for people based in Asia.

The question everybody is asking, is why did they build it through a quake area in the first place? And why didn't they put in more safeguards? The answer is of course is cost... It is the shortest route and they used a cheaper loop system. For minor breaks such as a shark taking a bite out of the cable or a fishing boat cutting it then this is sufficient, because you have two lines, one route to the destination and another back.

If the builders of the link had been more focussed on reliability then they might have used a mesh, such as that used in the Atlantic Ocean. A mesh provides a much more solid connection and it much more difficult to break...

So how are they going to fix the cables, well there are cable-repair ships that cost \$25,000 per boat per day. These boats have a grappling hook and pull the cable to the surface to inspect it for damage, then cutting out damaged sections and rejoining with new pieces. As you can imagine this is slow and highly specialised work. The boats have taken weeks to even get to Taiwan and it will take several more weeks to fix the cables properly.

Hopefully this lesson will encourage the builders of the 11,000 miles China to United States link to use a mesh design.