



Episode 517 – Willi Kraml – OE1WKL

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00:00

Eric 4Z1UG

QSO Today Episode 517 Willi Kraml OE1WKL

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01:09

Eric 4Z1UG

Thank you for your support. Welcome to the QSO Today Podcast. I'm Eric Guth, amateur callsign four z one Ug, where I demonstrate the diversity and relevance of the amateur radio hobby and its impact on society by interviewing ham radio operators, many of whom played vital roles in shaping our technology through the amateur radio hobby. And while many people might say ham radio, do people still do that? This podcast demonstrates through in depth interviews just how amazing, diverse, and dynamic the amateur radio hobby continues to be. As I said last week in an email to my list, the confluence of events prevented me from publishing a podcast, breaking my almost ten year streak of never missing an episode.

01:59

Eric 4Z1UG

I appreciate all of the kind messages and guest suggestions that were sent and received, and while I have tried not to repeat episode guests, it seems like this strategy neglects the amazing and interesting things that my former guests do after the interview. So I will bring back some of the previous guests to find out what they are doing now.

My guest this week is Willi Kraml, OE1WKL, creator of the Morserino CW code practice machine. Willi discovered amateur radio as a boy in Linz, Austria, but had to wait until the legal age of 16 to get his license. With his doctorate in linguistics, Willi pursued a career in IT security with KPMG, and when his local makerspace needed an Arduino project around amateur radio, the more sereno code practice machine was born.

02:56

Eric 4Z1UG

OE1WKL discusses the delivery of over 10,000 Morserino kits, his projects, and contributions to amateur radio in this QSO today. OE1WKL this is Eric 4Z1UG are you there Willi?

03:14

Willi OE1WKL

Yes, I'm here. Have a good day. Eric 4Z1UG from OE1WKL

03:21

Eric 4Z1UG

Thanks for joining me on the QSO Today podcast. Willi, can we start at the beginning of your ham radio story? Where and when did it start for you?

03:31

Willi OE1WKL

It started at a very early age. In reality, I was probably around maybe eleven or twelve years old when I became interested in radios as a broadcast receiver. My parents had two sets of one, a very old one in the kitchen. It was a german Volksefenger, and the other one a bit more modern still. I mean, we are talking about 1960, 1964, something like that. Still tube based, of course, not solid state. I was very interested in listening to radio, but the thing that sort of got on my nerves, I was not allowed touch these radio sets, so I couldn't tune to another station or anything.

04:20

Eric 4Z1UG

Why do you think that was? Was it because your parents had preferred radio stations that they wanted to listen to?

04:26

Willi OE1WKL

Yeah, probably yes. And they were probably afraid that make so many changes to their settings that it takes them a while to get back to normal.

04:36

Eric 4Z1UG

You grew up in Linz, Austria, right?

04:40

Willi OE1WKL

Near Linz in Upper Austria.

04:42

Eric 4Z1UG

Yes, it's the only place in Austria I've ever been. Linz was shortwave listening on these radios, something that Europeans did more than, say AM broadcasts?

04:56

Willi OE1WKL

No, no, it was strictly AM local stations that they were listening to. But especially with the old set in the kitchen that the Volksefenger, it was not very narrow banded. So in the evening you sometimes heard of other stations coming through? Yeah, DX stations on am coming through. And that interested me a lot. And I wanted to tune to them, but my parents didn't allow that. But they realized that I'm very interested in this kind of technology. And at Christmas they gave me an electronics kit as a present. And it was a cosmos radioman, which was a really very instructive a set of electronic parts that had all sorts of things in it. You even had to build your own electrolytic capacitor. There was a sort of a kit for a variable capacitor.

05:53

Willi OE1WKL

There were a few resistors and a coil that was mount on. It looked like a toilet paper roll, that paper roll with wire around it. And it had a very good instruction manual and it was explaining all the parts and how they work in very simple terms so that a ten or twelve year old boy could really understand them. And so I could build first detector receiver. It was the first project, more or less, with headphones. And now for the first time, I could tune the different stations. So that was exciting. And then the next stage was solid state. With a transistor, you could amplify the detector output or you could even build a regenerative receiver. And all of a sudden on AM, I could hear really distant stations at night. So that was exciting.

06:45

Willi OE1WKL

And there was even an add on where you could build sort of a little amplifier with a tube, a battery powered tube. So you had, I don't know, 13, 14 volts as an old voltage and 4.5 volts for the heater. And it was all very exciting technology and that's how I really got into it. And so I also acquired books on flea markets, etcetera,

about building radios and how they work and how electronics work. And I started experimenting with these, the parts I had in the kit. I got a second kit, I think a year later, it was from Philips, was not so much radio based as the first one, but more electronics based. So you could build multivibrators and things that blink or beep or whatever.

07:38

Willi OE1WKL

And I started experimenting and built also the first oscillators on the AM radio band, of course, because that's the coil and the capacitor ahead. So I built an oscillator and when I tuned to it, I could hear it in the kitchen radio, very much to the enjoyment of my parents.

08:04

Eric 4Z1UG

So you could take over everything they're listening to?

08:07

Willi OE1WKL

That's right, yeah. That was very fascinating.

08:11

Eric 4Z1UG

Did you have peers who shared this interest with you?

08:14

Willi OE1WKL

Not at this stage yet, but I, my father had a friend and his friend was a policeman. And the policeman, of course, knew about the legal regulations and said, yeah, well, it's not strictly legal to build an oscillator and start transmitting in your neighborhood, but there is something like ham radio. And he had a friend and I said, I will introduce you to him. He will teach you everything that you need to know and you could become ham radio operator. And so he introduced me to his friend, which was Norbert OE5UN. And he had a real huge shack, really, in his basement and a huge antenna outside. For me it was huge. It was just, I don't know, 30 meters of wire, but for me it was enormous. And so this was the first ham I really met in my life.

09:12

Willi OE1WKL

And he explained to me and he showed me some, the equipment he had in his check and explained certain things to me. The only thing that I didn't like because I was very keen and said, well, I want to take this license immediately. So he said, well, that's not really possible because at that time you had to be 16 years of age. And I was just 14 by then. Yeah, 14 and a half, maybe. You have to wait until you are 16. And then he said, well, even then it's too early. First you have to start being an SWL. You have to do a lot of listening. You have to learn cold, you have to learn this and that before it makes sense to go for your exam. So that was a bit of a downer, so to say.

10:00

Willi OE1WKL

But he gave me a VHF receiver and a two meter antenna. And this we at jeffreys they make was Nogoton. I never heard about this. Later it was tube based and am only, two meter, am only. But it allowed me to listen to all the local hams, two meter. Everything was am back then, pretty much everything. So I could listen to them. And before you know it, I knew all those by call sign and name. I have never seen any one of those men, but I knew all them by call sign and name from this friend of my father, who was the policeman. He gave me all the legal regulations, all copies of all the laws and regulations. So I was sort of learning them by heart. And then I decided, well, I don't really.

10:52

Willi OE1WKL

As soon as I'm 16, I will go for the exam. And that's what I did when I was 16. I booked an exam and I went there completely self taught. Really?

11:05

Eric 4Z1UG

Did you do that in Linz or did you actually have to go to some capital city?

