

Dan Hoffman:

Hello, and welcome to the City Works portion, part two of the Rouss Review. I'm City Manager Dan Hoffman, and still sitting here with me is Amy Simmons.

Amy Simmons:

Still here.

Dan Hoffman:

Still here. Okay. We're going to bring Ethan in to talk about public safety radios. I know he's sitting out in the hallway right now, so let's not waste his time. Let's bring him on in.

Dan Hoffman:

Okay. Welcome, Ethan Longneck... Longenecker! Just let it flow out.

Amy Simmons:

And it fits.

Dan Hoffman:

Longenecker. Longenecker. That flows pretty well.

Ethan Longenecker:

Yeah.

Amy Simmons:

Yes.

Dan Hoffman:

It's not Longacre.

Amy Simmons:

No.

Dan Hoffman:

Which for, I think, about my first year here, I was like, "Hey, Ethan Longacre." And that's not your name, actually. Longenecker. Longenecker.

Amy Simmons:

No.

Ethan Longenecker:

Longenecker.

Dan Hoffman:

Longenecker?

Ethan Longenecker:

Yeah. Just let it flow.

Amy Simmons:

Just think about how tall he is.

Dan Hoffman:

Longenecker. Long... Hey, there we go.

Amy Simmons:

See?

Dan Hoffman:

I know no one can see him right now, but he's a tall man.

Amy Simmons:

He almost hit the top of the door on the way in.

Dan Hoffman:

He's not like-

Amy Simmons:

No, but he's taller than me.

Dan Hoffman:

He's tall.

Ethan Longenecker:

This is an older building, too.

Dan Hoffman:

Yeah. And the doors are a little lower. But all right. Welcome the very tall Ethan Longenecker.

Ethan Longenecker:

Thank you.

Dan Hoffman:

There we go. All right. So today we're talking radios. And not just the walkie talkies you get at formerly Radio Shack. Where would you even buy kids walkie-talkies these days?

Amy Simmons:

Walmart.

Dan Hoffman:

Walmart? Walmart sells them?

Amy Simmons:

Mm-hmm.

Dan Hoffman:

Okay. They were always fun, growing up. Getting a set of walkie talkies when you were a kid, it was like gold. Of course now, they've got cell phones. I mean, when I was my younger son's age... Well, I never had a cell phone when I was a kid.

Amy Simmons:

No, uh-uh.

Dan Hoffman:

Because they didn't exist. But I'm not that old, but old enough. And oh, but man, if you had like a good pair of walkie talkies as a kid?

Amy Simmons:

You're special.

Dan Hoffman:

You were special. That was super cool. Now we've got walkie talkies around the house, but like I'm always missing one of them or something, or the-

Ethan Longenecker:

Batteries are dead.

Dan Hoffman:

The batteries are dead or something doesn't work.

Amy Simmons:

But why, when you have texts and cell phones?

Dan Hoffman:

Exactly. When I want to like, "Hey, let's grab the walkie talkies." Five seconds. I'm like, "Oh right. I've got a cell phone."

Amy Simmons:

Just text them.

Dan Hoffman:

But radios and-

Amy Simmons:

Public safety.

Dan Hoffman:

Public safety radios. We don't really call them walkie talkies anymore. But the radios for public safety, they're a huge asset.

Ethan Longenecker:

It's a lifeline.

Dan Hoffman:

It's a lifeline for first responders who are out in very precarious situations, and they have to work everywhere and they have to work every time. And they're a big asset for any local jurisdiction. Very expensive asset, but a critical asset.

Dan Hoffman:

So today we're going to talk a little bit about walkie talkies, AKA public safety radios. So Ethan, real quick, tell us a little bit about what your role is. You're in the Emergency Management Department.

Ethan Longenecker:

I am, yeah.

Dan Hoffman:

Department of two people.

Ethan Longenecker:

Yep.

Dan Hoffman:

You and Scott. And we've had Scott on before, I think.

Amy Simmons:

Yes.

Dan Hoffman:

So you and Scott, tell me a little bit about your role in that team and how the radios play in.

Ethan Longenecker:

Sure. So my current title is Deputy Emergency Management Coordinator. I was originally hired as the Radio Manager, part of emergency management. We really have three functions. We manage the radio system, which is why we're talking about this today.

