

Honoring our Own

by KI5LNM, aired by KI5MA

In honor of our own Italian amongst us and her mother. I thought it might be interesting to see that our work with amateur radio is due to an Italian.

In 1873, James Clerk Maxwell postulated the theory of the electromagnetic field. In 1888, Heinrich Rudolf Hertz proved such a thing as radio waves, though in his day they were called "Hertzian" waves. There was interest in radio waves within the physics community but only as a scientific phenomenon. Few thought to find out how it could be used for communication.

But it was the Italian Guglielmo Giovanni Maria Marconi that set "wireless telegraphy" on its way to become what we all know today. Marconi studied Maxwell, Hertz, and Sir Oliver Lodge's work in lightening and electricity. In the 1890s, Marconi found the means to make wireless communication work with radio waves. In December of 1894 he set up a transmitter and receiver for his mother to see what he could do. With his father's support, he continued to read and search out how to make this a valuable means of communication.

He found little support for what he was trying to achieve in Italy and was advised to try in England. So at the age of 21 in 1896, he and his mother headed north. After arriving and finding interest for his experiments by the Chief Electrical Engineer of the General Post Office, he applied for his first patent, patent number 12039. It was the first time a radio waved based communication system was patented. It would not be long before he would become known internationally for his work. He would be invited to the United States in 1899 and demonstrated his radio.

It didn't take long to want to achieve longer distances and wanted to compete with the transatlantic telegraph cables. On the 12th of December in 1901 using kites to raise and support antenna to 500 feet, he was able to reach Newfoundland from Cornwall. 2,200 miles away. Some though do not believe they actually made this contact during daylight on both sides, the worse time to try the experiment, and some wonder if it was just "noise" they were hearing as they were listening for the three clicks of a Morse Code letter S.

These skeptics spurred Marconi on. So in February 1902, he set out with better organization and documented carefully all he did to try a new test. It was this test that they learned that medium wave and long wave transmissions travel further at night than in the day. At this time, he proved that radio waves could travel hundreds of miles and were not limited to line of sight as so many believed they were. Using a ship sailing west from Cornwall they communicated to a maximum distance was 2,000 miles.

17 December 1902, the first transatlantic transmission was made from Nova Scotia. He then started a service to ships with subscribing ships receiving messages and news by wireless telegraphy.

But do we find our purpose of emergency use of amateur radio with Marconi? Of course, we do. There was this ship called the Titanic. It sank on 15 April 1912 and the survivors were rescued because of The Titanic's SOS sent 58 miles to the Carpathia. The radio operators on the Titanic were not employees of White Star Line but of the Marconi International Marine

Communication Company. As the Postmaster General of Britain summed it up “Those who have been saved, have been saved through one man, Mr. Marconi... and his marvelous invention.”

In actuality, there is a lot of debate on how radio operation affected the Titanic and its aftermath. One of the after affects was the passing of the Radio Act of 1912 in the US which set limits on amateur radio operators. Limiting amateurs to 200 meters or shorter as these “short waves” were considered of little use. So they would not interfere with military or commercial use. Other countries soon followed suit.

Today from the work he began, we still continue to use the radio waves. For us we use them for our own hobby activity, but also if ever needed in an emergency. We have our own Italian at our helm, and we hope that whatever happens in Lee County, we can help the agencies of the county with their communications to deal with situations of any kind. And to help the people of Lee County in other ways by means of wireless communication.