11:09

Willi OE1WKL

No, in Lintz. They had an office in Linz. So I went there. I had to get permit from the school because it was on a school day in the morning, so I had to get an exemption. The teacher was not very amused. I said, that's all nonsense. What are you doing there? So I went there, did the exam and passed. I passed because there was just maybe a year before they introduced a no code option where you could take the exam without Morse code. And this would limit you to VHF. And above that was the downside of it. No shortwave. But as I was really listening to VHF, I had plans to start with VHF anyway. And so when I was six, I had a license.

11:56

Willi OE1WKL

I went back to this first Elmer, to Norbert, and said, hey, listen, see, I have got my license. I didn't wait any longer.

12:04

Eric 4Z1UG

Were there different levels of exams in Austria at that time?

12:09

Willi OE1WKL

Only two classes, so to say, one with Morse code and one without. But all the other areas, technology, et cetera, operating techniques, legal requirements was all the same for both gases.

12:22

Eric 4Z1UG

So your first license allowed you to have full operation on all the pans?

12:27

Willi OE1WKL

Yes, yes, just on VHF and above.

12:31

Eric 4Z1UG

Oh, VHF and above. I see.

12:33

Willi OE1WKL

Yeah, VHF and above, because I didn't do the Morse test. And then I quickly after that, I got introduced to a local radio club in Linz, radio club 68. It was called like that because it was formed in. In the year 1968. And I became a member of them. And I got my real elmers there for the first time. Peter, OE5MPL, and Ossie, OE5BOL. Ossie became my CW teacher then, so he trained me one to one for about a year, and then I did my CW test and got the full license a year later. And Peter, he introduced me to VHF contesting, two meter contesting. He had a nice little contest station up on a hill above Lintz.

13:33

Willi OE1WKL

And so with the gap call, so to say, we took part in essentially all VHF contests that were on, and were quite successful, really. So that was interesting. So, yeah, this is how my career started.

13:52

Eric 4Z1UG

Can we talk a little bit about your schooling? Schooling in Lintz. Now, it's my understanding from actually interviewing other ham radio operators from Europe that your school kind of went off in different tracks, like a college track or a technical track in high school. Did that happen there in Austria? And which track did you take?

14:13

Willi OE1WKL

Of course, there were several different types of school or types of high school, and I went to what we called a humanistic track, or the humanistic high school, which. So you basically started your language training with Latin at the age of ten. Two years later, you started with old Greek, and only at the age of 15, I started with English. So that was a bit of a downside. I learned English very late in my life, I must say.

14:44

Eric 4Z1UG

You actually had exposure to the classics then, in Latin and Greek.

14:48

Willi OE1WKL

That's right, yeah. And not much to technology. I mean, I was always interested in technology when I went to school, but we didn't hear much about it at school that. So that was really all self taught. I was reading magazines about it and things like that. Yeah.

15:06

Eric 4Z1UG

How did ham radio then influence the direction that you went after high school? Did it influence your college or any further education?

15:17

Willi OE1WKL

Yeah, at first it seemed like it, because at first I thought, well, maybe let's go to technical university and maybe become a radio engineer or something like that. But then I realized when I started at the Technical University of Vienna, I realized that the type of high school I went to was not really the best preparation because nobody expected me to know anything about the classics, but they expected a lot more in mathematics and geometry and things like that, especially geometry was an interesting case. I had to do sort of the high school finishing exam. I had to do that at the university because I didn't have it at high school. And so I went to an extra class to learn all that. And that was easy. I passed with flying colors, that. So I understood all the principles of geometry.

16:18

Willi OE1WKL

But then at the technical university, you had to have your projects and you had to draw them by hand with ink, etcetera. And I hated it because it took me so much time. And whenever it was almost finished, there was a blob of ink on the paper or whatever. And whenever I had finished it, more or less, and I went to the guy examining it, he said, oh, that's not good enough. It's correct from the way how you draw it, but in the style of drawing and the neatness is not good enough. And so we ripped it up and I had to do it again. So I decided, well, that's probably not the life I want to live. And I changed. I went to the University of Vienna and started to study germanic languages and linguistics.

17:11

Willi OE1WKL

Total change, but which was more fitting to what I knew from high school, of course.

17:17

Eric 4Z1UG

You have a PhD, is that correct?

17:19

Willi OE1WKL

That's right. And it's in linguistics, comparative linguistics.

17:22

Eric 4Z1UG

So what did you do after that? What did you do for making your living first?

17:26

Willi OE1WKL

And this started while I was still working on my PhD thesis. I got a job at the Austrian Academy of Sciences.

They had a project, a linguistic lexicon project, really, collecting old germanic names that are in roman inscriptions and whatever, with romande or latin authors, history books from ancient times. They were collecting all these names into a lexicon. And they hired me as a helper in this project with a requirement to learn programming. As I was interested in things like that already. I said, well, that cannot be a problem. I will learn programming. And I did again, more or less self taught. I started with COBOL on the mainframe. So I did all the it, the database stuff for this project. And I had this job for, I think, about five years until the project was finished and the book was published, et cetera.

18:30

Willi OE1WKL

And after that, the question was, yeah, what do you do now? Yeah, it's in linguistics that the area specialized in was celtic languages, early Irish, early Welsh, and things like that. So not easy to make a living with this knowledge, unless you are lucky and find a job at a university. But there are not that many jobs, especially in these fields. So I decided, well, during my project, I learned a lot about computers and computing, and even I started to build my own home computer from scratch, really more or less soldering all the components on a PCP. So I said, well, I know pretty much about that, and this is an area that is really going strongly. So I went into it more or less.

19:20

Eric 4Z1UG

You actually ended up working for quite a time for one of like the big five international firms, right?

19:27

Willi OE1WKL

That's correct, yeah.

19:29

Eric 4Z1UG

What company was that?

19:30

Willi OE1WKL

That was KPMG. KPMG International. First, I worked for KPMG in Austria for the. The austrian firm was head of id. There was one of the austrian Internet pioneers in the commercial field. I think our company was among the first five companies having a permanent connection to the Internet in Austria. And because of that connecting to Internet, I got very much interested information security, network security, things like that. So I specialized on that. And then with KPMG International, I was for many years the global information security officer.

20:15

Eric 4Z1UG

And I think when you're referring to an early connection to the Internet, there was a connection that connected universities around the world.

20:22

Willi OE1WKL

Yes. And this is how I became exposed. Even during my project at the university, I was a heavy user of the computing facilities of the university. And so I realized, oh, then the first thing they had was global email. Yes. Still based on UCP back then, yeah. And then later on they changed it to SMTP and more modern protocols. So I was very interested in all this technology. I said, well, this is so useful for the academic field. All of a sudden people can exchange ideas and there are FTP servers where you can have repositories of your information and things like that. So that must be interesting for the commercial area as well.

21:07

Eric 4Z1UG

What was the name of that network, do you recall? Wasn't Usenet?

21:11

Willi OE1WKL

Usenet was one part of it. Usenet was sort of the knowledge and repository plus use groups.

21:22

Eric 4Z1UG

I remember when I was in college, but it was one of these things that there was a priesthood at every university that actually had access to this network. So it was talked about in very quiet language that it was there. But it wasn't probably until the mid nineties when actually the Internet started to kind of turn into the world Wide Web. How did ham radio play a part in all of this during these years? Were you active in those days?

