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PRATT

January 26, 1969.

Mr. Thorn L. Mayes
21120 Sullivan Way
Saratoga, California.

Dear Mr. Mayes,

Thankyou so much for the very interesting tape record that you sent me. You went to a lot of work to get the tone facsimiles for the different stations.

Marriott's story in full has not been published and I doubt that it ever will be since it is long and rambling.

I did not make a rotary gap for Mr. Isbell. An amateur friend of both Isbell a nd I, Bill Larzelere (died in 1930) who had a machine shop on Page Street sold Isbell the idea of putting one at PH. Isbell agreed to a trial and it was so good it was used for years. I do not know whether Isbell paid for it. It was exceptionally well constructed, had electrodes of ½ inch diameter brass rod and wassbelt driven.

The Federal Telegraph Company's "Beach Station" was constructed late in 1910 to demonstrate to prospective stockholders that the Poulsen Arc system could be tuned so well that two transmissions could be carried on simultaneously without having cross inteference. The first stations were at Sacramento and Stockton. By adding the Beach Station with its third transmitter the simultaneous transmissions could be demonstrated. Then a station was built on West Adams street, Los Angeles and the company went into commercial telegraph operations between there and the Beach Station. About 1914 it was decided to establish a ship to shore service and installations were made on a few ships, notably the vessels running to Australia via Hawaii and a sec ond transmitter was installed at the Beach Station, an arc of course. In order to comply with the Conve ntion of 1912 it had to be able to operate at 600 meters and it was possible to get the arc to radiate, somewhat poorly, at 600 meters. To make the signal audible the output was chopped up with a rotary type of commutating device called a "chopper". Daytime communication with these ships all the way to Australia was routine. The 600 meter feature was only used occasionally for nearby work or when working a ship not equipped by the Federal Company. This service was discontinued by the Navy when it took over all commercial stations in April 1917. (I had charge of the maintenance of all these stations on the Pacific Coast for the Navy, up to July 1918 when I was transferred to Washington.) After the Beach Station was returned to the Federal Company after the war was over (I was then building Federal's new coastwise system) I decided early in 1920, with the consent of the commercial department, to re-enter the ship to shore field and equipped the station accordingly. The transmitter as before, provided the long wave communications by arc transmitter and 600 meters with a chopper. At that time we were making 300 2 KW arc transmitters for the U. S. Shipping Board and one of these [illegible] meter emissions. Subsequent to the war, this station

OVER

was used only for ship to shore traffic. The new coastwise service operations were centered at Palo Alto. Receiving for both purposes was done on the hill at Daly City just beyond where the Hillcrest station "PH" had been before the war. Later, in 1933, all receiving was done at the new property I established at Lobitos near Half Moon Bay and the transmitters put at Palo Alto, the Beach Station then passing out of existence.

I do not expect to visit the Pacific Coast this year. I have a trip planned to England and later, in November, to Mexico City. However, when I do come to California again I will try to make time to see you and learn what exploits you may have accomplished by then.

Some time ago I wrote some anecdotes of my career but I am out of copies and intend to get some more run off. I will send you one at that time.

Now as to the history of PH. I will jot down what I can remember having just fortified my recollections by going through my various notes.

A man named Tim Furlong, who worked for me at the Mare Island Navy Yard 1915-1918, made early wireless experiments in San Francisco in 1903 between Telegraph Hill and Bernal Heights, a distance of about five miles, using a spark coil and the carbon-needle receiving method. Previous to that time there had been experiments by the San Francisco Call in 1899 and the Signal Corps established a Marconi type of system between Fort Mason and Fort Alcatraz in 1901 when the submarine cable connecting these places failed.

Working for the American de Forest/Wireless Telegraph Company Tim installed a station at the Palace Hotel in March, 1905. Its call letters were PH taken from the name of the hotel. It had a two-wire antenna that started from the Masonic Temple on the north side of Market Street, ran to a pole on the north side of the hotel, then to a pole on the center front top of the hotel on the New Montgomery side, then across the street to a pole on the Grand Hotel on the east side of New Montgomery street, and then down to a street floor window in the Palace Hotel. I once saw a photo of this layont at the Smithsonian Institution but a recent diligent search by me assisted by the Curator's staff failed to find it. The equipment used a straight spark gap fed by 60 cycle power and the receiving was done with a Wallaston wire electrolytic detector. You may know that this was a Fessenden invention. Fessenden showed it to de Forest who copied it but flattened the wire to make it different and called it a "spade detector". Fessenden sued in 1903 and won the case in 1906, whereupon the Company fired de Forest and later the President, Abe White who, to cover some fraudulent stock manipulations in 1901 when the company was organized, changed his name from Schwartz to White. (Schwartz means black in German). Furlong also built stations on the Goldberg Bowen Building in Oakland and on the Merchant's Exchange Building in San Francisco in 1905 but they were unable to communicate, the messages being carried back and forth on the ferries by four messenger boys. I never learned whether PH ever worked but I doubt it when these other sta tions failed at the same time. The San Francisco fire after April 18, 1906, destroyed the three stations.

