



LancasterHistory

Lancaster County Historical Society
Oral History Project

Interviewee: Emanuel (Max) Peters
Interviewer: Beverly Newton
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Bev: This is Beverly Newton. And today is July 9th, 2004. We are in the Lancaster County Historical Society Conference Room, and I would like to thank Mr Peters for coming in today. Can you tell me a little about your background, before you went into the military? I understand you were from Ironville, north of Columbia?

Max: Right! North of Columbia. Ironville was a little village. And it was named after the iron mines that were there sometime back and was a community of maybe about 40, 50 houses and I consider that my basic home where I grew up. We lived out in the country and we delivered newspapers, built radios, and did things like that. Worked as a lifeguard at the local pool, joined the Boy Scouts, so I stayed there until I guess between junior and senior high school. Then we moved to Columbia.

Bev: How old were you when you started building radios?

Max: I was a teenager. I probably built my first radio when I was fifteen. It was a one tube radio. It was a heterodyne type. I built that when they didn't have electricity so I had to run it on batteries. And I would listen to Berlin, Germany and England at nighttime on that radio.

Bev: It was AM (amplitude modulation) at that time?

Max: Everything was AM, that was before FM (frequency modulation). And what I did, I worked for Albright's who sold TV sets and radios, and I would get their old parts, and so I took an old vacuum tube, smashed off the glass, put the windings on to make the coils so I could get England and Berlin. So I'd sit up all night or most of the night. And my mother used to get mad. It was cold, and we just had that one pot-bellied stove. And I would just sit there and listen. And then finally, I decided to put it on my bicycle, I guess I was fifteen, riding around with this radio.

Bev: So you were the first, actually the first, like CB radios, with radio type communications

Max: Well, It was like the amateur radio, but I get into it on the receiving side.

Bev: So after, you graduated high school...

Max: It was 1938. I looked around and I didn't have the resources to go to college. At least I didn't think I did. So one day in 1939 going down to Atlantic City to the Grosserman's picnic, I

saw this big sign "Join the Army Air Corp", so I joined that. It was 1939, August the 3rd. I asked for Hawaii, but that was closed, so the only thing they had left was Panama and the Phillipines, and fortunately I picked Panama.

Bev: Yes, I read that you installed the VHF (Very High Frequency) communications across the Isthmus of Panama. How many stations?

Max: What we did, we had a lieutenant that just graduated from VPI he was an engineer, and I was his sergeant. At that time the VHF radio was just coming in and there was no communications across the Isthmus of Panama, so we went out and we established I guess about two relay stations, but anyway we could talk. Aircraft then could talk from the Pacific side to the Atlantic side. And that was the first time we had VHF there. That was something new.

Bev: How long did that process take?

Max: The biggest part was getting through the jungles to get to our relay stations. I think it was probably a couple months. But we were in canoes with the alligators out there in the river. It was interesting.

Bev: I can imagine, trying to avoid alligators.

Max: They didn't bother us and we didn't bother them. As I get older, that wasn't a very bright thing to do. But yes, we did that. So then after Pearl Harbor I went to Signal Corps OCS, because that was communications. Went to Fort Monmouth, New Jersey, got my commission

Bev: Fort Monmouth is..?

Max: New Jersey, the Signal Corp OCS. After the Signal Corps, OCS, we were sent to Florida to Tampa International Airport. At that time the army was requisitioning officers that weren't being filled, so when the turn came, everybody went. I was a radar officer at Tampa, with a SCR 270, which is large long distance radar. I looked around and said, "No future," and I hadn't been in the Air Corp. I wrote a letter requesting transfer from the Signal Corp to the Air Corp, and it went through. They sent me out to Will Rogers Field in Oklahoma. First I reported in to the squadron commander. I had already had a year on active duty. He said you're the senior second lieutenant on this post, but I can't make you a first lieutenant, you have to be professor. So if I'd stayed in the Signal Corps I'd probably be a first lieutenant. So I signed into the Army Air Corp and then we trained with communications people and we went from Oklahoma City to Woodward, Oklahoma and from Woodward, Oklahoma to Tyler, Texas. We supported troops on maneuvers. And then on to Louisiana from Tyler, Texas. After that we went to the port. Was on the Martinia, which was a luxury ship that the British had converted into a troop ship, so we had all the good food, kipper, and all that fancy meals to eat.