21:50

Willi OE1WKL

Not very active, because I was already married by then. I married when I still was at university working for my PhD. I had children, so I had a family, I had a job and had to learn a lot ongoing for my job. So I was not very active in the beginning years when I was still at university, I was active with my club in Upper Austria. I still continue to do some contesting and things like that, and I also used their shortwave station when I was up there and did some dxing on shortwave. But with the family and then the job, it was more and more complicated. I always had some radio set. I never became silent, completely silent, but it was really on a sideburner, I must say. Just didn't have the time.

22:45

Eric 4Z1UG

I've been there and done that. I had a Motorola MSS. I loved doing radios all day long, but coming home and playing on amateur radio was not one of the things. I was a popular choice with a family, so I get all that. So what's the status now? Are you retired?

23:03

Willi OE1WKL

Yes, I retired about ten years ago from my job. Then I said, well, I have so many interests besides Ham radio. Yeah, I'm keen.

23:14

Eric 4Z1UG

And now this mid show break, the QSO Today project that now includes 500 episodes of the QSO Today podcast. The curation of hundreds of hours of QSO today virtual expo presentations for public consumption is now supported completely by you, the listeners. I am using a business model called value for value, a concept developed by Adam Curry, K5ACC, where you contribute to QSO today exactly what you think its value is to you. Value for value. This mid show break and the promotion of the Ham radio workbench podcast later in the show are the only commercials that interrupt the program. QSO Today has no commercial sponsors to influence the content, direction, and editorial content of the QSO Today project, which exists solely for the promotion of the amateur radio hobby.

24:09

Eric 4Z1UG

Those of you that have listened to over 500 podcast episodes know that I'm not only infatuated by the amateur radio hobby, but by the people who perpetuate it as well. The hours that I dedicate to QSO Today is a half time job. Your support at any level pays for all of the technology that I use to create, produce, host, and deliver the QSO Today podcast and the project to the Ham radio community. And while it is a labor of love, it costs money. I know from statistics and surveys that only 6% of you actually contribute to QSO today in some form. Please make a generous donation using the slider to set the amount of your donation.

24:53

Eric 4Z1UG

Make that donation monthly to ensure that QSO today is here for the next 500 episodes as a value for value donation, it should be in the amount that you value each episode of QSO today, or your access to our amazing catalog of Ham radio educational videos found on YouTube Vimeo and using our own player link in the show notes page. Become a listener sponsor monthly or annually. Use my Amazon link in the right column of the QSO Today website before shopping on Amazon. Promote QSO today your friends and family by forwarding our email and social media posts. Subscribe to our mailing list. Subscribe to the YouTube channel. Tell your friends all of these actions are value for value. Keep the QSO today project alive by taking action now. We return to our QSO today.

25:49

Eric 4Z1UG

What are those other interests besides amateur.

25:51

Willi OE1WKL

Radio, photography, painting, singing, music in general. And so I knew that I wouldn't be bored when I retire. I had many projects that were sort of on the waiting list to be done. The other thing is also genealogy, to explore the roots of my parents a bit more. And that's a very time consuming hobby.

26:17

Eric 4Z1UG

If you start that, I have a sense of it. Your linguistics background and obviously your IT background, does that play into any of these things, like photography?

26:28

Willi OE1WKL

Yes, sure.

26:30

Eric 4Z1UG

You're a renaissance man. For all intent purposes, would you say.

26:34

Willi OE1WKL

No, no, it certainly played a role, yeah. Because many things are, they become different when you have a technological background, so to say, and you can use tools that maybe other people struggle using it because they don't have the background. So it always played a role. And then when I retired, I said, I also want to become more active as a ham. And I did two things that really made a big difference. The one was I went to our national society, the Ostracia, for such centre verbandh.

27:11

Eric 4Z1UG

Is that the same as the Austrian Experimental Transmitter association?

27:16

Willi OE1WKL

Yes.

27:17

Eric 4Z1UG

That's kind of the austrian version of the ARRL.

27:21

Willi OE1WKL

That's right, yeah. Has a strange name for historic reasons.

27:25

Eric 4Z1UG

So you went there and what happened?

27:27

Willi OE1WKL

And I went there because I have been a member all those years. And I saw in their monthly newspaper that they were looking for someone to help them with their website. So I said, well, I want to become more active anyway. Can I help you with the website? I have a little bit of technology background, not a web designer per se, but I probably know enough to be of some help here. I helped the guy who was responsible for this, and after about a month he said, well, you know everything now I'm old. You do it by yourself, so you.

28:06

Eric 4Z1UG

End up taking this job over.

28:08

Willi OE1WKL

Yeah, yeah. So this was one thing and. But the thing was, this was close to the 90 year jubilee of our society. And then they said, well, 90 years coming up, we should do a complete makeup of our website on that occasion. So I said, okay, new version of software, everything new. He said, okay, when should it be ready? Oh, they said two or three weeks from now.

28:43

Eric 4Z1UG

And did you pull it off?

28:45

Willi OE1WKL

Yes, I found, thankfully, I found another guy within our club for about two weeks. We did nothing else day and night, but setting up a new website, converting thousands of pages, writing new pages, doing I don't know what. And we delivered. Yeah.

29:08

Eric 4Z1UG

How many hams are in Austria?

29:10

Willi OE1WKL

There are about four to 5000. There are about 6000 licenses, but this includes, of course, repeater licenses and automated stations of some form and gap licenses. So the license is not to individuals, but to club stations. So it's about close to 5000, probably.

29:31

Eric 4Z1UG

Do you have a sense of how many of those are active?

29:35

Willi OE1WKL

Maybe a third of them.

29:38

Eric 4Z1UG

And do you attend a regular amateur radio club meeting?

29:42

Willi OE1WKL

Yes, I do. That was the other thing. There is a, the way our club is organized, we have local clubs, so to say that they're all under the umbrella of the National Society. And here in Vienna, there is also one club which I became. Well, I was introduced to it through a QSO, really? And there was a yl who said, well, that's. You're doing interesting stuff. I'm here with a local club. Won't you come and look what we are doing? And so I did. And it was the club within the, what they call metal up. Metal up is a hackerspace makerspace, literally in the underground because it is in a basement. But they also do some underground work, so to say. Yeah, it's interesting group, mostly young people.

30:38

Willi OE1WKL

And they have a ham radio group, they have bi weekly meetings and sometimes people come up with a interesting lectures and talks about what they are doing and what they are planning to do. And so I became active in this group as well. And this really was the spark for the Morserino project.

30:59

Eric 4Z1UG

One of the reasons that we're speaking with Willi is because Willi is the inventor of the Morserino and I happen to have one over my right shoulder here. And Willi has lots of them, probably. Can we talk about the Morserino? It appears to me that, and I'll put a link in the show notes page that you kind of started this project in terms of the funding of this project using a Kickstarter campaign. But how did that start? How did this idea for the Morserino actually become a project that you wanted to pursue?

31:30

Willi OE1WKL

Yeah, that's an interesting story, really, because in this group within the metal up, were preparing for a maker fair in Vienna. It was the second maker fair that was taking place in Vienna. And they said, well, we want to be there, we want to be present there, and we want to do something that is interesting. So of course we would show a ham radio station which rang up some wire and do some qsos there. But we also want to do something more active for people who are interested to do more than just looking at someone operating a radio station.

32:05

Eric 4Z1UG

So something interactive.

