

YOUNGSTOWN STATE UNIVERSITY

ORAL HISTORY PROGRAM

History of WKBN Radio

Radio Engineering Experiences

O. H. 12

BERNARD T. WILKENS

Interviewed

by

Frank J. Quartini

on

March 10, 1974

BERNARD THOMAS WILKENS

Most of the mind-boggling wonders of broadcasting that continue to amaze all of us were developed by members of the engineering fraternity. Those who work in broadcast engineering at Youngstown stations today have inherited traditions established by Hertz, Marconi, DeForest, Zworkin, Williamson, Schaffer, Chorpening, Phillips, and Wilkens.

Bernard Thomas Wilkens joined WKBN in March of 1930, and for the next forty-three years helped plan and execute many of the technical advancements of Youngstown's pioneer radio and television stations.

Born in Circleville, Ohio, Wilkens graduated from South High School. He attended the Dodge Radio Institute, and Valparaiso and Youngstown State Universities.

He is a member of the Institute of Radio Engineers, the American Radio Relay League, the Youngstown Radio Club, and the Knights of Columbus.

He has taught radio engineering courses at Youngstown State University, and lectured to numerous high school and college groups. From 1930 through 1941 Wilkens held a commission in the Naval Reserves.

His long tenure at WKBN Broadcasting witnessed an increase in power for WKBN-AM from 500 to 5,000 watts day and night, the construction of a new transmitter building, the inauguration of WKBN-FM, the construction of a new radio-television complex, the construction of Ohio's first UHF television station, and the

first transmission of color by a UHF station in Ohio.

Wilkins retired from WKBN on December 30, 1973. He lives at 55 East Judson Avenue with his wife, Evelyn.

Steve Grlevich

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INTERVIEWEE: BERNARD T. WILKENS

INTERVIEWER: Frank J. Quartini

SUBJECT: Radio Engineering Experiences

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Q: This is an interview with Mr. Bernard T. Wilkens for the Youngstown State University Oral History Program by Frank J. Quartini at 55 East Judson Street in Youngstown, Ohio, on March 10, 1974, at 2:00 p.m.

Q: Mr. Wilkens, what do you remember about Circleville, Ohio?

W: Well, it's a small farming community of about ten thousand people and it's thirty miles south of Columbus and about eighteen miles north of Chillicothe, Ohio. There are numerous old Indian mounds, serpent mounds, et cetera, just outside of Chillicothe. Some of the most famous are still preserved and there is the Logan Elm, which probably many many people have heard about. It's only about thirteen or fourteen miles from there.

Q: What did your father do in Circleville?

W: He worked for the Circleville Power and Light Company and was a stationary steam and electrical engineer for the municipal power plant.

Q: What about your mother?

W: Well, of course, she was a housewife, but before that, she worked manufacturing cigars using the hand rolling method.

Q: How did they meet?

W: It was one of those things. They worked in the same community. My father's first wife passed away in childbirth and he was a widower for quite a few years before he met his second wife.

Q: When and how did you first become interested in radio?

W: I first became interested in radio when we moved to Youngstown in 1920. I immediately joined the scouting program and in the scouting handbook, I found information on how to build a radio transmitter and receiver. I'd always been interested in electrical work, from the time that I was about eight years old going to the power plant where my dad worked

Under these circumstances, I tried to build a transmitter and receiver, and it worked. This was a funny incident. In those days, I didn't know that you had to have a license to operate a transmitter. I was on the air with it one day, when one of the men from the Coast Guard station in Ashtabula, Ohio, came down and saw the big flattop antenna I had up and wanted to see my equipment. I took him up and showed him; it was in the attic of our home on Carroll Street and Oak Hill. After he operated the set and contacted the Ashtabula Coast Guard Station, he pulled out a metal seal and sealed my equipment off so that I couldn't use it anymore.

Q: Did you experience any problems during the first World War since you were of German descent?

W: I experienced it only indirectly in the town of Circleville, Ohio, where we lived in 1918. The majority of people there were of German extraction. They had moved up into that area when they first came to this country as farmers because it was a very fertile region. Circleville is the County Seat of Pickaway County, the heart of an excellent farming area. So, on the streets of the city, you'd hear more German spoken than you did English before the war. Then came the war and, of course, everything German was thrown out. No more German was spoken and some bitter feelings, in one form or another, materialized among some of the people.