Bev: How long did it take you to cross over?

Max: It was about a week. We started out in a convoy and we were right in the center of a couple troop ships. The navy had their destroyers out scouting around to look for subs and

dumping munitions on them. Then the ocean became very rough. It was decided that it was too rough for submarines and since we were on a fast commercial liner, we took off. We went to western England. We were on the ocean end in February where they have all the storms. We got there in the beginning of March.

Bev: So you get over to England with your bomb group?

Max: We were the 409th Bomb Group. When I joined them in Oklahoma, they were the 409th so I stayed with that unit for the rest of the war.

Bev: Then you worked with communications and camouflage?

Max: When I was in the Signal Corps I was sent to the camouflage school and Corps of Engineer camouflage school in deception, so I had that background. Then they appointed me the camouflage officer and communications officer. We operated our base near Cambridge, England from March. It took a couple weeks for us to get adjusted. As a matter of fact, when the group went on the first mission they couldn't even find France because it was so foggy. They came back and went up and down the coast of England yelling "MAYDAY" and some of them had to bail out. At that time communications was not important to the pilots.

Bev: Maybe it was when they ran out of fuel!

Max: See back in the States they could read the water tanks. They didn't have to communicate, so the first guy they patted on the back was the communications officer. Then I was their friend. Because the DF (direction finder) sets worked.

Bev: I guess it was kind of a transition for the pilots, especially

Max: This is early in the war, and we are an emerging nation and the pilots came from all walks of life. They learned to fly and the water tank was a good thing to read. They knew where they were in the States. They didn't really have all the practice they needed for combat. When the second mission went out they found France and the flak guns found them. They got pretty badly shot up. So then they settled down and started making good precision bombing. But in the meantime we were experimenting in addition to using communications. I could tell what the weather was over the target area. For example, when the mission went out we went on radio silence because you didn't want the enemy to know where you were. In fact, we had spoofing stations on our base. We would use call signs from our base and it sounded like we were still there. After they dropped the bombs, they would report back. I could tell by the reflection (how much signal we received back) as to what the weather was. So, that was the precursor for the modern weather radar. We learned a lot from signals bouncing off the clouds. And I learned a lot when I was a kid from skips, radio waves and how they behaved. In addition to that we learned a lot scientifically. D-Day was a maximum effort. Before that I should say that we really practiced deception. We had a special safe that had call signs and all the frequencies. An order would come down and we'd change all the frequencies on the radio and change all the call signs before flying out to the coast and bring them back. We must have done that ten to twenty times. When the invasion started, that night an order came down and we painted black and white

stripes, so every Allied plane had these black and white stripes on the invasion planes. That was to identify, so when we come in, the Germans were a little bit confused because they weren't sure if this was the fake, or if it was the real thing. Also, General Patton did not take part in the invasion. He was held back. He had an army that sent the communications messages, so the Germans thought Patton was going to back the landing.

Bev: Yes, Patton was the "decoy".

Max: Decoy. So even though some of the beaches where they landed were very tough. My brother was on that beach. Where we flew then from, we would get daylight we were on double brief summer time, we would get daylight from 3 or 4 in the morning and it would stay daylight until 9 at night or 8 at night. So we had three missions. A box was eighteen aircraft, and we sent two boxes on a mission. On that day we had three. In September, the group then moved over to France. I was part of the rear echelon, the communication officer of the group went with the first echelon, I was with the base in England for a couple weeks longer then we moved with them. Then we jumped from Mir, France up to Leon Cougaraan, France.

Bev: How far was that from Paris?

Max: The airfield in France was ten, twelve miles from Paris. We were up near the border and that's where I went on this other mission. At that time we did get some sophisticated equipment called g-equipment, which is like LORAN that was a hyperbolic curve. These transmitters would send out these pulses and they would send out these pulses that looked like a hyperbola and where they intersected, that's where you were. And we could read that. Our navigation was improved, but we still depended on smoke for the battle area. The troops were moving fast. Our job was interdiction, which blowing up railroad bridges and marshalling yards, road junctions and supply dumps. Before we went to France there was a code word that was called a "no-ball" target. Turned out that a "no-ball" target is the codeword for the German V-1 rocket. That's the little airplane, jet-propelled missile, "buzz bombs". They'd fire them; we'd knock them down. They'd build these ramps, like a hyperbola, so we'd fire and knock them down, they'd build them up, and we'd knock them down. That was part of our mission. After we got over to France, there was one big push, where they had smoke out. The smoke was okay but the problem is, the wind changed and we didn't know that. Bombs were dropped and General McNair, that's the general they named the post after in Washington, was killed. So, they decided then they should have some air corps people go up with the infantry, and infantry people come back with the air corp. I was selected to go up. That's how I got on this river crossing, which was kind of an experience.