32:08

Willi OE1WKL

Yeah, or as a kind of a workshop, so to say, yeah. And so were brainstorming, what can we do? And, well, there was a workshop program for the maker faire, but it was sort of restricted to 1 hour workshops. It was restricted financially, so that the material should not cost more than, let's say €40 or something like that. And so, and it was restricted to the number of participants, ten people maximum, because of space requirements. So we said, yeah, to do some electronics soldering projects maybe would be nice. You can do something easy within an hour, even if people are completely new to that. But then he said, yeah, but what? What, what to build in the time of an hour, they say, yeah, you can do a blinking light or something like that.

32:59

Willi OE1WKL

People are happy that finished something and it's blinking and they take it home and then they put it in a drawer and nobody will ever look at it anymore. And at that time I had started to look at Arduinos, and the Arduino Nano had come out and was a very cheap version of the Arduino. And I was sort of experimenting how I could use the Arduino for ham radio. And one of my things I had already started was to build a Kia moss code. Kia with the Arduino. So I said, well, let's build something like that. Just a few parts loudspeaker, the Arduino, a display, a rotary encoder, and maybe two capacitive touch pedals. And we have a simple key here, and it is something people can actually use for something. And we had two months time to set up this project.

34:05

Willi OE1WKL

So together with another ham, we sat down. I did the prototype of that Kia within two weeks with an Arduino touch pedal, everything. The colleague of mine, he did the PCB for it and acquired all the parts. Then we said, how many kids are we setting up here? He said, well, ten. We have maximum of ten people. If ten are interested in the first place, if only five show up, then it's five. So we should have ten kids. I said, maybe ten is not really enough. Maybe we should do more because the price comes down a little bit if we make 20 pcb's and not just five or ten. And I said, yeah, but how are we. What are we doing with those?

34:52

Willi OE1WKL

We said, well, we make a workshop here in the metal lab, and we will find another ten people to build this. So we set up 20 kids, and then were waiting for the workshop, and 35 people were showing up, and 25 had to be turned away. But from those 25, ten were lucky, because they had the option at least to buy the kit material. So all the kids were gone. All the 20 kids were gone. And this friend of mine ordered, in total, I think, almost 200 of these kits, and sold them in the following months.

35:35

Eric 4Z1UG

For the time, it was a simple keyer.

35:37

Willi OE1WKL

Yeah, it was just. It was a simple key. It had a few more features. It could generate automated Morse code for training. It was sort of really a predecessor of the. Of the Mozarino 32. We had called it metamorzerino, because it was a metalab. And, yeah, Morserino for Morsen. And Arduino was in there. And I showed this to a Hamdan in province OE6. And he is a Morse code teacher, and he was very interested in it. And it looked at it. They gave him one of these things, and then he came back and said, that's an interesting project, but it doesn't do enough to be useful for people learning Morse code. It has to be able to do this and that and maybe that and this and that. So I looked at all these things.

36:35

Willi OE1WKL

I said, in principle, it can be done, but not with an Arduino. The Arduino is just not powerful, doesn't have enough memory, isn't fast enough. It just doesn't cut it. But I can have a look and see if I find something that is a bit more powerful, and that I can do that. And so I was looking around and trying to find modules that would be suitable, and found this healthcare module that had a display on it already, which was nice. It also had Wi Fi, which was nice, also had Lora, which was new to me. It's a kind of radio. Maybe we can use it as well. It comes with the module anyway. And so I started building a prototype, and I. We were at the ham radio in Friedrichshafen, the upcoming ham radio.

37:32

Willi OE1WKL

This Morse code teacher was giving a lesson about learning Morse code. And we showed this prototype of this Morserino. And there were so many people interested in that. So we collected email addresses and said, okay, I set up a mailing list, and if there's any progress, if. If the prototype comes near to a finished product, I will let you know, and we'll see how it goes. And my estimate back then was that maybe I had maybe 150 people on the mailing list, that maybe we can make 200 kits or something like that, or maybe 300. But how to finance it? I said, well, if it cannot at least make 100 kits in the beginning, it's just not worthwhile because the expenses would be too high just to put it parts, etcetera.

38:27

Willi OE1WKL

So I had the idea to do a Kickstarter experiment, and I announced it that I will do financing through Kickstarter. I announced it on the mailing list, and it gave the date and time when it would be possible to sign up for it. And my financial goal was €6000, because I said, with €6000, I can at least have 100 kids or so, that would be fine. Now, I had, when the date come and Kickstarter went live, I had the €6000 within 3 hours. And after nine days, that was the period the campaign was running. After nine days, I had €18,000. So instead, at least 300 kids and back. So I ramped up my estimate and said, well, you probably can sell 600 of those in the long run. And so I assembled the first kits and shipped them out.

39:37

Willi OE1WKL

And without actually further marketing, just those people who got the first kits and showed it around and made YouTube videos of it or mentioned it in a podcast or on their blog or whatever. Yeah, it started growing and growing, and now, in August, just a few weeks ago, I jumped over the 10,000 hurdle.

40:05

Eric 4Z1UG

I hope that you have a nice operating margin on it so that it's funding your retirement or something like that.

40:12

Willi OE1WKL

No, no, it's not. The margin isn't that big. It's not my goal to make money with that. Never was. And getting a pension, I can live comfortably of it, so I don't need it. Just finances a bit of my hobby, let's put it that way. So previously, if I wanted a new transceiver, I had to discuss it with my wife and say, well, how does it fit into the family budget? Now I just say, well, that fits into the Morserino budget.

40:38

Eric 4Z1UG

I buy it staying on the Morserino. I have one here, and it does everything. It slices, it dices, it makes Julien fries for those people that used to stay up late at night in America. And look at the device that does everything. It does everything for CW training. But I get a sense that for me, anyway, that I'm somehow using it wrong. I know all my letters. I've known them for 50 years, I want to build my receive speed. The problem is, and it's not a problem, but Cwop says you don't want to write anything down because you want to be able to do head copy.

41:15

Willi OE1WKL

Yeah.

41:16

Eric 4Z1UG

So what's the best way? Using the more sereno. If you already know your letters, you can actually go along at five, six, eight words a minute, but you want to build up speed. How should the Morserino be used to build up speed?

41:31

Willi OE1WKL

I would say once you know all your letters, the best way is to use the Echo trainer. You can start with things that are familiar, like english words, the most common english words, or the most common ham radio abbreviations. And you can limit the length of these words. So say, give me just words that are three letters long, which is easier to remember, and you start, well, you should start with at least, I would say, 15 words per minute as a.

42:04

Eric 4Z1UG

Speed, just to kind of fill in the gaps here. The Echo trainer setup allows you to choose what characters are sent to you and how. So right now, I've been playing with it with random characters, and some of those random characters also include punctuation marks and abbreviations for things. So if that's too confusing for me, that's a little confusing. Then I can actually go to simple words like ate and eat and three letter words.

42:35

Willi OE1WKL

Yeah, that's right. You have all options. Also, random characters. You can limit to, say, just alphabetical characters or alphabetical characters plus numbers. So you can build up from the more common things to the more exotic things. You can also use text and upload a text file to the mozerino, and it will play the text file. So like. Like an audiobook in Morse code. Yeah.

43:03

Eric 4Z1UG

How about callsigns? If I wanted echo test call signs.

43:08

Willi OE1WKL

There'S also a callsign mode which sort of generates artificial call sign things. They are not real life call signs. They look like real life call signs, though, and you can use those also. Starting, we say limit them to three letters only and then go to four and then to five. Start with short ones, and once your memory is sort of ready for it, go to longer ones.