Q: You were twenty-three when the Depression began. What do you remember it to be like? Was it difficult to find jobs?

W: At that time, I already had my commercial license. I was working at McElroy Furniture Company in the radio department, as a radio repairman, installer, and salesman. I had applied for a job at several different broadcast stations, but I had received no answers. The company started to cut our work down to two or three days a week. At about the same time that I got that notice, I also received a notice to come to work in Columbus, Ohio, at a broadcast station then called WCAH, which is now WBNS.

Q: What other types of jobs did you have before you worked at WKBN?

W: Well, being just out of high school, I was too young to get a job. I couldn't even get a working permit; I was only seventeen when I graduated. Finally I was able to get a job working at Ward Baking Company. I worked there for about three or four months and lost about twenty pounds, which I couldn't afford to lose. I wasn't very heavy; I think I weighed about a hundred thirty-five pounds when I got out of high school. Then, in February or March, I was old enough to get a working permit and obtained a job in a steel mill working as a crane man and a lineman.

Q: You mentioned that you worked in Akron at WFJC?

W: Yes, well--going back to the job at Columbus--I worked there for about five months and then a friend of mine from amateur radio invited me to come to work up there, so I did. He was chief engineer of station WFJC in Akron, Ohio, which was owned by the William F. Jones Company, an automobile dealer, of all things.

I worked there for about five months and while I was there, Mr. Williamson heard of me from various amateur operations, called me and asked me if I would come to work in Youngstown. Since it was my home town, I was happy to come back.

Q: What was WKBN like when you first started to work there?

W: The equipment was all homemade. Back in those days, very very few people had commercially made equipment. We had two studios, a reception room, a

transmitter room and a generator room on the third floor of the YMCA.

Q: What were your duties at WKBN when you first started to work?

W: When I first started, I was an engineer, an operator and a repairman.

Q: What was the programming like?

W: It was varied. It was considerably different from the situation today. Then, we carried live programming from CBS. We had quite a bit of live programming from the studio and occasionally, we did a remote program. Those were mainly from Idora Park because the equipment was so heavy and there was so much of it that it required two or three men to carry it in and set it up. We had storage batteries for the microphones and amplifier and large "B" batteries also for the amplifier. Those were the days of the old carbon microphones which required a DC potential on the microphone itself.

Q: Were there any stronger stations then?

W: Yes, there were Cleveland and Pittsburgh nearby, and many others in the United States.

Q: Was there anything that you could do to compete with them? Did WKBN make any changes?

W: At that time, we ran on five hundred watts and we had a schedule in which we were on for a couple of hours and off for a couple of hours, because we shared time with WOSU in Columbus, Ohio. Five hundred watts was all the power that Mr. Williamson figured that we could afford at that time. A little later on, it became possible to increase power and we applied to the FCC for that but were turned down because they claimed we weren't making the best use of our facilities.

Then we purchased a plot of ground south of Youngstown, just on the edge of the city, where we put up a tower that is still standing. In fact, it was erected in 1937 when we moved out there and it gave us a much stronger and much better signal than our antenna system in the center of town.

Q: What role did advertising play at WKBN?

W: Well, it was very important because without it, there was no money with which to operate. At WKBN, it was strictly a personal thing because there was very, very little advertising, due mainly to the Depression. What little there was, was generally run on a weekend. During the week, there was some, but it was very moderate compared to what we have today. There were two salesmen on the staff, and the wages took almost all of the income, so there was very little, if any, for modernizing of the station.

Q: You mentioned how you met Mr. Williamson. What was your first impression of him as a man and did this first impression prove to be accurate?

W: I figured that he would be a pretty good businessman because he already was running what was then called "The Good Housekeeping Shop" out on the corner of Princeton and Market Streets on the South Side. I figured that he compared favorably with the owners of the other stations that I had worked for previously. In fact, I felt that he was a little bit better than the others because he was also an amateur and knew the radio business pretty well.

Q: What led up to your working for Bell Labs?

W: Well, I had a commission in the Naval Reserves for many years and due to a football injury sustained in high school, the Navy Department gave me a medical discharge. But after the war had been going on for a year, they wanted me to go back in and sign a waiver on the medical discharge because they needed officers pretty badly in the field of radio communications. They got to the point where they were coming after me once a month and it was either go back into the navy or take a job affiliated with the war program.

