

WESTERN UNION AND THE RAILROAD TELEGRAPHERS (and, the early days of Wireless)



The Socorro, NM Train Depot, 1981
Photo by Evan Werkema

Originally published in the *El Defensor Chieftain* newspaper, March 4, 2006, Socorro, New Mexico. Additional photographs included not appearing in the original article.

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Last month, a briefly worded press release went nearly unnoticed. It simply read: "Effective January 27, 2006, Western Union will discontinue all Telegram and Commercial Messaging Services. We regret any inconvenience this may cause you, and we thank you for your loyal patronage."

After 155 years, and millions of telegrams and Telex messages, a major part of American history quietly slipped into obscurity. For more than 100 years, Socorro was part of that history.

With today's telephones, cell phones and e-mail, we can contact almost anyone we wish immediately and cheaply. This wasn't always the case. In Socorro's early days, and throughout the West, the mail was the only means of long-distance communications — and very slow mail at that.

With the mail being carried on stage lines and military supply trains, it was not unusual for a letter from Socorro to take three or four weeks to reach St. Louis or Chicago. That means if you were lucky, you might get a reply in only two months.

That all changed in 1830, when Samuel Morse invented his telegraphic code. Within a few years, regional telegraph companies were springing up everywhere along the East Coast. Many of the railroads were installing their own lines as well. Converted to "dits and dahs," messages could be sent to cities hundreds or thousands of miles away; and now it would be delivered in hours, not weeks. This was a tremendous leap in technology.

In 1851, the New York & Mississippi River Printing Telegraph Company was formed, with lines from New

York to Boston and St. Louis. With a true vision for the future, the company began to purchase the smaller, local companies to form a single, consolidated telegraph system. In 1856, they changed their name to the Western Union Telegraph Company, or simply, Western Union.

With their own lines, and those leased from the railroads, Western Union suddenly controlled almost the entire telegraphic industry from the Atlantic Ocean to beyond the Mississippi River. Thousands of telegrams a day were now buzzing along their lines, earning the company record profits.

Determined to become the dominant telegraph company in the country, Western Union built a telegraph line from their western terminus at Omaha, Neb., to Carson City, Nev. By 1861, the line extended to Sacramento, Calif.



This was eight years before the completion of the transcontinental railroad. For the first time in human history, people on opposite sides of a continent could quickly communicate.

The first message tapped out in morse code over Western Union's transcontinental telegraph line was from Stephen Field, the California Chief Justice, to President Abraham Lincoln, declaring California's loyalty to the Union. After all, the Civil War had just begun, and Western Union now controlled 90 percent of all telegraphic communications. This became a huge asset to the Union Army. The secret Telegraphic Corps was formed, accompanying the major armies with telegraphic equipment and operators. For the first time in warfare, troop movements could be tracked, supplies ordered, sightings of the enemy reported and details of engagements immediately transmitted to the president. Also for the first time, telegraphic news reports from the field allowed newspapers to carry stories literally hours after a battle, creating yet another industry — telegraphic news services.

The Confederacy was quick to develop their own telegraph system, but without the huge network of the Western Union lines in the north, communications were spotty and poorly developed.

Telegraph Arrives in Socorro

After the Civil War, the railroads made their push to the west, entering New Mexico over Raton Pass to Las Vegas by the end of 1880. The following year, the railroad tracks arrived in Socorro — and with it, the telegraph lines and Western Union. Socorroans could now send a 30-cent telegram to San Francisco or Chicago ordering a piano, a new stove or ceiling tiles, and know it would arrive at the Socorro depot a few days later. In 1880s Socorro, this was absolutely astounding. How quickly Socorro must have changed.

And who sent and received these telegrams? It was the railroad telegrapher. While the movies always portray the telegrapher as an old, white-haired man wearing a visor, the truth is, most telegraphers were very young men (although they did wear visors).

It was the fastest growing occupation in America. The railroads and Western Union recruited thousands of young men for the lines — as young as 16. And, it was a good occupation, paying good wages. In order to retain telegraph operators, Western Union and the railroads offered incentives, such as paid vacations, annual bonuses and health care — unheard of perks at the time.