de Forest, in 1907, organized the Occidental and Oriental Wireless Telegraph Company and it acquired all the Pacific Coast

(Vallejo for $1.000,000.
assets of the American de Forest Wireless Telegraph Company. It built a station on the northeast corner of Mason and Taylor street, San Francisco, on Russian Hill, leasing the land from the San Francisco school department. Tim built it and was its first operator. He sat there for over a year and never handled a single message because ships then had wireless. The station was built about February 1907. It was sold to the United Wireless Telegraph Company March 1, 1908. United was organized by the same crowd that threw de Forest and White out of the former company, being incorporated in the State of Maine in 1907. It was to be a big deal including the Western Union, Marconi and other companies but the big plans failed of fruition.

United tried to induce the Standard Oil Company of California to put wireless on its tankers but Standard was afraid the open sparks would constitute a dangerous fire hazard. Finally they agreed to equip their Barge #3. Tim made the installation starting March 14, 1908. She left Richmond March 19 for Puget Sound in tow by the tug Atlas with Tim as operator. J. O. Watkins (very recently deceased) relieved Tim at PH. Continuous communication was had, and the Standard Oil people then equipped 10 tankers. This was the start of the wireless telegraph business in the west. Tim retired September 30, 1944 after 42 years of activity, 4 as an amateur, 18 in commercial work and 20 at the Mare Island Navy Yard. Died in 1947.

One evening during the Portola Festival in 1909, I stopped by PH about 3 am. Eddie Foy of Berkeley was the operator. The spark gap was in two boxes, one within the other, to muffle the noise. We opened both doors of the boxes and the echo of the spark crashes could be heard from the downtown buildings. Then irate residents started to open windows and shout curses so we locked up, I going home in San Francisco and Eddie to Berkeley on the first ferry in the morning. Soon, because of complaints, the School Department refused to renew the lease so United established a 2 KW spark station on the top of the Chronicle Building (which worked exceedingly well) to take over the load while Arthur Isbell, the Manager, established a new station on the Daly City hills called the Hillcrest station.

My first visit to PH was in the summer of 1908. Malarin was the operator, Watkins having been given a ship installer's job. One day I was listening in at home when the Tenyo Maru, off the coast a couple of days, asked for the telegraph rate to Omaha. Malarin got the data from the office by phone but the Jap operators were very inexperienced with both the Continental code and the English language and after repeated attempts, slow and sending double failed to get the answer. Then Malarin cursed them roundly sending very slow and triple. The same week Malarin had a run in with the operator Chief Munsen at the Mare Island station "TG". The Commandant complained to Mr. Jessup, then manager of United. So did the Toyo Kischen Kaisha when the Tenyo Maru arrived in port because the Jap operator did understand the cursing message. Jessup then made Malarin Chief Operator in the City Office. About that time Sid Maddams became operator (about May 16 1908). Maddams was an old friend, Manager for Mackay Radio in Honolulu from 1928 till 1946, recently deceased. Sid, one day, heard music and a voice saying "if anyone hears this reply by telegraph". Sid replied and found it was the flagship U.S.S.Connecticut, of Teddy Roosevelt's "White Fleet" making its tour around the world. These ships had been equipped with small arc telephone transmitters by de Forest at Norfolk, Va. Maddams phoned the S. F. Examiner to send up a reporter. He

heard the man on the phone say "Hey, there is a wireless operator up on the Russian Hill Station that has gone crazy. He thinks he is hearing the angels singing in heaven." Maddams gave some more details so they sent up a woman reporter and got quite a story in the paper the next day. Later they paid Maddams ten dollars for it. Maddams says that at that time they could work ships 250 miles at night and much less in the daytime.

