

Thanks Chuck

I appreciate your accommodation of my schedule: some family events trump even cutting short a honeymoon for WTJU. (Yes, I really did cut the honeymoon a couple of days short.)

Two names come to mind as being worthy of remembrance for memorials at this occasion, Dalton Webb, and Yates Holleman. I'll go into more details later.

Now, some pre-history for WTJU.

Your radio station has the distinction of having arisen out of the figurative ashes of a commercial FM station, WBUZ, Washington D.C.

WBUZ was built to provide FM reception on DC transit buses and street cars, to provide entertainment, but mostly commercials, to transit riders whether they wanted it or not.

Back in the fifties, FM technology was relatively new, and receivers required a lot of space for tubes and power supplies, particularly on the noisy power busses (sorry for the pun) on streetcars. The receiver installations were huge compared to an iPod of today.

Unfortunately for WBUZ, listener enthusiasm for the broadcasts was tepid, and advertisers did not sign up in droves. Then WBUZ started to have labor problems and that is where WTJU got its start.

One morning, in 1955, when the staff announcer tried to turn on their transmitter, it faulted and indicated abnormally high VSWR. (You might have guessed that a life-long techie would start with acronyms somewhere along the line.)

Looking out the window, as the sun came up, the problem was obvious; the transmit tower was stretched out on the ground, a victim of some irate employee's vandalism.

WBUZ gave up in the summer of 1955.

Word propagated among the profession, and Francis (Frank) Colligan, another aspiring tool school inmate, got in touch with me and indicated that the 3 kilowatt transmitter was available for \$300.

That summer I was working as a student intern at the Bureau of Standard's computer laboratory (the huge computer had a total of 8k of memory, but that is another story.)

George Wilson enthusiastically responded to the opportunity, and thanks to one of the physicists at NBS, Dave Jones, we rented a U-Haul truck with a powered lift gate (I was too young to rent a truck) loaded the two immense transmitter racks in the truck and tooled down to New Cabell hall where we stored them temporarily in the speech school's facility. (If I were doing this in person, I would ask for a show of hands of how many

people were aware of the state-of-the-art studios that existed at the time on the first level of new Cabell Hall. Sadly, the studios were relegated to classrooms somewhere in the 80's. The major benefit for us at the time was the air conditioning that Prof Wilson managed to finagle.)

Because we had no budget for either the modulation monitor or frequency monitor required by the FCC for stations having over 10 watts of power, the lower powered stages of the transmitter had to suffice.

But before even that power could be used, the transmitter operating frequency had to be changed. Again, in the fifties, the technology of the time involved many, many multiplier stages to get from a nominal 100 kHz to 91.3 MHz.

It took me literally weeks, working in the attic of New Cabell Hall, to get the monster, which used an obscure magnetic deflection technology around a Phasatron tube, to achieve stable FM modulation.

In the meantime, we had to work up a do-it-yourself antenna. Here is where the late Dalton Webb performed some truly impressive work designing and constructing a two bay antenna and double-stub tuner to match the antenna to the transmitter output. Dalton was an incredibly accomplished technician. He had worked in R&D for a notable firm in Virginia Beach before starting at UVa. After graduating from the tool school, he joined NASA and wound up Directory of the Mercury tracking station in Bermuda where he had the initial go, no-go decision for the Mercury Launches. I suspect he was barely 30.

So little by little, it all came together.

One summer, while in High School, I worked for a firm of consulting radio engineers (Frank McIntosh of the McIntosh amplifier was the senior partner) so I was familiar with the many steps of getting an FCC license and proceeded to prepare the engineering statements and coverage predictions.

A sidelight. The original antenna was mounted on one of the elevator penthouse towers on New Cabell hall. Purists among the faculty were appalled at the desecration of the Jeffersonian ideal. To get access to the antenna required climbing out a window and then hiking up the slate roof to the ridge, then walking along the ridge to the antenna structure. One does strange things when in your early twenties.

Professor Wilson managed to scrape up enough money for a small mixer, a monitor receiver, some turntables, and a mike that barely fit in the announce booth of the Cabell hall studios.

Just as it was all going together, the US Navy decided they could not function without my services and I was called to active duty in December of 1956. This is where Yates Holleman came to the rescue. He finished up the remote control system for the attic

mounted transmitter, and pretty much straightened out what I had started and left unfinished.

So here we all are. Beneficiaries of some amazing early enthusiasms, successful academic political maneuvering, money infusions, dedicated volunteers and a whole lot of hard work by everyone.

I congratulate you all. Your reward, I hope, will be to attend the 100th anniversary of WTJU-FM.

If you have anything to correct or add, catch me at kalakala@Comcast.net.

Again, thanks Chuck and all of the WTJU people.

Rowland Johnson, B.E.E. 1961
Reston, VA. June 2, 2007