Dan Hoffman:

There you go.

Ethan Longenecker:

We obviously manage the emergency management function on a day to day basis. One of my main roles with that is exercises. We're working on planning a bunch of exercises right now for the City and actually other stakeholders in the community.

Dan Hoffman:

We did a great one about, what was it, a month ago? With school system preparing for bad things that might happen in school.

Ethan Longenecker:

Exactly.

Dan Hoffman:

So that was a great exercise.

Ethan Longenecker:

Yeah. Yeah. And we're continuing to work with others and continuing to progress with the exercises. Our third function is the drones. So I'm also a drone pilot, and do a lot with drone training as well.

Dan Hoffman:

Just like Amy.

Amy Simmons:

Yay!

Ethan Longenecker:

Just like Amy. Yep. So that's kind of our day to day triple threat of functions that we operate in. And then with the radio system, I do all of our subscriber programming, manage our maintenance contract with Motorola. So when there's system maintenance that needs to be done, I don't do that system maintenance, but I work with our contractors to get that done. Back to the subscriber programming, if anybody needs something done with their radio, I'm the guy that they call. And then if I can fix it myself, we fix it. If not, it can be sent out, or we can bring Tex in or whatever may need to be done with that.

Dan Hoffman:

Awesome. So radios, I know we were joking a bit about walkie-talkies and comparing what we currently have to walkie-talkies. And if you look at one of the radios that our police or fire... Or public services has some as well, I believe.

Ethan Longenecker:

Yep.

Amy Simmons:

And social services.

Dan Hoffman:

Social services has some. They don't look too far off from a really fancy walkie talkie, but talk a little bit about what is actually in these devices, because yes, your Walmart walkie talkie might cost you 20 bucks, but these per unit cost roughly what?

Ethan Longenecker:

The new ones we're looking at are about \$8,500 a piece.

Dan Hoffman:

Exactly. So a used car.

Ethan Longenecker:

Yeah. Pretty much.

Dan Hoffman:

I mean, \$8,500. That's an amazing vacation. A used car. What else costs about \$8,500? Braces.

Amy Simmons:

Yeah.

Dan Hoffman:

Jesus, braces. All right. So not cheap.

Amy Simmons:

No, not at all.

Dan Hoffman:

But talk about why. What are the big differences? What do these things have in them?

Ethan Longenecker:

So one of the biggest differences is the coverage factor. If you take one of those little family radios and spread yourself out two miles, you're not going to be able to talk to each other. Our system, when it was built, you had to have 95% in-building coverage. And we actually far exceed that in-building coverage throughout the entire city.

Dan Hoffman:

Oh, that's great.

Ethan Longenecker:

That's kind of one of the biggest things. It has to work. If you're a firefighter in a building and you have a Mayday situation and you're calling back to command, it's got to function. That's really the biggest thing, is these are tested. They have IP ratings. So I mean, they're durable. They're going to work.

Dan Hoffman:

What's an IP rating?

Ethan Longenecker:

Basically a waterproof rating. You can dunk it a certain distance in water and-

Dan Hoffman:

Waterproof.

Ethan Longenecker:

Yeah. We don't really do that.

Dan Hoffman:

Yeah. Yeah. They're \$8,500. So I'm going to trust the manufacturer on that one.

Ethan Longenecker:

But yeah. So we operate on an 800 megahertz system.

Dan Hoffman:

Okay.

Ethan Longenecker:

So we have almost unlimited talk groups as well, where we can have... PD has 16 channels in their home zone. But if we wanted to add a second zone, we can have 16 more talk groups. They could have a third zone with 16 more. So the possibilities are really limitless as far as how we want to operate tactically on these radios. We have encryption to where we can keep things private that need to be private. The battery life, these things will last an entire shift without charging, whereas your little family radios, as you know.

Dan Hoffman:

No, they won't last.

Ethan Longenecker:

They don't.

Dan Hoffman:

Plus the little family ones are normally shaped like SpongeBob or Mickey Mouse or something like that.

Amy Simmons:

GI Joe.