43:33

Eric 4Z1UG

I've been recently playing with this echo mode because I wasn't feeling with a CW generator, for example, that it was giving me. I could copy it in my brain, but it wasn't going back to my hand. What was interesting about the echo mode is you actually have to know what the letters are in order to be able to repeat them because you kind of have to say it in your head in order to be able to send it properly. Have I got that right in terms of how that echo mode works?

43:58

Willi OE1WKL

That's right, yeah. It provides a challenge, and in a way, that's my experience with people who do it also, they see it as a game. And it is a bit of. It is addictive in a way you don't want to stop. Just another word. And maybe not another one. And another one. And you can. If. If this is not enough challenge for you can also set it in a way that if after each correct answer, it ramps up the speed, so it goes maybe from 15 words per minute to 16 words per minute. And if your next answer is correct, it goes up to 17 words per minute again. If your answer is wrong, it goes back down again. So you are really approaching your limits all the time.

44:46

Eric 4Z1UG

One of the things I've noticed about it is it's not very forgiving when you're sending code into it, in terms of if you're reproducing a word or a phrase. Is that adjustable? Can you adjust the Morserino for kind of the weight of your fist?

45:01

Willi OE1WKL

Not really. And that's on purpose. It is a very strict taskmaster. Yeah, a very strict teacher. Because I think if a machine cannot decode your code, your fist, then many other hands will also not be able to decode it. There will be maybe a bit more forgiving to have more context than a machine usually has. And so they can infer what you might have meant. But it's better when you are learning to be. To get. To get a feeling for the timing, a strict feeling for the correct timing. And especially, I mean, if you use a straight key, you will never hit it 100% probably, but it should be strict enough so that a machine can decode it.

45:49

Eric 4Z1UG

I think that makes a lot of sense. It makes you a very fine CW operator. Could we talk a little bit about. It has some wireless features in the latest software. The module contains Lora. What is Lora and how is it used in the Morserino?

46:06

Willi OE1WKL

First? Yes, wireless features were in from the beginning, really? Both Wi Fi and Lora. Now, Wi Fi, everybody knows what that is. And I use it in the Morserino for. You can use it for updates, for firmware updates, for uploading files, text files, those. We mentioned. Those.

46:25

Eric 4Z1UG

Does that mean if I have two or more Morserinos in the same Wifi network, in my own home network, I could actually create a group of more Morserinos that communicate with each other?

46:36

Willi OE1WKL

Yes. Yes, you can.

46:38

Eric 4Z1UG

Without a server, without a server, you.

46:40

Willi OE1WKL

Even can do this across the Internet, point to point, not a group, it's just two point to points.

46:48

Eric 4Z1UG

If you know the destination IP address.

46:50

Willi OE1WKL

You need the destination IP address. And you have to set up your router normally, because you usually have a firewall, so you have to allow the return traffic coming through to port forwarding. So that's a little bit more

complicated. You have to know a little bit about configuring an Internet router, but you can do that. But what is easier to do and what many people do, there are several servers out there, and you can point them and they are sort of chat relays for the Mozarino. You point them to them, and whatever they get, they redistribute to everyone who is listening. And so groups of people can have a QSO, like on the Jonosphere, so to say.

47:30

Eric 4Z1UG

But that would solve the problem of somebody who has an IP address that changes, for example, right?

47:35

Willi OE1WKL

That's right, yeah. And there's no configuration necessary on your firewall or anything. It just works. Yeah.

47:42

Eric 4Z1UG

They could also log into the server. And in that scenario, are there a large number of Morserino users that are getting on these chat groups and communicating?

47:53

Willi OE1WKL

It's probably not a large group, but there are some, and there are even groups that set up their own server on the Internet, which is relatively easy. The code for that is a simple python script. It's also open source. It was originally written by a ham from Poland, and you can run it on a Raspberry Pi or literally on anything that runs Python. And this is out on the open Internet, so to say. Or you do it locally in a wide area network with VPN's or whatever, all options. And people clubs are setting this up for their training classes, for example, most called training classes.

48:36

Eric 4Z1UG

So you have the ability to go use Lora direct between the Morserino devices if you want to use them. I actually have an unusual circumstance. I have grandchildren that are not connected to anything except the telephone, but one of them is expressing an interest in the Morse code, but is not allowed to be on any network. This is beginning to look interesting as an alternative for them to be able to practice Morse code with me, for example, without being on the Internet. So that seems like that's an interesting solution. Also, can I use my Morserino with my old 50 year old transmitter, for example, because my Kenwood TS 520 does not have an electronic keyer in it, and I'd like to use electronic keying. Can I use the Morserino for that?

49:22

Willi OE1WKL

Yes, of course. It has an output with an optocoupler which is resistant up to 60 volts. So even tube based transmitters probably work well.

49:36

Eric 4Z1UG

Or you could use a relay with that.

49:38

Willi OE1WKL

You could use a relay between. But I think most reasonably modern transmitters would need it as it is completely isolated galvanically and is resistant 60 volts. So that should be enough for most purposes.

49:55

Eric 4Z1UG

Right. And that just plugs right into the back?

49:57

Willi OE1WKL

Yeah, and you just plug it instead of your key and you have your Mozerino as your keyer. And with the latest, one of the latest versions it's also a memory key. So you have up to I think eight or ten memories.

50:10

Eric 4Z1UG
CQ DX for example.

50:12

Willi OE1WKL

It's a bit a challenge to program those. That's not so easy. You need a. In some way you need a computer to program those memories, but there are ways to do that even for people that are not very technical. And then you have a memory key.

50:27

Eric 4Z1UG

Does the Morserino have a web interface? Can I log into it on my network if it's sitting on Wi Fi and actually program those memory spaces?

50:36

Willi OE1WKL

Not through a web interface but you can connect it through USB. It has a serial interface. And there is also some software written by Ham from Austria that runs in a browser. You need a chrome browser or something that is based on the chrome engine because they support serial ports, serial connections. And through the serial connection you can completely remote control your Morserino one hand. On the other hand everything you do on the mozerino is sent to your browser and is sort of displayed on the browser. You can even use it to hear the manuals if you don't want to read them. On display of the Morserino. It speaks the menu items for you. We designed that really in order to care for blind hands who would not be able to Morserino because they wouldn't be able to see the menu.

51:38

Eric 4Z1UG

So now they hear the menu and they can use the Morserino for practicing even when they are blind.

51:47

Eric 4Z1UG

I think my Morserino is probably two years old. Can I get software or firmware updates for it?

51:53

Willi OE1WKL

Yeah, sure. Yeah. You can go to the Morserino GitHub and download the newest version. You can jump directly from the oldest version to the newest version so you don't have to go version by version. It just takes the newest version and install it.

52:11

Eric 4Z1UG

And now this mid show break every two weeks I listen to the Ham radio Workbench podcast with George KJ6VU, Vince VE6LK, Mark N6MTS, Thomas K4SWL, Michael VA3MW, and Rod, VA3ON, on and their guest on often topical and important projects in amateur radio. This discussion amongst the regulars and their guests remind me of the conversations that I used to listen to on 146.94 and 146.46 MHz in Orange County, California while working on my own workbench almost 50 years ago. It is amazing how much practical ham radio knowledge that we can absorb by listening to the Workbench podcast. That starts to make sense when we start our own deep dive into our own projects.

