

- 0. TITANIC'S WIRELESS Story Preface
- 1. TITANIC INSIDE AND OUT
- 2. TITANIC'S CREW
- 3. MAIDEN VOYAGE
- 4. THE PASSENGERS
- 5. ICEBERGS
- 6. TITANIC'S WIRELESS
- 7. ICE WARNINGS IGNORED
- 8. ICEBERG RIGHT AHEAD
- 9. A DOOMED SHIP
- 10. DOOMED PASSENGERS
- 11. WIRELESS TRANSMISSIONS
- 12. RESCUE OF THE LIVING
- 13. RECOVERY OF THE DEAD
- 14. NEWSFLASH!
- 15. HEROES
- 16. A DISINTEGRATING VESSEL
- 17. THE REST OF THE STORY

Part of Marconi's famous invention - "the wireless" - which allowed people to transmit and receive messages via radio waves. Here we see the actual <u>coherer (receiver)</u> which Marconi used, in 1896, to describe the power of his invention. It is currently maintained at the Oxford Museum of the History of Science. *Titanic* used a Marconi wireless. Photo by Ozeye, online via Wikimedia Commons. Image license: <u>CC BY-SA 3.0</u>

Eleven years before *Titanic* set sail in the early spring of 1912, <u>Guglielmo Marconi</u> (incorporating the prior work of <u>Nikola Tesla</u> whose radio patent was finally <u>upheld in 1943</u>) had invented a way for ships to communicate with each other and with land-based stations. He designed a transmitter to send, and a receiver to pick up, electromagnetic radio waves.

If successful, Marconi's system would give ships something even <u>Samuel Morse</u> (and his Morse Code invention) could not provide:

wireless telegraphy.

At first people doubted whether messages could be sent across the ocean. They thought the earth's curvature would prevent it. But on December 12, 1901 Marconi heard the distinctive Morse Code sounds for the letter "s." (Follow the link to <u>check out Morse Code</u> yourself.) <u>His receiver</u> was in Newfoundland. His powerful transmitter was in Poldhu (Cornwall, England).

The <u>Morse Code</u> signal (which was <u>first</u> successfully transmitted in 1844, traveling a distance of about 40 miles between Washington, D.C. and Baltimore) had now <u>traveled</u> 1700 miles (on a radio wave) from Cornwall to Newfoundland (by way of the <u>ionosphere</u>). Marconi shared the <u>1909 Nobel Prize</u> for Physics and the <u>age of radio</u> had begun.

Ships (like the *Titanic*) began to install Marconi Rooms. Shipboard operators were employed by Marconi's company to <u>transmit</u> and receive (plus derive income from) communications for the ship's passengers.

With its 500-mile range limitations, however, it was not possible for the *Titanic's* <u>station</u> (the link takes you to Father Browne's photograph which is the only known picture of it) to be in constant communication with land-based Marconi stations.

See Alignments to State and Common Core standards for this story online at: http://www.awesomestories.com/asset/AcademicAlignment/TITANIC-S-WIRELESS-Fatal-Voyage-The-Titanic



TITANIC'S WIRELESS

See Learning Tasks for this story online at:

http://www.awesomestories.com/asset/AcademicActivities/TITANIC-S-WIRELESS-Fatal-Voyage-The-Titanic

Questions 2 Ponder

Does Technology Make Us Feel Safer (Even When We're Not)?

Do you think *Titanic's* passengers believed that having wireless communication, aboard ship, helped to keep them safer? If that is what the passengers believed, do you think they were right? Why, or why not?

If Marconi's wireless message was able to travel 1700 miles (from Cornwall to Newfoundland), in 1901, why was *Titanic's* wireless transmission-reception capability limited to 500 miles (in 1912)?

How are today's mobile devices, which are also "wireless," similar (or dissimilar) to the Marconi wireless aboard *Titanic*?

How does the use of wireless devices differ between then (aboard the *Titanic*) and now (in our daily lives). Can a person rely too much on a wireless device, such as a "smartphone?" Explain your answer.

Media Stream



<u>Guglielmo Marconi</u> Image online, courtesy the U.S. Library of Congress. View this asset at: <u>http://www.awesomestories.com/asset/view/Guglielmo-Marconi</u>



Samuel Morse 1844 Photo

Image online, U.S. National Archives. View this asset at: <u>http://www.awesomestories.com/asset/view/Samuel-Morse-1844-Photo</u>

<u>Morse Code - First Transmission</u> Image online, courtesy U.S. Library of Congress. View this asset at: http://www.awesomestories.com/asset/view/Morse-Code-First-Transmission



<u>The Early History of Radio</u> Image online, courtesy the <u>amazon.com</u> website. View this asset at: http://www.awesomestories.com/asset/view/The-Early-History-of-Radio





Marconi Station aboard Titanic

Photograph of Titanic's wireless station taken by Father Browne. Online, courtesy The Father Browne SJ Collection. View this asset at: http://www.awesomestories.com/asset/view/Marconi-Station-aboard-Titanic

TITANIC'S WIRELESS

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