



A word or two about KPA (Seattle) and KPD (Friday Harbor). In 1912 and the two or three years previous in which these stations had been operating, the transmitters of each consisted of a 5 KW spark. The ships were all equipped with either a 1 KW or a 2 KW spark. The receivers on shipboard as well as land stations used crystal detectors. With this combination of transmitter and receiver on 600 meters, the distance over which communication could be held varied with the intervening terrain, and whether it was day or night. When KPA (PA) was first installed in Seattle, it was located on the University of Washington campus where the Alaska Yukon Pacific World's Fair was located in 1909. The building was a small wooden one (a picture of which I am loaning you for copying) and the antenna was a conventional one with four parallel wires mounted on 12" spreaders. The antenna was supported by a 210' guyed wooden mast at one end, and the other end of the antenna was tied to a wooden water tower several hundred feet away. This was a fairly effective set-up, but due to the topography of the land around here, ships could maintain contact quite easily up to about Port Townsend, but California or Orient bound steamers turning west into the Straits of Juan De Fuca at that point, started to lose contact rapidly. Alaska bound steamers likewise lost contact after passing the San Juan Islands. Accordingly KPD was built at Friday Harbor. This was located so that its signals carried fine out to Cape Flattery the entrance to the ocean, and north to Seymour Narrows. KPD thus became a relay station merely to extend the range of the Seattle station KPA, which it did very effectively, adding about a hundred miles in both directions to the range within which a ship could maintain communication with Seattle. Thus a ship such as the Governor or President, or any one of many others, would call KPD as it rounded Cape Flattery, send its arrival at Seattle message to KPD. KPD would OK the message and immediately re-transmit it to KPA in Seattle. The steamship operators would get their messages giving arrival times etc., 8-12 hours before the ship arrived. Similarly Alaska ships reported to KPD soon after coming through Seymour Narrows, or after passing Cape Mudge. I've done it many times.

Neither KPA nor KPD attempted to handle much long distance night traffic, as both were inland stations primarily concerned with Seattle arrivals. The two stations that did handle off-shore traffic were KPC at Astoria, and KPH at San Francisco. This is where the long-distance night time communication came into play. For instance on the Senator, which I have mentioned, Day time contact with shore would normally carry out to say 200 or 300 miles. Signals traveled much farther over the ocean without dying out, than over inland waters like Puget Sound or the Inside Passage to Alaska. On the other hand the Senator could easily work KPC (Astoria) at night clear out to Unimak Pass, or frequently beyond up into Bering Sea. KPC therefore got the traffic from mostly off-shore ships. Similarly KPH maintained communication with ships running coastwise north and south plus lots of off-shore ships running to the Orient.

Please excuse the general form of this letter. It is unedited and I am putting down thoughts as they occur, but I'll leave it up to you to make what arrangement of ideas you may want to make. For instance, instead of re-writing a preceding page, I'll add to it here. Point # 1 is that I recall that ~~PX~~, later ~~KPX~~ was Marshfield, Oregon. Marshfield Oregon changed its name a few years ago to Coos Bay, Oregon. With PH at San Francisco, PM at Eureka, ~~PX~~ at Marshfield, and PC at Astoria, a coastal liner was in touch with one or more stations all the way from San Francisco to Cape Flattery, where it would pick up PD at Friday Harbor. Point # 2 is that since writing the first pages I have received a letter from Paul DeChamplain and he verifies my impression that PF was Aberdeen, Wash. He says Chehalis, where he was the operator was DV. He also adds that there was a station in Spokane. I remember seeing it there located on the top of the Carlyle Hotel. De Champlain thinks the call letters were KB. DeChamplain was operator at DV Chehalis from Dec 1909 until August 1910 and he says he knew of no station at Salt Lake City at that time, but was under the impression that United Wireless or DeForest had one or two in that area or in Denver but were out of commission before he began.

Although you do not mention stations other than United, you might be interested to know that there were several others. There was a two station circuit between Seattle and Roche Harbor, Wash operating in the interests of the Roche Harbor Lime Co. Roche Harbor is on San Juan Island and just a few miles from Friday Harbor. The Roche Harbor station call letters were RH and the Seattle station H.C. The HC call letters were the initials of the owner and operator H.C. Cox who is still living here, although retired. He operated a big machinery company under his name. In the combination was also a boat, the ARCHER which presumably carried lime to Roche Harbor, or from it rather. Its call letters were AR and it was not a United Wireless installation. The installation aboard the Archer was made by Mr T.C. Smith who I know quite well. He lives in Seattle, and might add something to your lore, although he never was connected with United.

The Canadian Government operated a network of spark land stations that in some ways was unique. For instance they used rotary spark gaps, about the first I remember of hearing. They had three letter calls, and this was before the days of International agreements on the assignment of call letters. Instead of starting with a common letter as they do now under International procedure, they all had their calls end in "D" They were

VSD	Victoria BC	later to become	VAK
KPD	Pachena Point, B.C.	"	VAD
USD	Estevan Pt B.C.	"	VAE
TLD	Triangle Island B.C.	"	VAG
AKD	Queen Charlotte Islands	"	VAH
PRD	Prince Rupert, B.C.	"	VAJ
PGD	Point Gray (Vancouver)	"	VAB
SKD	Cape Lazo, B.C.	"	VAC

VAG was later moved from Triangle Island to Bull Harbor, B.C. and a station added at Alert Bay, VAF.

