



## ICPC News Release

27 July 2016

### **ICPC reflects upon the start of the Global Cable Communications Revolution—150 Years Ago today**

LYMINGTON, United Kingdom—27 July 2016 marks the 150th anniversary of the laying of the first, fully operational submarine cable to span an ocean. Linking Ireland and Newfoundland, the Atlantic cable was symbolically the start of a global communications revolution that continues today. Modern submarine fibre-optic cables—which are the direct descendants of the 1866 telegraphic cable—now account for over 95% of all trans-oceanic communications and underpin the Internet. This latest development has profoundly changed society and economies.

The first trans-Atlantic cable was laid in 1858, but the joy and excitement that greeted its completion were short lived. After about 400 messages the cable unfortunately failed but there was some warning of its impending demise. Queen Victoria's message of congratulations to US President James Buchanan was only 94 words long but it took over 16 hours to transmit. Only 16 days after the Queen and the President had exchanged messages, the cable ceased operation.

Deployment of a new Atlantic cable began in 1865 from the legendary *Great Eastern*—at the time the largest ship afloat. Starting from Valentia Bay, Ireland, laying progressed until 600 nautical miles (1111 kilometres) from Trinity Bay, Newfoundland where the cable parted. Installation of another cable was attempted in the following year, again using the *Great Eastern*. This time the deployment was successful. The *Great Eastern* also recovered and repaired the 1865 cable to complete a second telegraphic link.



Queen Victoria and the US President (this time Andrew Johnson) again exchanged congratulations just before the much-needed commercial traffic began to flow across the Atlantic. This gave particular pleasure to the syndicated owners of the *Great Eastern*, who received about 50 messages regarding payment for services. The 1866 cable operated until 1872.

Such was the importance of the trans-Atlantic telegraphic link it was celebrated in the fresco by Constantino Brumidi that decorates the dome of the United States Capitol Building in Washington DC. Titled *The Apotheosis of Washington*, the fresco has a marine section depicting Neptune with trident, and Venus helping to deploy a submarine cable.



By the 1870s, cable design and operational techniques were advancing towards more reliable systems. Telegraphic cables were replaced in the 1950s by coaxial cables, which in turn gave way to fibre-optic systems in the mid-1980s. Each development was accompanied by exponential increases in the speed, volume and economy of cable traffic. Some of the early telegraphic messages across the Atlantic Ocean were transmitted at 10 words per minute and cost US\$2600 in today's money. By dramatic comparison, today's fibre-optic transmissions travel literally at the speed of light, carry vast amounts of data and cost a few cents for a lengthy phone call or YouTube download. And all of this has been achieved in 150 years.

Today, over a million kilometres of submarine telecommunications cable encircle the globe to connect the citizens of all continents bar Antarctica. The more than 150 members of the non-profit [International Cable Protection Committee \(ICPC\)](#), representing a community of interest embracing all organisations involved with submarine cables, act as the guardians of global connectivity in an increasingly connected world. We celebrate its beginning and look forward to its continued development.

To learn more about the 150<sup>th</sup> Anniversary of the first successful trans-Atlantic cable, the ICPC will be participating in the lecture [Annihilating Space & Time: 150 years of Transatlantic Telecommunication](#) at The Royal Institution in London, UK on 5 September 2016.

Also noted, Valentia Island, Ireland (one of the cable landings) recently held a two-week long tourist and cultural festival: "[Transatlantic Telegraph Cable Festival](#)" to commemorate the anniversary. On Wednesday, 27 July 2016, an unveiling of a sculpture as well as a live telecommunication link with Newfoundland to acknowledge the first successful message will take place. To watch an informational video, [click here](#).

#### **Sources:**

Burnett, D.R., Beckman, R.C. and Davenport, T.M. eds. *Submarine Cables: the Handbook of Law and Policy*. Martinus Nijhof Publishers. Chapter 10 pp. 237-254. ISBN 978-90-04-26032-0.

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Gordon, J.C., *A Thread Across the Ocean*. Simon and Schuster UK, 239pp.

#### **Image Credits:**

The sail/steamship *Great Eastern* laid cable from its stern as the vessel crossed the Atlantic Ocean. Source: Alcatel-Lucent Submarine Networks (ASN).

*The Apotheosis of Washington* painted by Constantino Brumidi. Source: Official Architect of the U.S. Capitol.

#### **About ICPC**

The International Cable Protection Committee was formed in 1958 and its primary goal is to promote the safeguarding of international submarine cables against man-made and natural hazards. The organisation provides a forum for the exchange of technical, legal and environmental information about submarine cables and, with more than 150 members from over 60 nations, including cable operators, owners, manufacturers, industry service providers, as well as governments, it is the World's premier submarine cable organisation. For further information about ICPC visit: [www.iscpc.org](http://www.iscpc.org) or send an e-mail to:

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