Telegrapher Sam Zimmerly

The first native to become a Socorro telegrapher was Sam Zimmerly, hired by the Santa Fe Railroad, in 1917, in the hey-day of steam locomotives. As the station telegraph operator, and later agent-telegrapher, it was a busy job. The first priority was handling the railroad traffic. All train movements were carefully ordered and reported along the line. The telegraph circuit that serviced Socorro ran from



The 1950s Western Union sign from the Socorro depot is now in the author's possession.



A typical Western Union “relay station” in the early 1900s. From here, received messages were retransmitted, or relayed, onto the proper destination circuit.



Photo by Even Werkema

The Albuquerque Western Union Relay Station in 1991. The AT&SF depot on the right, with South-western design, was destroyed by fire two years later.

Albuquerque to El Paso, Texas, and east to Clovis. All messages to every station along this circuit were “heard” by all stations at once, such that the clicking of the telegraph sounder droned on almost continuously.

Every railroad depot and siding along the line had a station number. Albuquerque was No. 1340, Socorro was 1416, and El Paso 1594, to name a few. As Zimmerly helped the customers, sold tickets and processed freight, he was always listening to the click-click-clack of the telegraph to sound out “1416” — signifying a message for Socorro.

If that wasn't bad enough, the Socorro railroad telegrapher was also the Western Union operator. This was a separate circuit, and a separate telegraph sounder clacking away. As Zimmerly conducted his daily business, his finely tuned ear was constantly listening to two different sounders with a message for Socorro. The skill of talking to a customer, drinking a cup of coffee, sending a Western Union message

on one circuit, while copying a train order on another, became second nature. It was a skill that made the railroad telegrapher legendary. And, Sam Zimmerly was one of the best. Able to send and receive morse code messages at 50 words-per-minute, he was considered the "best fist" in the district, a telegraphers term that his code was easy to copy and flawless.

In the mid-1960s, Sam Zimmerly had a most memorable experience. It was a particularly busy day when a passenger train arrived at Socorro. The station filled with passengers as Zimmerly had a full "weigh bill" of freight to load on the train. Suddenly, both telegraph circuits came alive with traffic for Socorro. Just as Zimmerly reached for his key to inform the Western Union circuit to wait, a passenger grabbed a piece of paper from the counter and said, "I'll get it for you."

As Zimmerly copied the train message on one circuit, the stranger held the paper against the wall and began writing down the other message. When the sounder quit clattering, the stranger handed the perfectly copied message to Zimmerly and introduced himself. The stranger was Gene Autry, an old railroad telegrapher before his movie days, claiming that was the first telegram he had copied in more than 20 years. Zimmerly gave his telegraph sign, a cartoon of a telegrapher busily at work, to Autry as a memento.

Zimmerly retired from the Socorro depot, in 1967, after 50 years of service with AT&SF. Two of Sam's brothers were also AT&SF railroad telegraphers: Joe worked most of his life at the Bernalillo station, while brother Charlie worked at Engle.

Everyone loved receiving a telegram, except once. Receiving a telegram during World War II usually meant only one thing. Every mother and wife dreaded the knock on the door from the Western Union delivery boy.

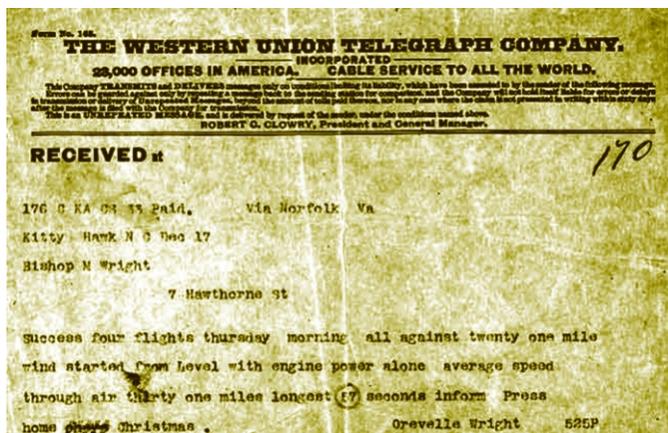


Photo: IEEE History Archives

Western Union telegrams were the primary means of communications for the first half of the 20th century. This is the original telegram sent by "Orevelle Wright" announcing their successful first flights.



