WIRELESS COMMUNICATION
NEWSPAPER CLIPS

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Binghamton Press
Thursday, October 23, 1913

First Order for Train by Wireless Originates Here

D.L. Marconi System Between
Binghamton and Scranton
Officially Installed

Graf Sends Message

"Binghamton, Oct. 23, 1913

P.N. Place, Supt., Scranton. 494 on time - Had 7 loads west - 141 tons - 486-478 report later.

F. CIZEK."

This message was sent by J.J. Graf from the Lackawanna railroad wireless station in this city, received at the Scranton station by S.S. Stone and repeated back to Mr. Graf this morning.

The sending and receiving of the message marked the establishment of wireless communication between the Binghamton and Scranton stations of the Lackawanna railroad.

It also marked the first occasion in the world's history that a railroad train ore was transmitted by wireless.

Lackawanna is Pioneer.

The Lackawanna is thus the pioneer in the business of putting into successful operation along its line apparatus for the sending and receiving of wireless messages.

L.B. Foley, superintendent of the telegraph for the Lackawanna railroad company; David Sarnoff, chief inspector of the Marconi Wireless Company of America; Louis R. Krum, chief radio inspector of the Bureau of Navigation, Department of Commerce, Washington, D.C.; J.J. Graf, telephone engineer for the railroad; S.H. Dailey, of the Binghamton Light, Heat and Power Company, and others were present when the first message was sent out from the local

station.

The Government and Marconi officials were here to inspect the apparatus and se that it was in perfect working order.

Certain rules and regulations governing radio communication, made by the United States Government have to be complied with before a license to operate a station of this kind can be secured.

Everything was found to be in satisfactory condition by both officials and the license for the Binghamton station will be granted at once.

On account of the unusual interested attached to the wireless stations in this city and in Scranton and the fact that this is the first time that a railroad has ever attempted to use the system, it was thought necessary by the Marconi Company and officials of the Lackawanna railroad to have the chief representative of the government make the inspection.

All stations and operators and all transmitting amateur operators, according to the new law must be licensed. This is to reduce radio interference with other stations.

Emits Waves of 1,600 Meters.

Mr. Krumm used a Kolster decremeter to measure the length and quality of the waves emitted from the apparatus. The first test showed 1,390 meters. It was afterwards brought up to over 1,600 to comply with the requirements.

The Binghamton and Scranton stations can work under 600 or over 1,600 meters. Anything between these figures is reserved or the government. the normal ship length is 600 meters.

Licensed operators furnished by the Marconi Company will have charge of local and Scranton stations temporarily until employees of the railroad company can qualify for the positions. Mr. Graf soon will take an examination which will make him a licensed operator.