These stations in addition to handling ship traffic also operated a very fast and efficient relay system. Each was located on just about the limit of the range of the adjacent station. Victoria would send a message bound for Prince Rupert for instance. It was copied and OK'd by Pachena Point who would immediately send it to Estevan, who immediately relayed it to Triangle Island etc.

One curious experience I'd like to mention. I have heard 3 different KPD's in my time. You will notice that Pachena Point, BC was ~~KPD~~ ~~say~~ back in 1910. At that time Friday Harbor was PD, but with the new International agreement in 1912,

Friday Harbor became KPD #2 and Pachena Point changed from KPD to VAD. Friday Harbor, KPD operated for several years then with the advent of vacuum tubes instead of crystal detectors, and with the use of short wave transmission, Friday Harbor as a relay station was closed down. Several years later, in 1935 I was in Alaska and the ship on which I was travelling made a stop at a cannery at Hawk Inlet, Alaska. I visited the radio station, and was surprised to find the call letters were KPD.

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OW →

Here is another afterthought out of proper context. I remember in the United Wireless days there was a United Wireless station at Victoria, B.C. with the call letters PW. After about 1911 the Canadian Government exclusively operated all ship-to-shore land stations, in contrast to the Marconi commercial stations in this country, but during 1910 and probably for a year or two before that there was a United station PW at Victoria.

One little bit of information as to how United Wireless operated. In the early years I believe there was quite a bit of stock selling promotion. Wireless was new and where it was going was anybody's guess. However by 1911 or 1912 it had become a pretty business-like organization. It would not sell equipment but leased it only. As I recall it, a steamship company would pay a monthly rental for the equipment of \$200 per month per ship. United Wireless furnished the operator whom they paid \$40 per month. Of course the operator got his meals and lodging from the steamship company, and received \$1 a day besides when the ship was in port and not serving meals. This was not such a bad deal as it might sound today. The operator had no expenses except for clothes, and got a chance to travel all sorts of places in the style equivalent to fine hotels, and being away from where he could spend money, actually saved some. I believe Marconi operators on the east coast started at \$30, but \$40 was the lowest here.

There was a competitive company to United Wireless in 1910 to 1912 and perhaps a little before. It was the Continental Wireless Tel. Co. They had a 5 KW station here in Seattle located on Queen Anne Hill and the call letters were S2. There was another station in Tacoma, call letters T2. They had contracts with no ships that I know of and soon folded up. There was an amateur in Portland, Ore. with the call letters C2. His name was Charley Austin. Perhaps Cliff Watson may remember him. He was on the air around 1912 or before. With his call letters C2 there may have been some connection between him and the Continental stations S2 and T2, but I think it was just a coincidence. I have visited his station and I don't remember his ever mentioning any commercial connections.

I don't know just what areas observed it, but here in this area there was a division of operating time in the United Wireless spark days prior to Sept 1912. Prior to that time, when the 600 meter assignment went into effect, ships and land stations had any wave length they chose--- some longer, some shorter than others. With the crystal detectors and Type D tuners, this didn't make too much difference. If a transmitter started up in your area, you usually heard him, then proceeded to tune him in better. Anyway with all the spark ship traffic, there was a serious interference problem with NPC the Navy yard station at Bremerton, who also had contacts to make with various naval vessels. Consequently there was in force for several years, a gentleman's agreement, that permitted the Navy to transact its business on the first half of the hour, during which all other stations remained silent. Then at half past the hour the Navy would remain silent and the commercial traffic would be carried on. It was strictly observed until the 1912 assignment gave 600 meters to the ship-to-shore traffic and put the Navy on a different part of the band somewhere above 1000 meters if I remember correctly, but there was no interference

Kraft

The Seattle station PA (KPA) was located on the U. of Wash campus until around 1913 or 1914. Then it was moved to the Maritime Bldg, in which the engineering shops were located. The location was nowhere as good, as the earlier station had this 210' mast which was far more effective than the comparatively low antenna on the Maritime Bldg. Accordingly about 1916 KPA was relocated in the 42 story L.C. Smith Bldg and a 5 KW 500 cycle quenched spark transmitter installed. I was part of the crew that made that installation and worked several days on the outside of the building running an antenna of some 16 wires from the 35th floor of the Smith Bldg to the top of the 10 story Alaska Bldg nearly two blocks away. That installation was a big improvement, and as I recall it, KPD at Friday Harbor was closed up about this time. When World War I started KPA was taken over by the Navy, as were all other land stations, and the call letters changed to NVL, but changed back to KPA at the end of the war

This letter has run long enough for a start, and covers considerably greater period than just United Wireless, but if you are compiling a history of early wireless you may be interested.

The two pictures accompanying this letter are:

1. The United Wireless station on the U. of Wash campus from around 1909 or 1910 until about 1914
2. The transmitter house at the Astoria marine station. It is labelled KPC 1918 as that is the year I was sent down there to dismantle it, but it is the same building that was housing the same station in earlier days of United Wireless known as PC. The guyed wood mast seen, is similar to the one at PA

I will appreciate you returning the photos to me when you have copied them.

Yours very truly

Vincent A. Kraft

P.S. In the picture of KPC you can get an idea of the typical guyed mast that was used at several land stations. The masts were square and tapered from perhaps a 12" cross section to about a 4" at the top. They were built of sections cut to fit together with overlapping joints. They were brown and apparently of creosoted or otherwise treated wood. Note the guy wire insulators. These were made of wood. The PA mast at Seattle was 210' high. I think the one shown here at PC was not quite so tall perhaps 180' high, but am not sure.