Photo: Roy Carrejo

A northbound freight rumbles through Socorro in the early 1970s – when train orders and movements were still being handled by morse code.

Through the 1960s, telegrams continued to be a popular and inexpensive means to communicate across the country.

Telegrapher Roy Carrejo

In the early 1950s, Roy Carrejo was assigned to the Tiffany station (north of San Marcial). In those days, Tiffany had a small station building and a siding, servicing the freights and passenger trains as they entered or left the 90-mile run through the Jornada del Muerto. Keeping track of all train movements was an important job for the railroad and the telegrapher. Simply put, if a train failed to show or was late, there was a problem, or there would soon be one.

Very few accidents or train wrecks occurred on the AT&SF line due to the diligent actions of the telegraphers and dispatchers. Train wrecks were expensive, often closing a line for days as the debris was cleared. This cost the railroad thousands of dollars in lost revenues. Knowing the exact position of every train at all times was paramount in preventing a deadly train wreck or mishap.



Job one for railroad telegraphers was keeping track of train positions. When two trains met on the same track – it was not a pretty sight.

After Tiffany, Carrejo was transferred to Socorro, where he worked for the next 34 years as telegraph operator, agent-telegrapher and station manager. During most of this time, all telegrams continued to be sent across the country in dits and dahs. Morse code was used on the AT&SF line in New Mexico for nearly 100 years.

Carrejo copied the last morse code message in 1976, when the old trusty telegraph sounders were replaced with teletype machines. Socorro was the last AT&SF depot to cease using morse code. The final dit-and-dah to travel down a telegraph line in New Mexico was sent by Roy Carrejo.

Asked if he ever delivered a singing telegram, Carrejo said, "only once."

One day, he delivered a telegram to radio station KSRC. Owner Walter Shrode, surrounded by several other people, insisted Correjo sing the telegram.

Finally, Correjo submitted. He opened the telegram and in the most melodious voice he could muster, sang out: "Your order can not be processed until you pay your \$300 past due bill."

Correjo's face wasn't nearly as red as Walter Shrode's.

Roy Carrejo faithfully served the railroad, and the people of Socorro for years. He retired Nov. 30, 1988 — the same day the AT&SF permanently closed the Socorro depot. He and his wife, Delores, still live in Socorro; and every once in awhile, Roy will pull out his code key, a 12-volt battery and old morse code sounder to hear the sounds of an age now gone.

Telegrapher Sam Padilla

Socorroan Sam Padilla was another AT&SF telegrapher. Padilla worked for the Albuquerque District, which controlled all train traffic from Albuquerque to Needles, Calif., and Phoenix to the Grand Canyon. Socorro was in a different district.

Upon graduation from telegraphers school in Pueblo, Colo., the AT&SF gave him a choice to work in Wisconsin or the Grand Canyon in Arizona. He and his wife discussed it, deciding it was a no-brainer. As a result, Padilla spent his entire career working the main line between Albuquerque and Kingman, Ariz. More than 30 AT&SF freight trains, and two AmTrak passenger trains, rumble over these tracks everyday, still making it one of the busiest sections of track in the country.

In his younger days, Padilla worked as the telegraph operator at Williams Junction (west of Flagstaff) and at the Grand Canyon station. In those days, the hotels at the Grand Canyon were owned by the railroad. As a result, all reservations for lodging, dining, transportation and even the mule rides into the canyon were railroad telegraphic messages. Plus, all the Western Union traffic to and from the guests. All of these messages and telegrams would arrive at Williams, where they were relayed to the Grand Canyon, making