About that time, the Western Electric Company, which actually hired me, had a man in the field who came to see me and told me about the program. My employer, Mr. Williamson, told him that he would be happy to loan me to them if WKBN could get a release forbidding the war program to take any more of his key people. We were down to where we were operating

the station with three women and only about three or four men in the engineering department. It made it pretty much touch and go because there weren't enough people to go around at that time. And incidentally, the program that they offered to me as originally planned was to go to Italy and help set up a fifty kilowatt transmitting station to transmit propaganda and news to the Italian people after our forces invaded Italy.

While I was in the program, I discovered that there were two very good friends of mine staying in Europe just waiting for the same job of putting such a transmitter into operation. I felt that I would be just wasting my time and asked them to either place me in the radar division or send me back home. They put me into the radar division and I worked there from then until the V-J day.

Q: Was this station in Italy eventually set up?

W: No, they never set it up. They found out that they didn't need it. They figured that they would use it to propogandize the people there, but the military situation deteriorated so fast after the Americans got a foothold in Italy that it wasn't necessary to mount the radio program at all.

Q: What innovation or technological advances at WKBN did you witness or were you a part of over the years?

W: Well, the transmitters became more sophisticated. All of the transmitting and audio equipment eventually changed over to solid state circuitry, which is in use today. There are very, very few tubes used in even the transmitter system compared to what were used when we first went into the business.

There were somewhere around two hundred different types of radio tubes in use when we first started in the business. It increased rapidly to many thousands and it got to the point where the solid state circuitry was the most used, particularly in the audio section. Eventually, all of the audio section became solid state and then a few years ago, they started in with the transmitters and particularly with the FM and television transmitters. Even in the plain ordinary AM broadcasting transmitters, they are now using quite a bit of solid state

equipment. It's fast coming to the point where there will be all solid state equipment used except possibly in the last stage of the transmitter.

Q: Was TV a very promising idea at first?

W: No, I can remember looking at it in 1932 in New York City when they used a spinning drum and a terrific amount of light to obtain a picture that was about three inches square, and had very poor definition. You could see movement and you could recognize the person, sometimes, but it was a very, very small picture.

Q: Who sponsored that?

W: That, originally, was sponsored by NBC. My wife and I saw it for the first time in 1932 in New York City at their studios. At that time, there were two TV systems in operation--the Farnsworth system, which actually originated in England, and the RCA system of Dr. Vladamir Zworin, using his iconoscope. But the spinning disc was actually a Farnsworth disc and it went by that particular name. I can remember back at the end of the World War II, in late 1944 or early 1945, the picture was quite small and you had to watch it in a very darkened room. The picture, I believe, at that time, was about eight inches by eight inches and the quality was very poor. You were unable to get good contrast and the same picture would not have sold very many television sets.

You have to remember that this idea was being evaluated by Bell Labs, particularly for what they could get out of it in transmitting it across the country. At that time, they didn't see that it was worthwhile.

But there's another thing that dates back. Television, as we know it today, was originally patented in 1917 by Bell Laboratories but sat on the shelf for many years. Of course, at that time, they were still using the spinning disc. They still had not come up with the Dr. Zworin invention of the image orthicon, which radically changed television and the ability to transmit an image.

Q: In your opinion, what effect did it have on radio once it became smoothed out?

- W: Radio, at that time, had a very, very, strong hold. Anything new grasps the imagination and the salesmen are always looking for something new to sell. It became a very major tool for selling. It affected radio somewhat at the outset, particularly because some of the large advertisers switched over to television because they had a chance to display their product and thus obtain a better response from the public.
- Q: How strict are the rules of censorship in regard to radio and television?
- W: The National Association of Broadcasters has a fairly strict censorship rule among their own members. The majority of the stations also tried to maintain some type of censorship because they realized that they were visitors in people's homes. On the other hand, you also have the FCC as the federal authority sitting back with the big stick and they can deny your application for renewal of license should sufficient members of the community go before the FCC with an unfavorable report on your station.
- Q: Has that ever happened to WKBN?
- W: No, it has never happened to WKBN, but it has happened to several stations in the United States.
- Q: So you do come in contact very closely with the FCC?
- W: Very definitely.
- Q: Are there any particular problems with having a radio station and a television station, with regard to the FCC? Are the rules more strict because you have two types of media which affect the public?
- W: No, the rules are the same as long as you're not the only station in the area.
- Q: Could you shed some light on the events that led up to the merger between WKBN and WMBW that eventually formed one station, WKBN?
- W: Well, that dates back actually to a clash between two musical interests in the early days of the history of radio in Youngstown. WAAY was owned by

the Yarling Rayner Company and was broadcasting mainly in the evening. It was sponsored or owned by the Yarling Rayner Company, and of course, they were out to improve their own musical interests.