53:02

Eric 4Z1UG

So join me by listening to the Ham radio Workbench podcast now and as George and crew push beyond 200 episodes, you can get to the Ham radio workbench podcast by clicking on the banner in this week's show notes page. And now back to our QSO.

53:19

Eric 4Z1UG

And what do you prefer when you're using your Morserino? Do you use your own paddles or do you like to use the capacitive paddles?

53:26

Willi OE1WKL

Well, I do both also for testing how they work. I think the paddles work quite well up to, I would say speeds of maybe 25 words per minute. Some people are using it with 30 words per minute. Even if you really go into high speed above 30 words per minute, then a very a good high quality mechanical paddle is better.

53:50

Eric 4Z1UG

And as the Morserino creator, do you carry it with you when you go traveling just so that you have your CW companion?

53:59

Willi OE1WKL

Sometimes I do. But I have to admit something here. My original idea in the very beginning was to build something like that for my own purpose, to improve my code. But the irony is the big success of the Morserino prevented me from actually using it.

54:18

Willi OE1WKL

I hear that because I'm shipping out 120 to 150 kits every month. This is more or less a full time job now, and when you are retired you have no time to do a job. You know how it is. So having a, having this job and all the other retirement obligations is. It's really tough.

54:39

Eric 4Z1UG

Yeah, I understand that as well.

54:42

Willi OE1WKL

So I'd like to do more with my Morserino except just testing the software.

54:47

Eric 4Z1UG

I realize that you're probably not on the air as much as you'd probably like to be, but do you have a current rig? What do you operate when you do operate?

54:57

Willi OE1WKL

Yeah, I have rig, but it's essentially all QRP. As an apartment dweller, I'm very much restricted to setting up antennas, so I'm using makeshift antennas, more or less experimental stuff like using the lightning arrester as antenna quite well. Yeah, I wouldn't. I wouldn't feed a kilowatt into it. I wouldn't know what it does to all the neighbors in the building. But with QRP, that's fine. And it allowed me to bridge with five watts of power to bridge maybe seven, 7000, 8000 km.

55:37

Eric 4Z1UG

What's the QRP rig?

55:39

Willi OE1WKL

I have several. I have an Icom IC 705. I have a Ziego X 6100. And my newest acquisition is a QRP-Labs QMX plus. That's the newest one. But you are right, I'm not as much on the air as I would like to because the Morserino project costs me a lot of time talking about the project. In a way, what is being shipped out now is the second version of the Morserino 32 about. When was it? Three years ago, four years ago. I had to do some hardware changes because of the availability of certain parts. The last speaker was not available anymore. The module that I'm using, that also has the processor, it has changed. And so I had to do a new layout.

56:30

Willi OE1WKL

And now this version is coming to the end of its life after more than 10,000 kits being sold in total. And 10,000 means about 2500 of the. Of the first version, about 7500 of the second version. Because the healthcare module that I'm using is sort of not being manufactured anymore, not available on the market. So the decision that I'm up to is, will there be a third generation of it or not? And this decision will be made later this year. Currently it looks a bit like it, yeah. The chances are maybe 66% is the.

57:09

Eric 4Z1UG

Issue for you on creating and selling. The Morserino more around the logistics of part accumulation and kitting and all that stuff. More than the design itself.

57:22

Willi OE1WKL

Yes. The design, of course, is fun because doing something new all the time, and that's always fun. It's a challenge sometimes, but it's interesting and fun. All the other things that the logistics, getting parts. I mean, during the pandemic, it was very difficult for a while because all the transport roads were affected and there were huge delays and all the electronic companies were hoarding parts because of the different supply chain issues. So that we are just buying things as much as they could. So that was really hard. And all the kitting is a lot of time shipping it and do all the logistics around it. So I'm reconsidering all the options here. Right now I'm checking how much effort is it to do a redesign because a new version of this module has a lot of changes.

58:15

Willi OE1WKL

It's not binary compatible means do some software porting as well.

58:22

Eric 4Z1UG

It seems to me that Digikey started with a keyer. The original Digikey was like 1969, and that started this billion dollar parts distribution company as it exists today. It's international. Have you thought about coming up with a collaboration where they actually kit the parts for you? Maybe the case and the board and stuff would have to be supplied, but it seems to me that, wow, in terms of a turnkey parts distribution kit distribution business, they could do all this work. There's some other people I know that are doing work with Digikey as well. Digikey is one of the companies in Israel that I can just order stuff from. And it gets here, like in three days, which blows me out of the water. There's no problems with the customs, and they do this all over the world. Have you thought about something like that?

59:17

Willi OE1WKL

Yes, I'm considering things like that because really, the kitting and shipping part is the. Is the most time consuming it by far. Yeah. And the most tiring. I am in discussion with somebody, let's put it that way. I cannot disclose it for now, but discussions are ongoing to find some other way for shipping these things, for shipping the kits out, and hopefully this comes to a good end. And if so, and if my decision that the redesign for a new version is not too much effort, then there might be a new version out in 2025.

01:00:01

Eric 4Z1UG

Over 40 years ago, I used to work for a company that made tone boards for two way radios. The owner was a ham, still is a ham. I think the company still exists. Communication Specialists and Spence Porter, WA6TPR was the owner of it. And I once had a conversation with him because he was buying machines to do things like, if you were going to send out a kit, a tone board kit, well, you had to have, like, four fiber washers, and you had to have four bolts, four nuts, and you had to have four lock washers. And you could hire people to actually sit there with a rubber end of a pencil and separate all that stuff.

01:00:41

Eric 4Z1UG

But he ended up buying these machines that you dump all of the screws in, and the thing would drop all the stuff, the exact number, into a plastic bag, seal the bag and drop it into a bin. And he says, you know, if you can

buy a machine, it works twenty four seven. And does this work, then it makes this job easier. This seems like the greatest time. We don't have Heathkit anymore, but we do have a lot of companies that are making kit radios. QRP Labs, you're making the Morserino. I know that the Ham Radio Workbench guys have their kits as well, but there's all kinds of kit companies out there. But the worst part about this kit job is kitting. It's the drudgery work.

01:01:25

Eric 4Z1UG

And if you can have a fulfillment house that has all of the machines to separate the resistors and oh, whatever. That was something I learned over 40 years ago. If you could have a machine that does this repetitive, mind numbing work, then it makes the design part even more interesting.

01:01:45

Willi OE1WKL

That's certainly true. And as you said, it's either machines or you have access to very cheap labor, which in certain parts of the world also works quite well.

01:01:57

Willi OE1WKL

You're absolutely right that certainly we have the ability to purchase things in the world that are made with very cheap labor. At least in the west we benefit from that.

01:02:07

Eric 4Z1UG

What is Flipboard magazine?

01:02:09

Eric 4Z1UG

I see that you're a contributor. I've never heard of Flipboard magazine before. What is that? Is that like substack?

01:02:16

Willi OE1WKL

Yeah, it's similar. It's essentially just a collection of URL's. Yeah. And it presents this as a magazine. And I'm sort of editing Ham radio magazine. So I'm just. If I read something interesting, I'm subscribed to so many blogs and channels, and if I see something that might find a wider interest, I just flip it to the flipboard and the readers. I think I have about 1700 subscribers to this page, but also occasional things, people who just stumble over it and then find a page or one or two. So I think I had quite millions of accesses really to the flipboard, but about 1700 subscribers to it. And for me it's not much I do know, editing or commenting. I just see something that is interesting, as in, well, that deserves a wider audience. So I flip it there.

