Early Codes in Wireless Telegraphy
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In a New York Times interview dated 19 April 1912 the surviving wireless operator of **RMS Titanic**, Harold Bride, made some interesting comments regarding his difficulties in achieving efficient wireless communications after his rescue and delivery to **RMS Carpathia**. In the interview Bride singled out the wireless operator on the American Navy cruiser **USS Chester** for the latter's ineptitude, particularly his inability to copy "Continental Morse" rapidly and efficiently. In order to clarify the problem of differences in telegraphic codes at the time of the **Titanic** disaster the following historical background and explanation may be of help.

When Samuel F.B. Morse invented his land-based telegraph around 1840 he also developed (with the possible assistance of his able assistant, Alfred Vail) a "code" made up of dots and dashes to represent letters, numerals and punctuation. This code, which came to be called "American Morse Code" or simply "Morse Code," was used on American railroads and by the land-line telegraph messaging services until it was eventually phased out in the 1960s. It is also sometimes referred to as the "railroad code."

In Europe in 1848 a similar code was created by Friedrich Clemens Gerke and initially used on telegraph circuits in Germany. First known as "Continental Code" (since it was developed on the continent of Europe) it was eventually adopted by the International Telecommunications Union and renamed "International Morse Code." It is of similar construction to American Morse code - 15 of the 26 letters of the alphabet are identical in the two codes - but there are also significant differences. Eleven of the letters, nine of the numerals, and all of the punctuation marks use different dot-and-dash combinations in the two codes, and American Morse uses a different timing relationship between the various elements of the code (dot, dash or space). These differences make it more difficult for an operator to become proficient in both codes.

As maritime use of wireless began to grow in the period between 1900 and 1912 the Continental Code (or International Morse Code) became the default standard for transatlantic ocean-going vessels while in America there was a tendency to cling to maritime use of American Morse code. This created the possibility of confusion that might hinder communications between vessels during an emergency.

A further complication was the fact that in the early 1900s the U.S. Navy developed its own code for use by Navy wireless operators. This code shared only four letters with Continental Morse and three with American Morse, and in a few instances the same dot-dash combination was used for multiple characters, the theory being that a Navy operator would know which character was meant by the context. The not-too-surprising result was that Navy operators, while proficient in their own code, could hardly be expected to know both American Morse and International Morse as well and in fact this shortcoming was evident at the time of the *Titanic* disaster. The Navy operator on the *USS Chester* – and perhaps other Navy operators on other unnamed U.S. ships – was singularly inept in "Continental" Morse as reported by Harold Bride in his interview.

All of this confusion regarding codes came to an end after the *Titanic* disaster when the international community adopted the International Morse Code as the universal code to be used for maritime wireless (later called "radio") telegraphy, eventually extending to all wireless communications. American Morse was confined to land wire-line and U.S. coastal vessels, the latter until just after WWI, and the Navy Code disappeared completely.

POSTSCRIPT: U.S. Navy radio operators were still required to know American Morse Code even after the Navy's adoption of the International Morse Code for wireless use after 1912, primarily because U.S. coastal ships continued to use American Morse until about 1920. The code tests for Navy Radiomen during WWI were 25 wpm International & 15 wpm American Morse for Petty Officer 2nd Class, 27 wpm International & 20 wpm American Morse for Petty Officer 1st Class, and 28 WPM in both codes for Chief Petty Officer.