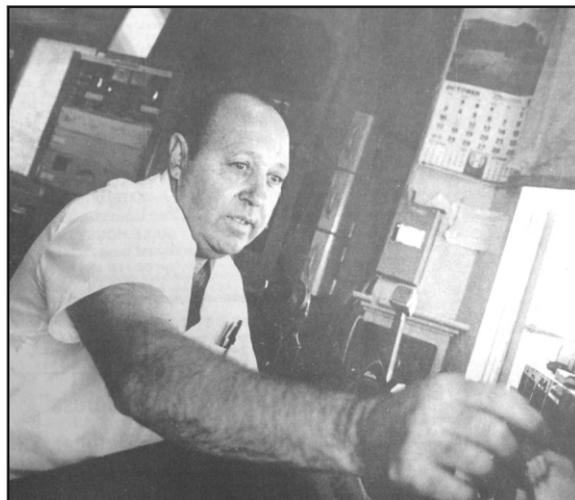


Photo: El Defensor Chieftain archives
Agent-telegrapher Roy Carrejo prepares for an arriving freight train at the Socorro depot in 1982. He retired as Station Manager in 1988 — when the Socorro depot was closed.



Photo: Paul Harden
Roy Carrejo sends morse code on his Vibroplex speed-key and sounder — still in working condition.

these two stations among the busiest on the AT&SF line.

At this time, Padilla and wife, Susie, lived in Williams. He worked two days a week at Williams Junction and three days a week at the Grand Canyon station, traveling back and forth on the train. At least he got to ride the famous Grand Canyon train for free! Since the passenger cars were often full, he usually rode in the forward engine (where it was nice and warm in the winter).

After 11 years in Arizona, Padilla transferred back



Photo: El Defensor Chieftain archives



Photo: Paul Harden

(Left) Sam Padilla works the "mainline track" between Albuquerque and Kingman from the Gallup, NM depot. Teletype replaced morse code shortly after this 1972 photo.

(Right) Today, Sam Padilla, like all true railroad telegraphers, keep their speed-key and sounder in working condition.

to New Mexico, working at the Gallup station for the next 25 years. Morse code was replaced by teletype machines along this mainline track in the early 1970s, several years ahead of Socorro.

Padilla completed his career in Gallup as the assistant train master, retiring Dec. 13, 1993. After 36 years with the railroad, the Padilla's returned to Socorro.

And like Roy Carrejo, Sam Padilla still keeps his old morse code keys and sounder in working condition. They were the tools of the trade. No true telegrapher could ever part with them.

The Age of Wireless

When one thinks of "wireless," cell phones come to mind, or perhaps your television remote control. However, wireless was actually invented by Guglielmo Marconi in the 1890s.

As a young man, Marconi began experimenting with transmitting energy long distances through the air. Building powerful transmitters, Marconi successfully sent the first morse code message across the Atlantic Ocean in 1901. America and Europe were now connected, not through wires, but through what Marconi termed "wire-less."

In short, Marconi invented radio. In 1902, he formed the Marconi Wireless Telegraph Company, hiring railroad telegraphers to send the morse code messages between the two continents.

Soon, Marconi's "spark gap" transmitters were placed onboard ships. For the first time, ships could communicate

with land, using morse code to report their position, receive weather reports, and messages to and from the passengers — This revolutionized the maritime industry almost overnight.

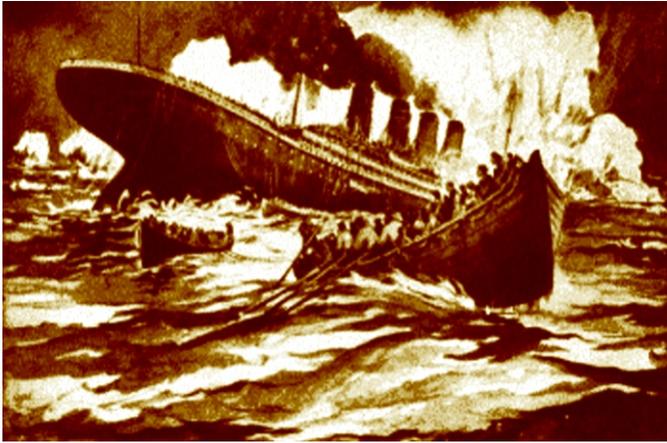
To add the new-fangled wireless station to a ship, a small wooden room was built behind the bridge, from which the term "radio shack" originated. Within a few years, hundreds of ships at sea were outfitted with radio shacks.