01:03:19

Willi OE1WKL

And the subscribers, they use this as their main source of information, everything about ham radio.

01:03:27

Eric 4Z1UG

Right. So you're curating amateur radio content for your followers.

01:03:31

Willi OE1WKL

Yes.

01:03:32

Eric 4Z1UG

Can we go back the introduction of the Morserino to your maker space there in Vienna. Did that have an effect of attracting younger people to ham radio? Does it have that kind of magnetic effect?

01:03:47

Willi OE1WKL

No, I don't think so. It is attractive for hams, but it is not attracting people to ham radio in general. There are

exceptions because there are some people who take the Morserino, for example, to classroom projects. I know a guy who does that regularly once a year. So he goes to his local school and here's an arrangement with the teachers. And he is given 2 hours and he explains a little bit about Morse code and the history of Morse code and why people are using Morse code. And then he demonstrates the Morserino. He demonstrates Morse code. They have to learn a few characters or numbers, usually four or five characters. They learn, and they learn them by singing them. So he's singing da di da da. Yeah. And they are repeating. And children learn like that very quickly.

01:04:46

Willi OE1WKL

So within no time, then they have four, five, six characters, and then it distributes them into two classrooms, adjacent classrooms, and gives a Morserino to each of them. And then one class has to send one character and the other one has to hear it and send it back. And then they send a character of their choice, and the other class has to hear it, decode it, and send it back. And that's. That's interesting for young people. They like that very much.

01:05:16

Eric 4Z1UG

So I thought maybe the makerspace might be the place to attract young people to amateur radio. But do you have any thoughts? Is there something that we could do better to attract young people to amateur radio from an austrian perspective?

01:05:30

Willi OE1WKL

Yeah, I think that there are two areas, schools we have, I think now in Vienna, at least two or three schools where they have a ham radio station and a teacher who is interested and offers classes and projects with them. Schools are one area where you can attract people. Maker spaces in general, at least here in Austria, are not very good, attracting very young people. Most people that are attracted by makerspace are already at university level, usually 18, 19, 20 years old and older, rarely any younger.

01:06:10

Eric 4Z1UG

And do makerspaces attract people like they live in apartments and therefore can't have a power shop in their house?

01:06:17

Willi OE1WKL

Yeah, yeah, of course. Yeah, yeah. You have no room for your 3d printer or laser cutter or whatever, so you go there. Yeah, that's right. Yeah, that's. That's one of the reasons. And I mean the other reason. You find sort of like minded people. Yeah. That's the same kind of attraction that amateur radio clubs had, at least in the past. Yeah. You find like minded people. I think within ham radio, we have become a bit bad about that. Yeah, yeah. As ham radio gups, we are not attracting people anymore, really. That's at least, that's my observation that many clubs are more or less. There are a bunch of friends who meet regularly, maybe once a month or something like that. They meet for a beer or pizza or whatever, but if an outsider joins them, they hardly talk to them. They don't explain anything.

01:07:12

Willi OE1WKL

They are not inviting them to any activities, and that's a shame. Really? Because that would be also a way to attract people. And honestly, there are two groups of people that you can attract. Young people. When they go to school and university, they might find the time and easy and eager to learn new things. And the other group is people who may be close to their retirement because they are looking for a new hobby for the time when they are retired.

01:07:47

Eric 4Z1UG

I've actually seen this lately in some of the interviews that I've made, that retired people, there's a social opportunity that lends itself with amateur radio for retired people. And then it's even more valuable when they become widowed that they still have some way of communicating with the outside world. And, you know, I rely upon my wife Karen, to, like, keep the social life going. She runs the social calendar. And I can only imagine

that if she wasn't around, would I have a social calendar. And it's my amateur radio connections that actually draw me out of the house on my own. I can see that there's a huge value in amateur radio for retired and older people.

01:08:31

Eric 4Z1UG

I'm jumping around and I apologize to the listeners, but you have such an interesting background, and you do so much that I want to make sure that I touch on this. You are now on a committee at the ARDC. The RDC is the organization that used to be Amperenet. They dole out money for amateur radio projects that meet their grant criteria. Could you talk a little bit about what you're doing now on the ARDC?

01:08:57

Willi OE1WKL

Yes, I'm a member of what they call the grant evaluation team. So this team looks at projects that have been granted and have been finished, and we look at how the project went from the very beginning. What did they apply for? Why did they apply for it? How did they apply for it? How did the project develop? How did it end? Were all the objectives met? Was it a good project to be funded, or was it questionable? Was it successful? Success is very difficult to define here, because even a project that fails can be successful in a way, because it is always an opportunity for learning. For the people who did the project, they learned, they failed, but they learned a lot, even when failing.

01:09:50

Willi OE1WKL

So failure is not really a very strong criteria, except if you publish nothing of your project, if nothing is published and there is no way to learn anything from it, then it was really a failure. But those are very rare in most cases. Even if they did not achieve all the objectives written out when they applied for the grant, they usually achieve a lot, and they learned from the failings as well. And many have set up websites or other ways presentations of what they did and how they did it. So that's all very useful. And we are sort of evaluating that and also giving feedback to the ARDC board and to the grant advisory committee to improve the way how grants are being spread around the globe.

01:10:46

Willi OE1WKL

We want, the ARDC wants to be as inclusive as possible, inclusive in all ways, inclusive with regard to gender, with regard to race, ethnicity, etcetera. Geographically, started originally in the US, and it's still very us centric. But there is a lot of effort going on to spread the word outside the US as well, and to include as many people as possible and many clubs, etcetera.

01:11:15

Eric 4Z1UG

One of the things that occurs to me, by spreading these opportunities around the world, it also protects the radio spectrum that we so zealously guard that we've had for 100 years, because there's a lot of large corporate interests around the world that would love to have the spectrum that we have, of course, both HF and all the way through the microwave band. So I think that this is very powerful. Do you think that with this feedback that you're giving ARDC, is ARDC now able to, say, help define the implementation of a grant project, meaning that it can provide a framework for tracking the goals of the granted project and how that is implemented and reported?

01:12:02

Willi OE1WKL

Yeah, I think it, I mean, they always had some kind of framework, but with these things, especially if you start something new, and this was a very new thing in the beginning, there's always room for improvement, and it's a continuous process to improve things and to refocus on certain areas and say, well, we also look at what is the public impact of a project, for example, what is the exposure of a project to the general public? And we have seen some projects with a huge exposure.

01:12:33

Willi OE1WKL

When people are doing things at huge fairs, for example, with ten thousands of visitors, then you have a huge audience that you can reach, possibly or others are doing things in the connection with emergency networks,

setting up mobile stations, radio stations, radio towers, repeaters, and explaining to the public, and to maybe the organizations like the Red Cross or the firefighters, etcetera, explaining to them what amateur radio can do in the case of a disaster. And that's very helpful, I think also for the general awareness, and we need a lot of general awareness or general public awareness if we want to protect our spectrum.

01:13:25

Eric 4Z1UG

I think so. I begin the podcast usually with ham radio. Do people still do that? Because there are many times when I'm out in the public, whether it's in the United States or here in Israel. In Israel, we call it Hovavi radio of friends. It's friends radio. And people will go, well, I remember that from the sixties, or I remember that from the seventies. But do people still do that? I mean, that's almost a universal reaction to when you say that you still do amateur radio. I like to say ham radio is more exciting now than it's ever been. The more sereno is a good example of this combination of being able to integrate these technologies to create something really interesting and spectacular. But we're doing that on every front.