Dan Hoffman:

The GI Joe ones. They're not super professional. But these radios, they don't... Well, they don't communicate point to point. They rely on towers.

Ethan Longenecker:

Correct. We have two tower sites. One is at Jefferson Street out behind the new innovation center on the water tower. And then we have the one at the Timbrook building.

Dan Hoffman:

Yeah.

Ethan Longenecker:

So we're a two set. Two tower site system.

Dan Hoffman:

We're fortunate in one of the benefits of being pretty compact like we are is that we can get by with two towers. Places like the county that surrounds us, the jurisdiction I just came from, you need 15 to 20 towers for total coverage. And that ain't cheap.

Ethan Longenecker:

No.

Dan Hoffman:

Because these things don't work without good tower coverage. How much does it cost if a community needs to put up a tower? How much does that cost, roughly?

Ethan Longenecker:

Ooh, you're looking at probably in the range of a million dollars.

Dan Hoffman:

Wow.

Ethan Longenecker:

It depends on a lot of factors, but yeah. It's definitely not a cheap endeavor to put up a tower site.

Dan Hoffman:

Yeah.

Amy Simmons:

Or easy. Our last endeavor at Timbrook was years.

Ethan Longenecker:

It took years. And there was all kinds of historical improvements that had to be made.

Dan Hoffman:

Oh wow.

Ethan Longenecker:

There were balloons that were put up, and they took pictures from all around the city to see what the view was going to be. And yeah, I wasn't here for that. That predates me, but it's interesting to look back at some of the files that are in existence from that time.

Dan Hoffman:

Well thankfully our boundaries aren't expanding and we won't need to add anymore towers, but for a jurisdiction that let's say needs to plug major holes in their coverage just like a cell phone provider, they got to put up these towers at a million bucks a pop. So not cheap.

Ethan Longenecker:

No, definitely not.

Dan Hoffman:

And the maintenance, also not cheap. We currently have what type? We have Motorola radios, correct?

Ethan Longenecker:

Yeah. And we have a Motorola service contract, which we're going to pay for our system multiple times over by the end of that contract. But if we have an issue in the middle of the night, Motorola is going to respond to that issue if it's a high priority issue. If it affects our coverage, it affects our operations, they're going to be there within I think it's three hours in the middle of the night. That's pretty good to have that option.

Dan Hoffman:

Absolutely. And the current radios we have, all, of course, radios, just like any technology, has a shelf life. So where are we at with our particular radios?

Ethan Longenecker:

Our current public safety radios are Apex seven thousands and-

Dan Hoffman:

Oh, that sounds fancy.

Ethan Longenecker:

Very fancy.

Dan Hoffman:

The Apex 7,000.

Ethan Longenecker:

Way fancier than the 1000. No, I'm just kidding.

Dan Hoffman:

Oh my goodness. Like a Terminator or something.

Ethan Longenecker:

Yes.

Dan Hoffman:

Oh, this is the T1000.

Ethan Longenecker:

Yep. So their end of life is 2023 where we will no longer be able to get parts for them. We won't be able to send them out for service. We're in the process of replacing those radios with Apex 8,500. Or excuse me, 8,000. The price is 8,500. The model is 8,000.

Dan Hoffman:

8,000.

Amy Simmons:

Of course.

Dan Hoffman:

But those will have some additional capabilities built into them.

Dan Hoffman:

What kind of stuff?

Ethan Longenecker:

One thing is we have some issues with coverage at the hospital right now. Just the nature of the building itself in the emergency department and kind of the wall structure and all that causes some issues with coverage. But our new radios will actually be able to operate on wifi, so we can program in the hospital's wifi connectivity, and then they'll operate just like they would normally via the wifi at the hospital. That's kind of one of the big things right now, because that's been an unknown issue that we've been trying to solve.

Dan Hoffman:

Now our guys aren't going to have to like go in there and ask the front desk lady, "Hey, what's your wifi password?"

Ethan Longenecker:

No, that'll be done on my end. I'll also be able to be programmed over the air, which is nice. I can do a firmware update, push it out. And then as soon as the radio's power cycled back at Timbrook and has wifi connection, it'll update itself.

Dan Hoffman:

Nice.