One of the first new passenger ships to be built with a dedicated radio room was the H.M.S. Titanic.

Marconi received the Nobel Prize for Physics, in 1909, for his invention. And rightfully so, as wireless communications transformed the 20th century, with no signs of slowing down in the 21st.



Photo: Marconi Calling Musuem
Guglielmo Marconi, inventor of "wireless" radio, sent the first telegraphic message across the Atlantic Ocean in 1901.



Telegraphy and the Titanic

When the *Titanic* set out to sea on its maiden voyage, two Marconi wireless telegraphers manned the radio room: Jack Phillips and Harold Bride. Hundreds of messages to and from the passengers, using the new, novel wireless, kept the two busy.

One message received was the infamous iceberg report — the very iceberg the *Titanic* struck around midnight on April 15, 1912. Immediately, the two telegraphers began sending out distress calls. They alternated between sending the then common "CQD" and the newly adopted "SOS" (dit dit dit – dah dah dah – dit dit dit).

As water began to enter the radio room, Phillips ordered Bride to leave for the lifeboats. Phillips told Bride that he would send a couple more distress signals and join him shortly.

Harold Bride survived the disaster; Jack Phillips remained at his post as telegrapher and went down with the ship, along with 1,300 others.

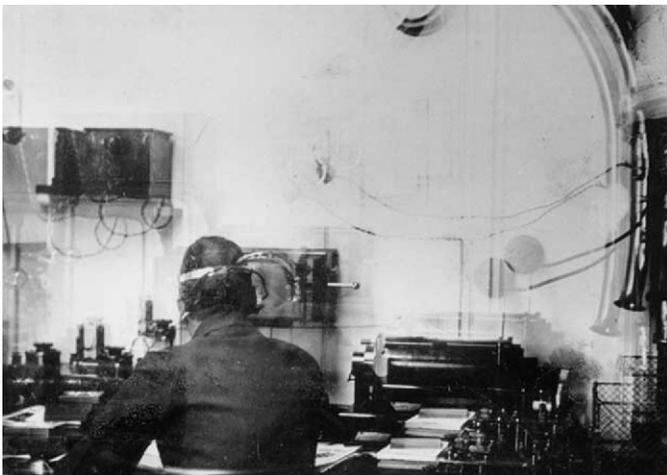
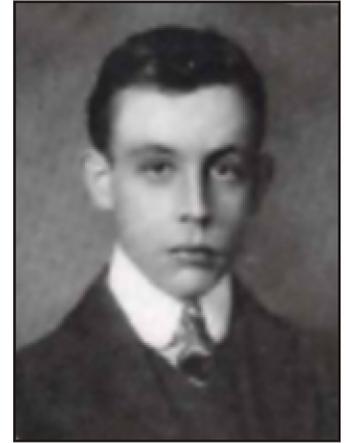


Photo: British Maritime Museum
The only known photo of the Titanic "Wireless Room."



Marconi Titanic Operator
Jack Phillips



Marconi Titanic Operator
Harold Bride



A morse code key identical to that used on the Titanic. Keying the "spark gap" transmitter could fuse the contacts together. The long brass lever was an emergency disconnect should this occur.

Numerous ships listened as Phillips' transmissions went silent. To this day, a telegrapher who passes away is known as a "silent key." In 1985, Dr. Robert Ballard used Phillips' last message, a final position report, to help locate the wreckage of the *Titanic*.

The ship *Carpathia* rescued the 700 lifeboat survivors. Immediately, *Carpathia*'s telegrapher, Harold Cottam, and the surviving Harold Bride, informed New York of the disaster over the wireless. The two worked tirelessly sending the names of the survivors as they became known, messages to family, and answering the incoming inquiries, some of which were from the press.

Young David Sarnoff was the New York telegrapher on duty who received the first messages of the *Titanic* disaster. For the next 72 hours, Sarnoff was in constant communications with Cottam and Bride. Furnished by Sarnoff, the names of the survivors were printed in the *New York Times*, giving the young telegraphers, and the Marconi Company, instant national fame — and the world an instant look at the disaster.