Bev: Yea, I remember reading that you got strafed there a little bit. You also have a taillight.

Max: Yes! I still have it. The first night we were in this convoy and all the vehicles had the night vision lights. There were two little things like cat eyes. If those cat eyes were apart, then you were too close to the other vehicle. If the cat eyes made a little triangle, you were at the right distance. If you could hardly see them, you were too far back. The corps of engineers used search lights to flash up on the clouds and these search lights and flashes and the light would reflect down, give you a "dawning" effect, giving you enough light so we could cross the river.

Somebody fell asleep and our group got lost and the next thing you know we see this German half-track. He sees us and he runs; we hide. Then another infantry unit comes up, sees the half-track and they hit it with 50 cal. machine guns and knock it out. Next day, we were on the road and by that time there was a lot of refugees also filling the road. We were just moving down this column; things are very fluid in combat. We saw these natives running, so I said to my driver, "Hey, better hit the ditch!" Ching! We hit the ditch and this Messer Schmidt was shooting---chit, chit, chit. So we took out the spare tire and I hit the light. The bullets put a hole in the jeep, but it missed the engine. Anyway, we could drive. I decided to take that (the tail light) as a souvenir. That's, that's how I got that. That's one of my souvenirs.

Bev: So, at the end of the war, you still stayed in?

Max: Well, at the end of the war, I got out, cause I had enough points. I went to F & M. I took pre-engineering, and then had the opportunity to get a regular army commission, so I went back in and I finished up at night school. Then the army sent me to graduate school and I got a graduate degree.

Bev: In engineering?

Max: The graduate was from, it's now the Smith School of Business in Maryland. So it was more of a business, operations, and research-type thing. Then I took other courses, and then I went to California and worked on computers. I've been kind of a student all my life, I guess.

Bev: Your career. How long did you serve?

Max: I went in the career when I came back, I was integrated in the Signal Corps in the regular army. And there, the new activities signal intelligence activities was being reformed from World War II, so the Signal Corp thought I should go there. I went down and interviewed and asked them a lot of questions and didn't have the foggiest idea who I was and they said, "Okay, Peters will do." At that time you never mentioned the unit, you never even mentioned Arlington Hall, cause that was classified, and I started off in that. I didn't like it at first, but turned out to be a fun career.

I studied under William F. Friedman. He was one of the greatest cryptoanalysts in the world. There were about twenty of us that studied under him. We studied every crypto system that was used by the allies. We studied the Enigma machine, and the Purple Machine the Japanese had, and our own things. They made me an analyst. And having this background in communications, I was analyzing the emissaries radio traffic, and you pull nets together, and having had a background in communications I could pull a lot more things together than the average analyst could, cause I knew how the radio behaved and what to expect from that. That was before the NSA and CIA and DIA. I stayed with them and then being Signal Corps we had a lot of infantry and artillery come into command units so they'd stick all of us Signal Corps into all the technical jobs which were the fun jobs; they were doing the desk jobs. There was a time that we had signal intelligence in ASA in the army and electronic warfare that was in the Signal Corps. They determined that probably they would have a study to see whether we needed two units or we needed one. Since I had the background in that, I was with the ASA board. They said, "Okay, you will be secretary on this study group." We had a high-powered Pentagon study

group and they concluded then that electronic warfare should be part of signal intelligence and ASA should get it. So then they said, "Well, now since you did all this stuff, now you're up to date, you integrate this battalion into the sig-int side." So I did that. And then they said "Well, since you did this now, you have this background, why don't you be the head of the electronic warfare division?" So I did that. And that's how I became, and for that I was awarded the Legion of Merit when I retired for writing the first concept for integrating electronic warfare and signal intelligence into a combat unit, into land warfare. And then afterwards, I did some work to get the Air Force to integrate them. Then I went out and retired.