Ethan Longenecker:

Whereas right now we have to go touch every radio to do a firmware update, and it's... Yeah, it's a nightmare.

Dan Hoffman:

That's tedious.

Amy Simmons:

And how many radios do we have right now?

Ethan Longenecker:

We have 225 just in public safety.

Dan Hoffman:

Oh, okay.

Ethan Longenecker:

And then obviously Public Services and DSS and there's a lot of additional radios, because we're really... We support the whole of the City. We're not just public safety radios. We're across the city.

Dan Hoffman:

Gotcha.

Amy Simmons:

It's a lot of updating.

Ethan Longenecker:

And that's actually just portables. If you include mobiles in all the vehicles and apparatus, that number goes way up.

Dan Hoffman:

Yeah. Now after 9/11, obviously there was all this talk about interoperability, although that still feels like it was not very long ago. That was 20 plus years ago. And these radio systems have changed dramatically in that timeframe. Are there still issues with interoperability? How do we coordinate with neighboring jurisdictions? Tell us about that.

Ethan Longenecker:

Yeah. There's always slight issues with interoperability. As far as Frederick County currently, they're on a VHF system. And when we built our system, we actually maintained VHF. We spent some extra money to do that so that we could have interoperability with the county. And we interopt with Frederick County really on a daily basis with the fire department. We have some permanent patches that are built. So we basically just operate as normal with Frederick county.

Dan Hoffman:

But we don't hear all of their chatter. If our guys are out in the field responding to a call, they're not also getting radio traffic from Frederick County.

Ethan Longenecker:

No, they're not.

Dan Hoffman:

Do we just switch? It's a switch that gets flipped over?

Ethan Longenecker:

On the radio, if you were responding into Frederick County, there's just a little button that you basically take from one position to another position, and then you're in the Frederick County VHF zone. And we can interopt with them that way.

Dan Hoffman:

Nice.

Ethan Longenecker:

Now, their future system that they're in the process of planning is UHF. So it's a whole different frequency band. Our new radios that we're looking at purchasing will have a UHF band in them.

Dan Hoffman:

Yeah. UHF not being the old weird Al Yankovic movie from the eighties.

Ethan Longenecker:

I'm not familiar with that one.

Dan Hoffman:

Oh my goodness!

Amy Simmons:

I don't know what you're talking about.

Dan Hoffman:

All right. So if you're... Well, I'm not going to go down-

Amy Simmons:

We digress.

Dan Hoffman:

I digress. But if you have a moment, check out UHF, a movie from the eighties by a Weird Al Yankovic. It is a hilarious movie.

Ethan Longenecker:

That's good to know.

Dan Hoffman:

There you go. A little nugget for everybody. But it has nothing to do with our radio system.

Amy Simmons:

Nothing.

Ethan Longenecker:

No, but so the new radios will have that UHF band. So as Frederick County gets operational on their new system, we'll already kind of have addressed that interoperability potential issue with these new radios.

Dan Hoffman:

Awesome. And where are they with replacing theirs? Because my understanding is that they've got a big project that's either about to start or is underway.

Ethan Longenecker:

Yeah. I think they are in the process of planning, I think, at this point. I don't know how far they are as far as implementation.

Dan Hoffman:

Yeah. So whether you're in Winchester, Frederick, or really any jurisdiction around, if you see your local City Manager, your local Council saying, "Well, we need to borrow 5 million dollars, 10 million," in some places, 20 million dollars for a new radio system, that's kind of the cost of doing business. Just, this year, even though we're not building towers, we're not adding a bunch of new radios, we're just doing updates and our maintenance contract has an escalator in it.

Ethan Longenecker:

Yeah.

Dan Hoffman:

I mean, we didn't do anything different, but our costs went up a significant amount this year. And with ours reaching end of life, we're going to have to start the replacement process pretty soon. So thankfully a little stimulus money will help ease that blow. But we're still looking at a million, million two, million three just to get the new radios we need.

Amy Simmons:

Can we sell the old ones and get some money back?

Ethan Longenecker:

It's not really... No.

Amy Simmons:

Because you can't get parts. Nobody wants it.

Ethan Longenecker:

Yeah. Because they're at end of life. We're actually going to maintain them as a cache.