When the *Carpathia* pulled into New York harbor on April 18, the two telegraphers, Cottam and Bride, were met on

MARCONI WIRELESS TELEGRAPH COMPANY OF CANADA, LIMITED
MONTREAL

No. 7777 STATION CAMPELAWN APR 15 1912

Prefix W Code K Words 33 Recd. CHARGES FOR TRANSMISSION

Office of Origin Montreal

Service Instructions: Bio - New York

Station sent: Montreal Time sent: 10:15 AM By whom sent: [Signature]

READ THE CONDITIONS PRINTED ON THE BACK OF FORM.

To: Commander - Ste. Carpathia

Vitaly important that we receive names balance survivors including third class and crew last message received with names nine a.m. today - please do your utmost - give us this information at earliest possible moment. White Star Line

Photo: Marconi Calling Museum

The actual telegram from the White Star Line, owners of the Titanic, to the captain of the Carpathia: “Vitaly important that we receive names balance survivors including third class and crew - last message received with the names nine a.m. today - please do your utmost - give us this information at earliest possible moment.”

the dock by none other than Guglielmo Marconi. He put the two men up in the Astoria Hotel with "anything they wanted" to repay their tireless and faithful service. Marconi then sent a heartfelt telegram to the father of Jack Philips, the Marconi telegrapher lost on the Titanic.

David Sarnoff went on to form the Radio Corporation of America and is often credited as the father of television. At the time, investors wondered who would watch wireless broadcasts of moving images. Sarnoff served as the CEO of RCA until 1970.

The Telegraph Industry

Following the Titanic disaster, the value of wireless telegraphy was clearly established.

Wireless stations began cropping up everywhere and, for the first time, Western Union had competition to its "land line" telegraph service. However, both industries flourished and made record profits.

The demand for telegraphers exploded. There never seemed to be enough telegraphers to fill the jobs. Schools around the country trained thousands of young men, all of whom were assured a job upon graduation. It was the fastest growing industry in America, with telegraphers needed for the railroad, Western Union, the ocean-cable circuits, newspaper news rooms, wireless stations and as shipboard operators. Even during the 1930s depression, telegraphers were seldom unemployed.

The Socorro Chieftain employed a news telegrapher from

about 1890 to 1920, and printed the messages in the newspaper under the heading "Telegraphic News."

As the telegraph industry grew, the demand often exceeded the capacity of the lines, creating a push to find ways to send the morse code messages faster to process more messages per day.

The familiar morse code key allows an operator to send a message about 20 words-per-minute, or about as fast as the receiving operator can write with pencil and paper. Around 1910, several semi-automatic keys were invented that allowed an operator to send morse code in excess of 35 words-per-minute. With names like Vibroplex and the McElroy, these "speed keys" became instantly popular. Messages could now be sent so fast that only a trained operator using a typewriter could keep up. Soon, this became the norm and by the 1920s, telegraph and wireless offices were filled with speed keys and typewriters, doubling the number of messages an operator could process in an eight-hour shift.

Since then, there has hardly been a railroad telegrapher, radio telegrapher or amateur radio operator using morse code that doesn't own a "bug," as the mechanical contraptions are called. They are prized possessions, finely tuned and adjusted until they feel "just right" to the operator.

Today, the Vibroplex Company is still in business, selling their famous speed keys for about \$200.