I had a friend of mine said to me "are you serious about retiring?" And I said "Yes". He invited me out to Mountain View, California where GTE, which was Sylvania at that time. Went out, and it looked pretty good, so I was hired as the assistant engineer. I stayed at that about twenty years. I worked system engineering and management jobs, things of that sort. It was very interesting. 1965 was before the computer was built and Silicon Valley was a very unique very loose thing. I mean, people talked to everybody. So about every Monday or Tuesday night, we'd all go to Stanford to one of the big labs and bring a pizza, and everybody would talk about what they're doing. And they traded all kinds of stuff, I mean the codes you were using on the computer and all these things, it was really fun until they were made. Then everyone stopped. Our company called us in and said, "Anybody mentions what he or she is working on - walk away". Because if you'd be in the audience of somebody mentioning what they're doing, and even though GTE could have had a step ahead of this company, with you being there, somebody would say, "Oh yes, I was when I mentioned this, this is our patent". So we could not take part in [those evenings]; everything just stopped. All the fun just stopped. An IBM official who used to be in the lab said, "I know you went to our church and we were going to do work with GTE." So we officially went down to their conference room. I walked down the hallway, and I see him, I stepped in his office, he goes, "No, no, you can't." But we could talk to each other and then we were going to do it together as companies and we do this Lockheed, and Philco Ford, we do other companies that we teamed up with because a lot of times these projects were bigger than one company could run.

So then about 1970, we thought that both my wife and I our families had been here [Lancaster] since before the American Revolution. We thought we needed to come back among the square heads where we belonged, and so we came back to Lancaster. So I retired. I felt I made enough mistakes; let the young people make their share. We retired and come back to Lancaster. That's about fourteen (14) years ago. So that gives you the fast, whirlwind, tour of what I did.

Bev: That's pretty interesting that you got the Legion of Merit integrating all that stuff. When it was new, basically, a new science to everybody

Max: Yes! But see, at that time we didn't know that. We're just young people just doing our thing. But yes, I'm looking back now and what, if I had a perfect memory, God, it'd be great. I mean all the stuff I'd been exposed to at the Signal Intelligence material, and all the crypto systems, and then going out into Mountain View and talking to all the computer people. So then I built my first computer, from a kit. It was a Heathkit. Got involved in amateur radio.

Bev: Are you familiar with, there's a group around here that does amateur radio?

Max: Spark?

Bev: I think that's what it was. They had a field thing a couple weeks ago.

Max: Yes. I was there. But I don't operate anymore. I just do the theory.

Bev: Do you have a license?

Max: Yes! KI6NJ.

Bev: Do you have a station at the house?

Max: I have a station at the house. I got permission. I'm at Wood Crest. I made sure that I had my antenna below the roofline. So I said, "I know how to camouflage, these, so you won't see it. It's going to blend in," so they gave me permission. I guess you can say that for growing up in Ironville, cause our ancestors on my mother's side and my father's side, they were all farmers, I guess you could say, I achieved the American Dream. I was the first one to go to college, and the first one to do all these things. Half the time, they didn't know what I was doing; my parents didn't know I was playing with radio.

So that's the thing in a nutshell. And we've been enjoying it ever since. And we did, if you notice, on this amateur thing, we do have a van and it has the five positions. We have fast scan television, we have slow scan television. We take the Sony camera, which has a floppy disk like a computer and take a picture, stick it in the computer, and the computer will put out electrical impulses and we change the electrical impulses into a tone and put the tone over the radio, so we can send pictures then by radio. We use GPS to track where we are. And then we have data systems, voice so we have five positions. When the group said they wanted to do something, okay, if you want to do it we're going to do it by engineering standards like we did it at GTE. Where we have a plan, specifications, and a testing program and we'll lay this all out in the same way. And we did that. And we built this. And it's still, we built that in 1996 and it's still pretty modern. We have an antenna that folds on the roof, and when you get there the antenna will stand up, you turn the antenna over, shoot the information. Our next version, which I need to find someone that's good on software, because we are going to set it up so that you take the van out, type in, get the GPS to type where you are, and you know where our base station is and the antenna's going to go up and go tick, tick, tick, shoot it. That will be our next version. I was the assistant engineer for that.

Bev: Well, thank you Mr Peters for coming in. Thank you for your time.