On my visit in 1908, the open core transformer on the floor was in a mahogany box and bore the legend in gold: American de Forest Wireless Telegraph Company. The spark was open and the tone very rough, being excited from raw 60 cycle power. The station derived its power from a 10 KW transformer on a pole on the street. The detector was a carborundum crystal clamped between a phonograph needle and a slab of metal, with bias voltage from a dry cell. On my 1909 night visit a larger transformer, also in a mahogany box, was on the floor and the spark gap in the sound-proof boxes, lined with sheet asbestos. The same detector was used. United had no rights on any other kind of a detector other than carborundum which had been invented by General Dunwoody after he retired from the Signal Corps and became a Vice President of United. They could not use the electrolytic due to the Fessenden suit and the following injunction and they could not use other crystals because of patents by Pickard. Most ship operators not only had their own hand picked carborundum crystal but also galena a nd others they carried in their pockets. I once left my galena crystal at PH. George Baxter, opera tor in charge, reported it to Malarin and Isbell and I was dressed down smartly for exposing the Company to possible law suit.

After CH (Chronicle Building) was commissioned, I made the acquaintance of the various operators there, notably "Pop Hyde" and at first would operate for them when they wanted to go out for a snack, later to substitute for them when they wanted a day off. This would be only 2nd and 3rd shifts as I was going to high school in the daytime. In March, 1910 Malarin put me on ships, after I graduated from high school in December 1909.

Hillcrest opened about early June, 1910, while I was on the tanker Pectan in South America. It was the first station I heard when approaching the United States except, of course, the Navy station "TH" on the Farallone Island. PH was open only for 12 hours, from 8 pm to 8 am and the operator was another friend, A. Y. Tuel. Before the tanker docked in San Francisco, Tuel had resigned to go with the new Federal Telegraph Company, having been preceded by J. O. Watkins a few days earlier. I was assigned to Hillcrest, 3rd trick, that August. The second trick operator was C. H. Kessler who I relieved earlier that year as operator on the tanker Washtenaw. By this time the transmitte had been equipped with the Larzelere rotary gap and had a musical tone. When Tuel was there it had the straight gap, same as on Russian Hill. The station had three rooms, one the operating room with the United's type D tuner (we called it the de-tuner) and the Western Union wire (we had to know both codes). The second room had the transmitter, using an open core transformer as usual, a rack of glass plates covered with tin foil and helix with spark gap. The door between muffled the noise so it was not disturbing, taking into consideration the wearing of ear phones. The third room was for storage purposes. Outside was an old wooden horse watering trough with water in it and two metal plates, constituting a rheostat in the power line. When I had trouble getting to a Jap liner out of Yokohama I would piss in the trough [illegible] plates but was careful to put them [illegible]

their proper places. Later, both Malarin and Isbell complimented me on the long ranges I was able to accomplish. As mentioned before, I could not have made these records using the provided carborundum detectors. Prevalent at the time was an agreement with the Navy that the first half hour of each hour would be Navy time and the second half hour commercial time. This was just great as I could make entries in the log, telephone messages to the newspapers and others like Captain Matson who demanded his home be called whenever a message from one of his ships arrived, put messages on the Western Union wire and have time left over for reading novels.

One night, while reading about a gang of pirates boarding a ship, a sudden noise occurred, shaking the shack. With our revolver I scouted outside but saw nothing. Resuming my reading it happened again. I could only guess someone was hiding in the privy. So I announced that whoever was in it better come out because I would put a bullet through it and fired a shot in the air for emphasis. Out came Bill Larzelere a bit frightened. He had heaved large stones on the roof from the hill above.

United went bankrupt in 1911 because of conviction of some of its officers on mail frauds plus a suit by the Marconi Company for infringement of the 4-circuits patent. Marconi Company of England bought the assets for a pittance and sold them to their American subsidiary for a tremendous price. Thus the Marconi Company of America came into control of United in 1912 and the San Francisco operations were taken over by Mr. A. H. Ginman, a very fine Englishman who later befriended me, in February 1912, Isbell becoming manager of the ship department.

Again, for the summer of 1912, I had the second shift at PH. The equipment was the same as in 1910 except that facilities for 300 meters had been added to conform to the Convention of 1912 (London) to which the United States had adhered. These consisted of a small antenna held by the nearest mast to the house, and a 10 inch Marconi spark coil. The station was built with two masts to hold the large antenna. As far as I know the 300 meter facility was not used and finally was dismantled by J. O. Watkins.