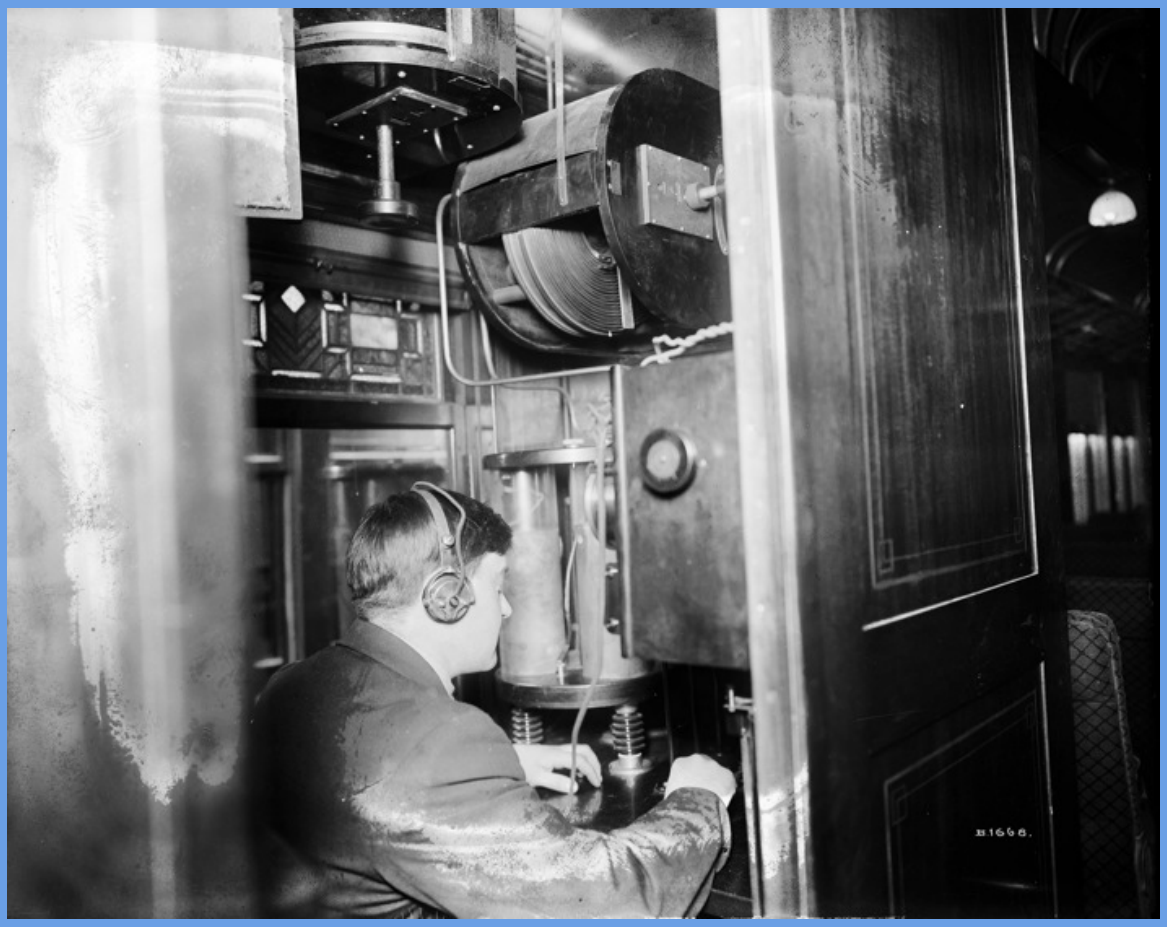
Mr. Krumm, after he had thoroughly inspected the wireless installation in the station, said that the type of equipment used by the Marconi Company here is the latest and best used by the company. He also said that the station is one of the most powerful inland stations he has ever inspected.

Government Will Fix Calls

Mr. Krumm announced that the government officials will decide upon the letters by which the Binghamton and Scranton stations will be known on the list of wireless stations on file in Washington. The railroad company can use any three letters beginning with W to designate the Binghamton station. The same applies to the Scranton station.

The train equipment will be ready in about ten days. Mr. Foley stated that he expects the railroad company to employ one trainman who understands the Morse or Continental codes to operate the train wireless apparatus.

Photos from D.L.& W. Collection, Steamtown National Historic Site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Binghamton Press
September 25, 1913

Lackawanna Railroad Plans For Opening of Wireless Station

Two dynamos for the Binghamton wireless station of the Lackawanna Railroad are being constructed by the Crocker-Wheeler Company at East Orange, N.J. As soon as these are completed and arrive in this city, Telephone Engineer J.J. Graf and his assistants will install them in the wireless office in the local passenger station. The receiving and sending apparatus will then be ready for use.

It is expected that the initial message sent to the Scranton office will be in the nature of greetings from the Mayor of Binghamton to the chief executive of the mining city. Plans are under way to make the occasion an important one in the history of the road. It will mark the beginning of what may terminate in wireless communication being established from one end of the system to the other.

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Binghamton Press
January 21, 1915

Binghamton Man Picks Up 42 Wireless Stations, Including Those On British Warships, And One In Far-Off Netherlands

Irving H. Kattell of Sherwood Avenue Hears
Communications Also from Germany; New Orleans
Sending is Distinct

It is a long ways to the "P.H. G." wireless station in the Netherlands, but a few thousand miles is a mere nothing to Irving H. Kattell of 23 Sherwood Ave. when he wants to hear what is going on in the extensive wireless world.

Mr. Kattell, one evening recently, opened the wireless instrument he has installed in his home and in less than two hours picked up 42 different land stations and steamships.

Nearly all of the letter signals sent out are listed in a directory of stations which the United States government has issued for the convenience of licensed

operators throughout the country. Each station or boat is known by three letters. For instance Binghamton is listed as "W.B.T." and Scranton as "W.PT." Operators announce these letters when about to go into wireless communication with other stations.

Has Aerial in Attic.

