

# Peter Selway – Porthcurno Telegraph Museum

During the summer, whilst I was on holiday in Cornwall, I had the opportunity to visit the Telegraph Museum in the remote seaside village of Porthcurno. An old friend from semiconductor days is now the chairman of the trustees and took me on a personal tour, which was brilliant.

In 1870 Porthcurno began its life as an important centre of international communications, when the cable from Carcavelos, Portugal, was landed there. In this year a chain of telegraph cables linking Britain with much of the empire was completed. Some of the cables were laid by Brunel's SS Great Eastern. Between 1865 and 1874 she laid 26,000 miles of cable including 3,600 miles under the Indian Ocean.



The building shown, now the museum, was built in 1909 and housed all the transmitting and receiving equipment. The submarine cables came ashore and were connected to a landline cable in the Cable Hut at the top of the beach.



Porthcurno, also in 1929, began to operate world radio communications through a merger with Marconi's radio network. In 1934 the name changed to Cable and Wireless. At its height Porthcurno was the world's largest cable station with 14 telegraph cables in operation.

Across the road was another key activity, which was the training centre for the operators who had to be highly skilled at sending and receiving messages.

The operators also had to be excellent technicians since the equipment was very delicate, and in many places around the world these operators were the only technically trained people. Seeing all this made one realise what kind of 'colonial' life these enterprising young men (as they all were) were setting out for.

In WW2, being worried about the possibility of being bombed, the activities were relocated into underground caves excavated into the rock behind the building by Cornish tin miners. These caves now contain fascinating exhibits of all the many instruments developed over the years to communicate over the cables.

Although in the early days the equipment was similar to that used by land-based systems, including the railways, this was unsuitable for the very long distances and very weak signals encountered under the sea. The longest serving detector was the mirror galvanometer, which enabled a message speed of 5 words per minute over 2500 miles. Later inventions included a 'syphon' recorder which wrote the + and - signals directly with ink onto paper tape, making the operator's job much simpler, and simplifying the re-transmission on long routes. Eventually regeneration was used, allowing messages to be sent over concatenated links without accumulating errors.



The museum is very well set up for an interesting visit for all ages, including a room for presentations to groups, with many restored and attractive instruments and demonstrations. There are lots of hands-on activities for children. Photographs and artefacts abound, and for the serious enthusiast there is the Cable and Wireless archive, complete with a very helpful archivist.

One can only begin to understand what impact it had on the running of the British Empire when instead of it taking 6 weeks to get a message to the other side of the world, it could be received in 6 minutes!!