There was another musical house in Youngstown owned by Harry Warner. He was unable to get any programming on Yarling Rayner radio, WAAY, so he convinced a friend of his, a Mr. Yaw who owned the Yaw Battery Company, to install a radio station with Mr. Warner as the musical director for the station. I believe he had some monetary interest in it at that time. The WMBW station was erected on Market Street very close to where the old Market Street School was. It was just north of the school in a building that is presently operated or owned by the steelworkers' group.

- Q: Was Mr. Williamson the only person that had any control over the station or were there others involved?
- W: He and Creed Chorpensing were joint partners in a radio repair business and had the only control. They put the radio station on the air to give the people some programming and to prove their ability to repair radios. The station was owned then by those two people for a few years until one day when they needed a pair of fifty watt tubes for their transmitter and neither of them had sufficient money to purchase them. They went to a friend, Lew Brock, who was also in the radio business, and he purchased those tubes for them and gained a half interest in WKBN.
- Q: How did Mr. Williamson eventually get full control of the station?
- W: Well, back in 1930, Creed Chorpensing sold his interest to Mr. Williamson and left the station. A few years later, Mr. Brock had moved down into Kentucky and wanted to dispose of his interest. Mr. Williamson and a man in Cleveland, a former mayor of Cleveland by the name of Townes, jointly purchased that stock. Then, Mr. Williamson was in partnership with Townes and I believe also one or two shares of stock were owned by a Mr. Jones, who was a certified public accountant.

Q: Do you remember any humorous or lightened moments that you can tell us about?

W: There are many, and it depends on what you might consider light or humorous. There were many humorous situations in those days because the equipment was what we called "home brew" or "homemade," and we ran into various difficulties.

I can remember sitting at the control console late one evening while we were carrying a CBS program out of New York when suddenly the audio just went dead. So I immediately called our AT & T repeater station in New Castle but was unable to contact them. I called the Cuyahoga Falls AT & T repeater station and told them what had happened. We later found out that someone, or a group of people, had evidently backed a truck up to a pole, and with an ax, had cut through the two thousand pair cable from New Castle, Pennsylvania, to Youngstown, Ohio, hooked this cable onto a winch and had pulled it out. They had to winch it out because there was not a single track on the ground where that cable came down and about two miles of the cable was pulled through the supports, piled onto the truck, and driven off someplace.

Q: How long did this blackout last?

W: Well, actually, it only took a few minutes to reroute the program through Cuyahoga Falls, so it was less than a five minute interruption.

Q: Were you ever tempted to leave WKBN and go to any other station? Did other people try to spirit you away from WKBN?

W: Yes, several times. I could have gone to work for Westinghouse and a couple of others, but this was my home and my family ties were here, so I chose to stay.

Q: Is this what made you stay at WKBN?

W: Right, in fact, I liked working with Mr. Williamson. I worked with him for many years. I knew how he worked, how he thought, and for that reason, I decided to stay with him

Q: How did you become the chief engineer at WKBN?

W: Well, when Mr. Chorpenning quit, there wasn't anybody else. I was it.

Q: What do you think is the future of radio?

W: I think it will continue as it is today. You probably won't see any marked changes in radio, but you probably will see some in television. Radio, I believe, will remain in its present form. You may find a reduced number of stations because eventually, I don't think that the smaller station can manage to survive commercially.

It requires a certain amount of money to update a station. The station must be updated at least once every twenty years, if not earlier. That updating depends on the maintenance program. If the station's maintenance program is poor, then it will have to be updated every ten years.

Q: Has WKBN ever had any trouble with renewing its license over the years?

W: Well, we've had challenges, but we've been able to meet them. We've never had any serious threats really.

Q: Do you ever go back and visit the station at all?

W: Yes, once in a while, I go back.

END OF INTERVIEW