Mr. Kattell has fitted up an aerial in the attic of his home. This consists of 15 wires extending across the 40-foot room, 15 inches apart. Wires connect the aerial with the sending and receiving apparatus, which is located in one of the living rooms of the house.

The apparatus is the property of the Lackawanna Railroad Company and was constructed by J.J. Graf, telephone engineer for the company. Mr. Kattell has been employed at the local station as a telegraph operator for a number of years. When the wireless station was established in Binghamton, he was assigned to take charge of the limited amount of work of that office. He learned the code, which is slightly different from that used in telegraphic with Morse instruments.

He took an active interest in wireless telegraphing and like many other operators, decided to install an aerial in his home. He has been granted the use of the Graf receiving set apparatus when it is not in use at the local station.

Fifteen Feet Above Press Building

This aerial is constructed entirely within his home. The attic, where it is located, is about 10 feet higher than the Press building. This height is an advantage in picking up stations many miles distant.

Mr. Kattell on the night he heard 42 different stations, was taking life easy in a comfortable chair in front of the table on which was the open receiving apparatus and all but a few of them were distinct. The air outside was heavy with moisture and weather conditions were not considered as perfect for wireless work, but even so Mr. Kattell experienced no difficulty in hearing much that was being transmitted through the air.

He penciled the signal letters of the stations on a piece of paper and not possessing a government directory, sent the list to Mr. Graf in Scranton to have them identified.

The reply gave all the names of all of the stations listed in the directory as follows:

NAA - Arlington.
WSV -Virginia Beach.
WHA - Cape Hatteras
KNA - Not listed.
KEB - S.S. Sabine, Mallory line.
KEI - Not listed.
MDY - English war vessel.
MBD - English war vessel.
HB -Amateur.
KKB - S.S. El Sol., Southern Pacific Co.
NIL - Not listed.

WSE - Sea Gate.
WBF - Boston, Mass.
WBU - Hoboken.
VBA - Canadian station.
VBB - Canadian station.
KGL - Not listed.
WSL - Sayville.
WDE - Pere Marquette ferry.
DLF - German station.
WND - S.S. Windber, Sou.Pac. fishing boat.
KGT - Not listed
PHG - Netherlands station.
KTA - S.S. Latimer.
HD - Amateur.
HK - Amateur.
VCN - Canadian station.
KQX - S.S. Persian.
NAR - Key West, Fla.
KMD - S.S. Cristobal.
KTV - S.S. Tolego.
WHG - S.S. El Orient.
NAH - Brooklyn.
NAN - Beaufort, S.C.
NAT - New Orleans, La.

The wireless operator on a British war vessel asked the operator on another British warship if the spark was working all right and the answer came back "It is working perfectly." Some of the stations were sending secret code messages and Mr. Kattell could not understand their purport.

The call of the Netherlands station over in Holland was not as distinct as some of the others, but sufficiently clear to be heard. The German station is supposed to be located somewhere in Germany. The directory does not state where. New Orleans could be heard distinctly.

Mr. Kattell on other occasions hear Colon, Panama, and a station in Alaska plainly.

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Binghamton Press
Monday, April 25, 1915

Establish New Wireless Record

Telephone Conversation Carried on
with Scranton Over
Lackawanna System

A new distance record for wireless telephony was established yesterday when Frank Cizek, superintendent of the S.& U. divisions of the Lackawanna railroad, talked with P.N. Place, superintendent of the Scranton division, over a stretch of country between Binghamton and Scranton. The messages traversed 63 miles, a rough mountainous region.

The achievement was made more creditable by the fact that the messages exchanged were not brief greetings, but business communications regarding the movement of trains. The Lackawanna trains between Scranton and Binghamton moved for several hours according to orders sent and received by the wireless telephone.

Every word transmitted by the wireless was heard distinctly, according to L.B. Foley, superintendent of telephone and telegraph and wireless of the Lackawanna, who was in charge of the experiment. Mr. Foley was jubilant over the achievement. Experiments with wireless telegraph and telephone have been conducted by the Lackawanna under his diction for more than a year.

The more recent recorded demonstration previous to yesterday's was on Feb. 9 last, when wireless telephone conversations were carried on between the station at Binghamton and a moving train at Lounsberry, N.Y., 26 miles away. The immediate object of the Lackawanna experimenters now is to increase the distance between a fixed station and a moving train to 50 miles, and that between two fixed stations 150 miles, the distance between Hoboken and Scranton.