Dan Hoffman:

Okay.

Ethan Longenecker:

Like for Apple Blossom, we have to call in a State cache of radios because we have so many extra first responders in town for that. This will be maintained as a cache that we can use for that, we can use for large incidents, whatever the case may be.

Dan Hoffman:

They become the new walkie talkies.

Amy Simmons:

There you go.

Dan Hoffman:

I don't think my kids are going to use them.

Dan Hoffman:

I'm going to go play paintball and use the... No, I'm not going to do that, before somebody files a complaint. I will not use them for my own personal entertainment. Well, thank you very much, Ethan, for coming in, explaining radios. Is there anything we missed? I think we hit all the big topics.

Amy Simmons:

Let's ask Ethan. Anything else you want to cover?

Dan Hoffman:

Yeah. Anything else we missed?

Ethan Longenecker:

Not off the top of my head.

Dan Hoffman:

All right. So those are radios.

Ethan Longenecker:

I was waiting for some hard questions. Those were all easy questions.

Dan Hoffman:

Well, next time we'll get you some harder ones.

Dan Hoffman:

Trust me, we could have gone another 15, 20 minutes and dug into the signal propagation issues within buildings-

Ethan Longenecker:

Oh man.

Dan Hoffman:

But I think given our time and our audience, we probably don't want to get too that.

Ethan Longenecker:

We don't want to get into the Omnisphere and-

Dan Hoffman:

Nope. We're not bouncing off any atmosphere with the weather or anything. Ethan, thanks for coming in. Yeah. When will we see him again? Will we? I'll see them around, but maybe we'll bring him in for another... Oh, I know when we should bring him in. We should bring them back in when we start doing some of these exercises.

Ethan Longenecker:

We can do that.

Dan Hoffman:

Because we're planning a big full scale exercise when?

Ethan Longenecker:

Full scale in October. October 1st.

Dan Hoffman:

Oh, we should talk about full scale emergency management exercises.

Ethan Longenecker:

We can do that.

Dan Hoffman:

That would be good.

Dan Hoffman:

Thank you very much, Ethan.

Ethan Longenecker:

Yeah. Thanks for having me.

Dan Hoffman:

Absolutely. All right. There goes Ethan Longenecker. Long. Not long and acre.

Amy Simmons:

No.

Dan Hoffman:

Longacre. Longenecker.

Amy Simmons:

Right.

Dan Hoffman:

There goes Ethan Longenecker. Tall Ethan Longenecker.

Amy Simmons:

Fitting name brand.

Dan Hoffman:

He's a good guy. And when you have a department of two people, having two really competent, good people that care about what they do is very important.

Amy Simmons:

Absolutely.

Dan Hoffman:

So we are lucky to have him, just like everybody we bring on. I don't think you'll ever hear on the show us bring somebody on and be like, "Well that person's a waste of space."

Amy Simmons:

Well, for one we don't hire those people.

Dan Hoffman:

Exactly.

Amy Simmons:

But two, we wouldn't have them on the show if we did.

Dan Hoffman:

That's true. We're pretty selective. So you're kind of getting the cream of the crop on this show.

Amy Simmons:

That's right.

Dan Hoffman:

So anyways, there goes Ethan, part of the cream of the crop. If you are interested in learning more about our public safety radio system, these are the types of things we discuss at the public health and safety committee meeting, which meets normally the third Wednesday of each month. Sometimes it says every other month, but it meets the third Wednesday of the month.

Amy Simmons:

At five.

Dan Hoffman:

At five o'clock. So that's when these big changes or improvements to our radio system, they get discussed there first. Alrighty. So thanks for sticking around for part two. Hope you check in next time when we will talk about...

Amy Simmons:

Trees.

Dan Hoffman:

Trees. Talking about trees next time.

Amy Simmons:

Fitting, because it's perfect time to plant in the round October timeframe.

Dan Hoffman:

All right.

Amy Simmons:

So we're going to talk about how you plant trees, the City trees system, our Tree City USA, and anything else you want to know. Trees, trees, trees.

Dan Hoffman:

All right. Trees, trees, trees next time. Thanks for sticking around. We'll see you around City Hall.