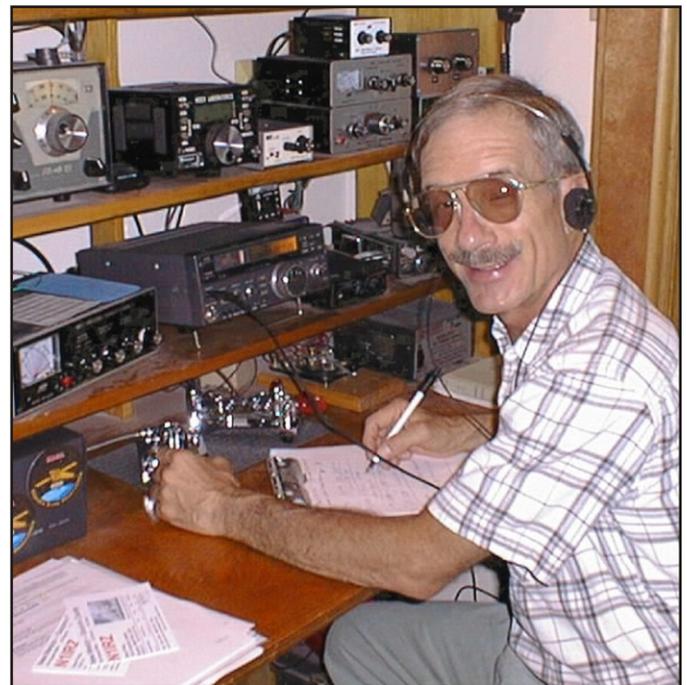


Photo: Dave Finley

Dave Finley, N1IRZ, is one of the Socorro "hams" that regularly uses morse code on amateur radio. He is shown using his Vibroplex "bug" speed-key.

The Death of Morse Code

Thousands of former telegraphers shudder when they hear about the "death of morse code." However, it is not entirely dead. Some ship-to-shore stations still use CW (as morse code is called in the radio world), and by many amateur radio operators (or hams). Thousands of hams around the world still communicate exclusively in morse code by choice. Dave Finley, N1IRZ, Paul Harden, NA5N, and Jan Harden, NØQT, are three of the active morse code hams in Socorro.

There is a "romance" to communicating with another person in morse code that is hard to explain. Only an old telegrapher can explain it to you. The next time you see Roy Carrejo or Sam Padilla, ask them.

Although morse code is nearly obsolete, it does not mean it is not still efficient.

This was proven in April 2005 on NBC's "Tonight Show with Jay Leno" when a contest was held between "the fastest text messagers in the country" and two old telegraphers. The contest was to see who could send a prearranged message the fastest — the contest was clearly designed to poke fun at morse code.

The two old telegraphers chosen were amateur radio operators, who happened to be accomplished CW operators. When the showdown began, one young man began madly punching buttons on his cell phone. The CW operator smoothly worked his speed key, sending dits and dahs across the studio at 28 words-per-minute. After about 15 seconds, the telegrapher on the receiving end waved his piece of paper with the completed message in the air, easily beating the text messenger, who hadn't even come close to completing his message to send. The message read: "I just saved a bunch of money on my car insurance."

With the exception of amateur radio, morse code is virtually dead. Like the railroads, the old telegraphers and the Western Union delivery boys are now part of an era gone by — never to return. It is a shame this era came to end last month with hardly a notice.

So the next time you send an e-mail across the country, think of the old railroad and wireless telegraphers that started it all.

— 73, Paul Harden, NA5N

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The contest on the "Tonight Show" between the fastest text messenger and a CW operator proved morse code is still fast and efficient.

Some of the references used in this article: AT&SF Railfans Web site; "Marconi Calling" online museum; a special thanks to railroad photographer Evan Werkema; "Western Union" Web site; interviews with Chuck and Albert Zimmerly, Roy Carrejo and Sam Padilla; and El Defensor Chieftain archives.

The International Morse Code			
The American Morse Code, used by railroad telegraphers, differs slightly.			
A	●—	K	—●—
B	—●●●	L	●●●●
C	—●—●	M	—●—
D	—●●	N	—●
E	●	O	—●—●
F	●●—●	P	—●—●●
G	—●●●	Q	—●—●●
H	●●●●	R	—●●●
I	●●	S	●●●
J	●—●—	T	—
		U	—●—
		V	●●●—
		W	—●—●
		X	—●●—
		Y	—●—●●
		Z	—●—●●
		1	●—●—●—
		2	●●—●—
		3	●●—●—
		4	●●—●—
		5	●●—●—
		6	●●—●—
		7	●●—●—
		8	—●—●—
		9	—●—●—
		0	—●—●—

Be a Telegrapher

Using the Morse Code chart above, decode the following:

El Defensor Chieftain
• TELEGRAM •

—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—
—	—	—	—	—