"I firmly believe," Mr. Foley said, "that we shall be talking from our strain in Hoboken to our station in Scranton within the next three or four weeks."

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Binghamton Press
April 26, 1915

Local Man Gets Contract for 9 Railroad Stations

A.E. Badgley Will Build New
Depots on Lackawanna Cut-off

Will Start Work at Once

Contracts for the construction of nine passenger stations on the new cut-off of the Lackawanna Railroad between Hallstead, Pa., and Clark Summit, Pa., have been awarded to Contractor A.E. Badgley of this city.

Mr. Badgley stated this morning that the construction work on the new buildings would begin at once at it is expected that the stations will be ready for use by the first of November.

Mr. Badgley received notification this morning that his bids for the construction of the buildings has been accepted and he was authored to start the work as early as possible.

The stations at Hallstead, Dalton, Milford and Kingsley, all of which are in Pennsylvania are to be combination passenger and freight stations. They are to be constructed of tapestry brick with artificial stone trimmings. The roofs of the stations will be of green tile.
The floors will be constructed with marble partitions and fittings.

The stations at Glenburn, LaPlume, Factoryville, Foster and Nicholson are to be constructed of concrete.
The exterior of the buildings are to have flush hammer treatment and the interiors will be of construction similar to the four large stations. The smaller stations will be constructed with provision for waiting rooms, ticket offices and express offices.

The amount of the contract is not announced.

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Binghamton Press
Thursday, April 12, 1917

D., L. & W. Wireless Station Closed

Government Will Operate Plant Here,
in Buffalo and Scranton in Emergency

The Lackawanna Railroad wireless stations in this city, Scranton and Buffalo have been closed by the Government and aerials disconnected. The station in Hoboken is being utilized as an auxiliary to the station at the Brooklyn Navy Yard.

In case of an emergency the Government intends to operate the stations in this city, Scranton and Buffalo. The emergency will be if the telegraph and telephone wires of the company are tampered with, thereby holding up train movements.

The station at Hoboken is one of the largest in the country. It is capable of communicating with the other side of the Atlantic, and during several tests over a year ago, a wireless station thousands of miles distant in South America was in communication with the Lackawanna plant at Hoboken.

With wires strung from the gigantic smoke stack of the lower Washington avenue shops to the roof of the Lackawanna depot, the wireless station of the railroad system in this city is also one of the largest in this part of the country. On various occasions operators in this city could hear the operator at the Eiffel Tower in Paris, France.

Several days ago Government officials took over the Hoboken station and immediately put it to use, as an auxiliary to the Brooklyn Navy Yard station, which is somewhat smaller. Only recently the Lackawanna was ordered by navy yard officials to discontinue operating the Hoboken station until such time as they tune the plant, so that it would not interfere with the navy yard work.

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Corning Leader
December 17, 1919

Lackawanna May Resume Wireless

May Put Aerial at Binghamton
In Working Order Again

Whether the Lackawanna Railroad will resume its wireless now that there is no longer any wartime ban on its use by others than the government, is a question which being discussed in railroad circles.

Employees in the absence of any official information, are unable to answer the question, but many of them believe the wireless soon will be sputtering again.

The great aerial erected in Binghamton which was in constant touch with other aerials in Scranton, Hoboken and other cities, has not been used for more than two years, and for the same length of time the instruments have been sealed.

There is no longer any reason why the wireless should not be used again,and employees are awaiting the words which will remove the long spell of silence and inactivity.

"Of course the experiment was more or less in the nature of a novel advertisement for the Lackawanna," said one of them "but it had its practical uses,s too. In times of storm when wires were down the wireless was generally available for train dispatching and other forms of communication. We also used it successfully in talking with trains in motion."

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Binghamton Press
Tuesday, March 28, 1922

Radio Telephone Used on Lackawanna Trains

Successful Demonstration is Given in Operation
Especially Fitted Car Running Between Scranton
and Hoboken

(Special to The Binghamton Press)

Scranton, March 28. - Radio telephone messages were received and dispatched from rapidly moving Lackawanna trains Sunday afternoon for the first time in history. The test was made from a specially fitted car attached to Train 3, from Hoboken Scranton, and Train 6, from Scranton to Hoboken. It was a complete and most satisfactory demonstration of the practicability of the system on moving trains and sustained the opinion of Lackawanna wireless experts that the equipment could be installed on trains for the convenience of passengers.