01:14:11

Eric 4Z1UG

And the Internet gives us this ability to move at hyper speed in terms of advancing the state of the art. When the turnaround time could be a year on an idea years ago. Now we do it in minutes, which makes it even more exciting. But I think that for some reason, we are nothing communicating to the general public that we are still here and that we're more relevant than ever. I've had this idea in my mind that I need to write a column for the ARp magazine, which is american advancement of retired people. It's a magazine for old people. You start getting it at 52 years of age or something like that, has great articles in it, but I've never seen an article about amateur radio. And it seems like it's the prescription for a lot of what ails us when we're older.

01:15:00

Eric 4Z1UG

What excites you the most about what's happening in amateur radio now, beyond the mosarino?

01:15:08

Willi OE1WKL

I would say it's all the possibilities we have with getting very new, extreme, very low price, or extremely low price equipment through SDI, etcetera. And if you look at the transceivers of QRP labs for dollar 100 or dollar 150, you get technology marvel, that would have cost thousands of dollars 20 years ago, and it wouldn't have features that you have now in even these tiniest machines, like lcd display and things like that. So the combination with modern technology, microprocessors, etcetera, that's very exciting. Also, what I find interesting is that through things like, for example, reverse beacon network, WhisperNet, and PSK Reporter. We have so many means now to observe the propagation conditions around the globe. That was very difficult.

01:16:07

Willi OE1WKL

20, 25, 30 years ago, you really had to go out and try to establish a connection by calling CQ, and then you would see if it would work into a certain area of the world, or it wouldn't. But now you just glance at your screen on your computer and you know exactly what's going on. It also has a downside of course, because people are not calling secure anymore.

01:16:30

Eric 4Z1UG

You can profile antenna now with Whispernet.

01:16:33

Willi OE1WKL

Exactly. And all the tools we have with our computers, what we can do, like antenna modeling in theory, before you build something. Also doing electronics modeling before you build something. So it's also exciting, I think, for home brewers. That's also something I think we should preach a bit more to people. Not just to buy some plug and play equipment, but go out and build something yourself. Even if a simple wire based antenna or whatever, a simple electronics project, try to do something yourself. I think that's an important message also to our ham colleagues.

01:17:13

Eric 4Z1UG

Would that be the advice that you would give not only to your ham colleagues, but to new or returning hams to the hobby?

01:17:19

Willi OE1WKL

I will do something, build something, even if it's simple, doesn't have to be a transceiver with all bells and whistles. Get some kids. You mentioned it already. There are so many kids out there for all sorts of things. Get something. Just try it out. Build something. Build something with an arduino or some other microprocessor. There are also kids out there for that. You can experiment. It's so cost effective. It doesn't cost anything, really. It's a few beers, give you a microprocessor and a display and things to play with.

01:17:54

Willi OE1WKL

You can afford to burn a few of them up.

01:17:57

Eric 4Z1UG

Yeah, that's right.

01:17:58

Eric 4Z1UG

Because they're not expensive.

01:18:00

Willi OE1WKL

They're not expensive. All these electronic parts, they are so cheap nowadays. And I think that's certainly one of the, that's an advice I would give everybody. The other thing is find a group of young enthusiasts, like a makerspace, and go there. It's really inspiring just to see, even if it's not completely focused on ham radio, even if just talk about laser cutters or 3d printers, these are all things that are also useful in our hobby, by the way. You can build cases, you can build lots of things that are useful. And just to learn something new, how these things work, they are just inspiring. And I think finding young people that are enthusiastic about these things is also good advice.

01:18:49

Willi OE1WKL

A third advice is no, it was actually something that is exciting for me as a hamdan is the fact that even the oldest technology, like Morse code, is alive and actually growing. That's my impression. People are getting more interested in it, although it is that old. The oldest electronic communication technology, if you want, and I want to tell a little story here, because when I tell people that I do the Moserino and people that are not hams, maybe they said well, are people actually really using Morse code? And I said, yes, and there are quite a few, really? They said, but, yeah, but commercially, Morse code isn't being used. It doesn't matter if it's airplanes, ships, whatever. Nobody's using Morse code. I said, yeah, in a way, commercially, it is not being used. That is true. But sailing boats are not used commercially.

01:19:52

Willi OE1WKL

And I'm sure, you know, people who go out sailing, why are they doing this? Why are people going out sailing? When the propeller and the engine has been invented and you can buy a motorboat, why are they going out and sailing? Because it is fun.

01:20:08

Eric 4Z1UG

Or why do they buy a mountain bike when they can buy an e bike?

01:20:11

Willi OE1WKL

Right. It is fun. It is a challenge. You have to learn it. In the beginning, it is hard, but once you master it, and even if you are not yet a master, but just along the way, if you have made some progress, that's satisfying and

that's fun, and that's why people are doing it. And that's why people are still using ham Radeon, where they're still using Morse code, because it is fun.

01:20:36

Eric 4Z1UG

Well, you know, I get the impression that the Morse code is more popular now is because I think that, at least for me, I'm continually bombarded by either audible information or visual information. I mean, when you have a smartphone and you've got the Internet and stuff, your brain is on overload. And right now, here in Israel, with the war going on, we're being fed information on a minute by minute basis. It's stressful. And what I find about the Morse code is that it's kind of like it separates your brain from the rest of the noise. And I think even if you're in America or you're in Austria, if you like the Morse code, it's because it's a way to kind of like, there's a zen about it. There's like a meditation about the Morse code.

01:21:24

Willi OE1WKL

That's right. You focus on something, and you focus on that and nothing else. Yeah.

01:21:30

Eric 4Z1UG

Right. And it's good for your brain. Again, for older people, maybe it'll delay dementia, which may be inevitable for all of us if we live long enough, but maybe it's a way to kind of keep those neurons firing in our brains as we get older.

01:21:46

Willi OE1WKL

Yeah, absolutely. Agree to that. Yeah.

01:21:49

Eric 4Z1UG

Willi, I want to thank you so much for joining me on the QSO Today podcast. I knew this would be fun. I'm so glad that you agreed to talk to me about you and about the more sereno I know. That I'll get some very good feedback from this episode, so I appreciate it so much that you came on board.

01:22:10

Willi OE1WKL

Thank you. Thank you for the conversation.

01:22:13

Willi OE1WKL

73 73 to you.

01:22:17

Eric 4Z1UG

That concludes this episode of QSO today. I hope that you enjoyed this QSO with Willi. Please be sure to check out the show notes that include links and information about the topics that we discussed. Go to www.qsotoday.com and put an Oe one WKL in the search box at the top of the page. You can sponsor the transcription of this episode or any of the previous episodes by clicking on the transcription button on every show notes page. The cost is dollar 75 per episode, regardless of the length. We will quickly transcribe the episode and give you credit for your sponsorship. Please send us the call sign of the podcast to make sure that we transcribe what you want. Remember that QSO today is value for value. Please support our project by making a donation or becoming a listener sponsor today.

01:23:09

Eric 4Z1UG

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guests always sound brilliant. Ben also publishes a weekly jewish history podcast. There is a link to that on the QSO Today homepage. Until next time, this is Eric 4Z1UG

73.

01:24:06

Eric 4Z1UG

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