I was a strike breaker though so far the strikers had not paid any attention to PH. However, one night about 11;30 pm the 3rd trick operator phoned me from a saloon in Daly City saying several of the strikers had come out on the street car and gone into the saloon for a drink. Telling him to stay in Daly City and notify me if and when the strikers might leave, I waited and soon they arrived at the station. Isbell had taken the precaution of surrounding the place with a barbed wire fence so it was not easy for them to enter. I appeared on the steps with the revolver, announced that the fence was electrified (which it was not) and threatened to shoot unless they left. After a few minutes of huddling punctuated with curses to me, they left. Soon the relief operator phoned to say they had left for the city on an owl car. I managed to get the next owl car home. They ran every half hour.

We all had to get Certificates of Skill pursuant to the Ship Act and licenses in 1912 following the enactment of the Act of 1912

My activities at PH ceased in 1912 though I continued to run on ships up to 1914, except that when the Navy took over in 1917 I -5-

I don't think I can help you much on operator's fists of nomenclature. The latter could not be much different in 1914 when Dick was there than it was before. The sending key at PH was heavy, involving large brass contacts (maybe 3/4 inch diameter) under the table in a can of water so we could not send very fast. George Baxter had a bug but we used it only on the Western Union wire and I never became really adept with a bug. A lot of our operating was quite informal, dispensing with call letters and we never used special signals like the Q signals adopted later. A ship close by might say PH once or twice and we would come back with two dots. After the message had been sent (often using abbreviations) I would give two dots for an acknowledgement (terrible typing). I remember in 1912 the lumber schooner Fort Bragg was leaving the harbor about 5 pm and said "PH". We could recognize most of the familiar ships by their spark tones. I gave two dots. He started a position message and it stopped right in the middle. I called several times but no answer. The next day I went to the city office and here was the operator. While crossing the bar a big sea swept off the wireless shack and threw the operator into the water. After a few strokes his hand touched a rail and he pulled himself aboard again. Malarin got him another ship.

About the time CH took over, there were about 75 ships equipped running out of San Francisco, not counting the Japanese vessels. From 1907, the Massie Company had a station in San Francisco and equipped the ships of the Pacific Coast Steamship Company. But Massie went broke late in 1907 and the service stopped. In 1911 the Marconi Company, who had taken over the wreckage of the Massie Company, reactivated the old station and established a competing service..The only reason the two stations did not play rough and try to jam each other was because the only operators Marconi could find they had to hire away from United and as all the boys were friends, they treated each other courteously.

Speaking of fists, we of course, all had our characteristics and could recognize each other quite well. Some had exceptional features and had only to make a few characters to be recognized. Some, like A.Y.Tuel sent in measured sequences like a machine and sometimes we had to guess, though even that gave away the fact that it must be one of just a few fellows that sent so carefully. Combined with the tone of the transmitter, recognition was almost sure fire until a stranger appeared on the scene and we had to learn another identification.

It was lots of fun. I had an 8 KW rig of my own on Lombard street with a 112 foot mast and sometimes could outwork PH, particularly if a dumb operator was on duty like Shaw. So on off hours, with Isbell's consent, I would work a ship that had trouble getting through to PH and phone the message to the office. But I stopped my amateur activities in 1912 when the new law required us to go below 200 meters wavelength.

If you have any specific questions, send them along. I might be able to help.

Sincerely
Haraden Pratt

Haraden Pratt

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HARADEN PRATT
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February 22, 1969.

Mr. Frank Geisel
2816 Tice Creek Drive, #6
Walnut Creek, Calif. 94595

Dear Frank,

Thankyou for the copy of your letter to Thorn Mayes of Feb. 3rd.

You mentioned dearth of information on early Palo Alto and Lobitos. When the Beach Station KFS was discontinued the transmitters were installed in Palo Alto. I do not remember the date. I built the Lobitos station in 1933 and provision was made for the marine department on the ground floor where the receiving and control of the transmitters was done. Both telephone and telegraph connections were put in for the San Francisco main office.

Bill Breninman has permission to use anything in my January 26th letter.

I have just received a nice letter from Mayes which I hope to answer soon.

You ask if I know Dr. Beverage? Yes, indeed. He was working with Dr. Alexanderson during World War I, on ground antennas and I helped him some as I was in charge of Navy Radio ~~radio~~ station construction and his work was being done at New Brunswick, N.J., where Alexanderson was installing his two large alternators for Navy use. I have kept in touch with Beverage over the years and see him frequently, and we also correspond from time to time.

Best regards,

Haraden Pratt

P.S. Yes, I heard about Fass's illness and wrote him a note recently, which he replied to.