A number of Scranton officials and attaches of the company were present for the demonstrate at the station here between trains and were greatly interested. The receiving and sending of the amateurs were almost perfect and their co-operation in the tests was greatly appreciated by the company's experts.

The trial of Sunday was for test purposes only and was intended to demonstrate that radio telephone broadcasting can be done from a rapidly moving train. Communication was established with stations in Newark, Mount Morris, Scranton and as far west as Elmira and Ithaca.

Radio Concerts on D.,L.& W. Train

Several hundred students from Cornell University will be entertained by concerts while journeying under the personal direction of Division Passenger Agent J. Louis Smith of this city from Ithaca to New York City over the Lackawanna railroad on April 5, the beginning of the spring recess.

The"Cornell Special," which will carry he students, will be equipped with a radio telephone set and a specially constructed amplifier to enable all in the car to hear the vocal and instrumental music concerts, which will be broadcast from Newark, N.J., New York and surrounding points.

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New York Evening Telegram
New York, Thurs., April 6, 1922

Phoebe Snow Boosts Radio as Dancers Holler 'Let'er Go'

Wireless Train is Working Right and Jazzing Passengers Are a Sight Upon the Road of Anthracite.

No longer need tedious railroad trips be boredom. The first "jazz train" has proved a success. Passengers were dancing to the tune of an orchestra in Pittsburgh when the Lackawanna "Radio Special" pulled into Hoboken terminal last night. Firemen shoveled coal to the tune of a "Hot Time in the Old Town Tonight." Diners passed up soup melodies in favor of Schubert sonatas and even the sleepers are equipped with ear sets for lullaby melodies. Jazz dancers filled the buffet car.

The jazzers were boys and girls from Cornell, 475 of them, homeward bound from Ithaca for the Easter recess. This was the first public test of radio train equipment devised by David Welles Richardson, a Princeton student, No. 26 East Eighth street, assisted by G. Donald Murray, Jr., No. 66 West 38th St., and E.G. Sisson of Montclair, the last two Princeton graduates of last year.

"This test means that the Lackawanna will at once equip its long distance limited trains with radio apparatus, including ear tubes, in Pullman berths and horns in buffet cars, with a proper space for dancing," said L.B. Foley, Lackawanna Superintendent of Telephone, Telegraphy and Wireless, to a reporter. "Also we will at once give a short course in radio so that every train will have a member of the crew competent to tune the apparatus."

Train Sends Greetings.

Just before the last dance, as the train was pulling through Newark, Mr. Foley in the Hoboken terminal "rang up" J.J. Graf, communications engineer of the Lackawanna in charge of the radio test. "A reporter is here waiting for you," he said. A few minutes later the answer came back, "Greetings from the Cornell Special of the Lackawanna. Our radio test is a complete success."

The train left Ithaca at 1:25 p.m. yesterday afternoon. The first entertainment was a series of conversations with amateur radio stations. Nearly every amateur wanted to know the train speed, which was around 60 miles an hour on the level. When the special reached mountainous country, a concert provided by the General Electric Company at its Schenectady broadcasting station. This was according to schedule. the purpose was to test the receiving power of the apparatus in tunnels and mountain bends. The music was amplified so loudly that it hurt the ears of those in the buffet cars.

Among the Cornell passengers were the members of the Big Four Orchestra of the University, who were bound for New York to supply music at the Intercollegiate Ball at the Commodore tonight. At Scranton the boys tore off several of the best numbers, which were broadcast from the train. Dozens of radio amateurs then talked to the train, giving thanks. One said, "Thanks. That was moving music."

The train transmitting set has a range of only 20 miles. The remarkable receiving is set is technically described as an Armstrong regenerative set plus a specially built and designed amplifier for train work plus detector and two steps of audio-frequency amplification, with a power amplifier used in conjunction. Thea antennas are six wire cages four and one-half inches in diameter, erected both on buffet and dining cars.

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Binghamton Press
Tuesday, Nov. 29, 1949

'Star-Spangled Banner'

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Lackawanna Railroad Telegrapher First to Hear Radio Music Here

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Irving H. Kattrell
Looking Forward
To TV Programs

There was a time when a number of Binghamton residents looked at Irving H. Kattell suspiciously.

The D., L. & W. telegrapher had claimed he had heard music through his wireless headset.

And everybody in Binghamton knew at that time that the only sound you could hear by wireless was the staccato dots and dashes of the international telegraphy code.

That was back before World War I, when the D.L.& W.was tinkering with the idea of sending wireless messages to and from trains.

The Lackawanna was not only the first railroad to try this method of communicating, but according to early recedes of the experiment, the first organization to use commercial wireless exclusively on land. Before 1913, when the railroad started its wireless system, wireless was used almost exclusively on the high seas.

Heard National Anthem

Mr. Kattell, Binghamton telegraph operator for the D., L. & W., was the local link in the Hoboken to Buffalo railroad wireless system.

Because he was accustomed to using the Morse telegrapher's code, Mr. Kattell practiced at his home, using the international code, with a small wireless set. it was during one of those proactive sessions he heard "The Star-Spangled Banner" relayed.

Amazed, he called his wife to listen to the phenomenon and ran to tell his neighbors. But by the time he brought them, the music had died out.

So certain was he that he had heard the national anthem, he told The Binghamton Press, which printed a story about Mr. Kattell's claim. It was after that local people looked at the telegrapher with suspicion.

Looks Changed.

But their looks turned to embarrassed glances when it was announced subsequently that Dr. Lee DeForrest had developed the vacuum tube, making possible the transmission of the human voice, music and other sounds by air waves.

It was the unannounced program from Dr. DeForrest's laboratories in New York City, which "The Star-Spangled Banner," that Mr. Kattell.

The railroad telegrapher got his introduction to radio by way of a crystal wireless set that was installed at the D., L.& W. station in connection with the road's experiment with the sending wireless messages.

Two trains - No. 3 and No. 6 - were equipped with sending and receiving equipment and two sets were installed in Hoboken, N.J.; Scranton, Binghamton and Buffalo.

Publicity Stunt

Antennae for the Binghamton equipment was strung between a tower - still standing just south of the passenger station - and the top of the railroad's water tank to the left of the Chenango Street overpass.

Old-timers on the road recall the D. L. & W.'s radio set up as more of a publicity stunt than a practical application of radio. The road continued to use its regular telegraph and telephone systems for receiving actual instructions for movement of trains. The wireless was used largely for transmission of messages to and from passengers on the two trains.

Nevertheless, success of the railroad's experiment proved a forward step in the development of radio.

Even Guglielmo Marconi, inventor of wireless telegraphy, wasn't convinced that the method of communications he had developed would be useful on land. He had considered it only as "God's gift to the mariner" and useful for sending messages by sea. Marconi believed that mountains would impede the sending of wireless messages.

Met Sarnoff

The first successful message sent via D., L. & W. equipment was between the Lackawanna Limited, en route to Scranton from Hoboken, and the Lackawanna

station in Scranton. After months of tinkering and changing coils and circuits, messages were transmitted between Hoboken and Scranton.

Mr. Kattell recalls when he got his first message through to Buffalo, nearly 200 miles.

The wireless equipment was set up through special arrangements with Mr. Marconi, David Sarnoff, now head of Radio Corporation of America, and Dr. DeForrest were interested in the project. Mr. Kattell recalls his own association with Mr. Sarnoff in the project.

The man who was to become head of RCA acted as a telegrapher on one of the trains during one of the trips. On the receiving end was the Binghamton telegrapher who at the time lacked proficiency in handling the international telegraphers' code.

Mr. Sarnoff rattled off messages at the rate of 35 words a minute, while Mr. Kattell could take them only at the rate of 20 words a minute. At the Binghamton man's request, Mr. Sarnoff slowed down.

Aided in Big Storm

The telegrapher's only meeting with Mr. Sarnoff occurred when the then-obscure radio pioneer dashed into the railroad telegraph office and asked Mr. Kattell: "Are you the telegrapher here?" After firing a question that the telegrapher couldn't answer, Mr. Sarnoff left.

The wireless was of great use to Binghamton merchants in March, 1914 when a severe storm broke over this region and cut off commercial telegraph and telephone communications.

Merchants used the "new fangled" device to place orders with New York suppliers. Elsewhere on the line, the wireless was seed to handle messages to points isolated because of the storm.

The system was abandoned at the outbreak of World War I and has not been revived until recent years when more and more railroads adopted radio as a means of communication.

Mr. Kattell's interest in radio has not diminished since those early days.The 69-year-old telegrapher, who lives at 73 Sherwood Avenue, was one of the first to obtain a television set in this area and is prepared to receive programs transmitted by Binghamton's first television station.