SoundBites Podcast Transcript
Episode: “Behind the Sound: A Deep Dive into Starkey’s Genesis AI”

Dr. Dave Fabry:

Welcome to Starkey Soundbites. I'm Dave Fabry, Starkey's Chief Innovation Officer and your host. Today, we're talking about the need for constant improvement and growth, and refusing ordinary to really strive for something exceptional. And I can't think of anybody I'd rather have on to talk about this than Nate Johnson. Nate is our Director of Product Management here at Starkey, and he and his team are responsible for the product roadmap really. And we'll talk a little bit about what that means.

But really, it touches every part of the organization, including people working on hardware and the form factors, whether it's a custom in the ear style or behind the ear and RIC style, whether it's the programming software or whether it's the user applications, which increasingly patients are using that user app as an interface to our products. And Nate, I think one thing that I think of when I think of you is unflappable. And I think that's a characteristic a good product manager has to have because there's all kinds of commotion.

You're on very critical timelines and they change, and we have to adapt and look at that constant improvement. And I think of you as being unflappable. And so, it's a pleasure to have you here today on the podcast.

Nate Johnson :

Thanks a lot, Dave. It's really great to be here, and I appreciate the quick compliment as we get into the weeds here. So, excited to be on the podcast and talk about what we do at Starkey and how we make our hearing aids.

Dr. Dave Fabry:

Yeah, this is your first podcast you were saying?

Nate Johnson:

Yeah, it is.

Dr. Dave Fabry:

It's a privilege to have us and SoundBites host you for your first time on.

Nate Johnson:

Absolutely. Excited to get into the conversation with you and really talk through, like I said, our physical hardware products, our mobile applications, our fitting software.

And talk about we or how we on my team and product management really bring in voice of the customer, whether we're talking about customer being our hearing care professional, or whether we're talking about customer being the actual hearing aid user.

So, on the product management team, we definitely are very focused on bringing both of those viewpoints into our products and ensuring that the products that we push out into the field are well accepted by professionals and patients.

Dr. Dave Fabry:

I think you hit on a very important point. I mean you say designed by professionals, for professionals. And a friend of mine, Mike Maddock, will often say you can't read the label when you're inside the jar.

And although we may fall in love with a product or technology or application, we want to make sure, and that's one of the things that you are responsible ultimately for, to do a gut check with professionals to see if indeed this is something they're looking for.

But then, that's not it either, because then when we talk about the user app and the way the patient interfaces, we want to make sure that the patients find this beneficial. So, the voice of the customer in your case, can mean both the hearing care professional and ultimately the end user.

Nate Johnson:

Yeah, absolutely. That's a great point, Dave. So, interestingly enough, I am an engineer by trade. And your point on not getting too enamored of the technology definitely strikes home. So, as an engineer, I can tend to think that a piece of tech that's future, future looking and out there is really cool.

But at the end of the day, my job and my team's job is to make sure that that technology that we're bringing into the hearing aid has actual tangible value. It's making our professionals' lives easier. It's making our hearing aids better for that end user.

Dr. Dave Fabry:

Well, so let's start there. It can be difficult, it can be challenging, it can certainly be humbling to ask for feedback from end users or from professionals, because hopefully everyone likes to get compliments. And we've been getting a lot of very favorable compliments about Genesis, which was launched just in February.

Now, here we are six months later and we're already updating that product, and we'll get into that a little bit more. But we've heard a lot of great things from the market, from hearing care professionals and end users about how their lives have been impacted in a positive way by this technology.

I'll admit, I don't learn as much from compliments as I do from complaints. Fortunately, I get a lot more complaints than I do compliments. But that can be a humbling experience. Explain how you go about that process of getting feedback from professionals and end users.

Nate Johnson:

Yeah, absolutely, Dave. So, there's really a few primary ways that my team does that. So, one, which is a very important part, and I know you actually have this as well, is something that we call at Starkey Advisory Boards. So, for our Genesis product launch had a very in-depth advisory board.

So, we had hearing care professionals working with us on the front end of the ideation process. So, really early on in development, we're targeting areas of the product, the fitting software especially that is going to make it easy for them, efficient for them, make sure that they're able to provide the best service to that end user.

Another aspect that we use very frequently and probably is more on the complaint side of it that you mentioned is we have this internal tool, which we call product suggestions. So, it's a Microsoft dashboard that the sales reps can get feedback from the field, from a provider, I don't like X, Y, and Z, I wish you guys had this, why don't you do this like this?

And this tool, when the sales rep enters it, is automatically filtered. My team can go in and look, okay, this week we had 10 suggestions regarding this aspect of our hearing aid. And what that does is as you know very well, Dave, these hearing aids are on an 18, sometimes even 24-month rolling development cycle.

So, something that we're working on right now might not hit the market until 2026. So, it's important that we get that feedback and iterate on it rapidly to make that big impact to the field. So, those are two areas that are really important from a professional standpoint.

But the one that I like to fall back on, the tried and true is just really going out into clinics, talking to hearing care professionals, and they're out there doing it every day. They're interacting with your products. They're interacting with other manufacturer's products.

And there's just nothing that works as well as getting into the clinic. And you can talk to the professional, you can talk to the patient at the same time. And it's amazing, the insights that you gain from doing that.

Dr. Dave Fabry:

And I know one of the things that really impresses me about you in this role is you've been very deliberate and determined to spend time with clinicians' permissions in their office, often engaging with them directly or even the ultimate privileges if they allow you to witness the fittings and the engagement that they're going through fitting our products on patients.

And that really is a partnership that we value and treasure for those clinicians who will do that for us. Because I know as an audiologist in my role as chief innovation officer, which I say I look out the window and think deep thoughts. The other thing is I do have a patient advisory council that I work with, with the understanding that I have a lot of things on my plate, all of us do, but seeing patients is the best way to get that immediate feedback.

And I expect them to give me to be brutal in their candor. And so, I really appreciate that you have made that attempt to go out as often as possible into the wild, into the real world for those patients.

Nate Johnson:

Yeah, absolutely. No, that's what's been in my experience, especially coming out of the engineering side of the organization, not having that clinical background that you yourself has... that's really been the most eye-opening for me.

Dr. Dave Fabry:

And you mentioned the focus groups that really began with Genesis and the establishment of ProFit. A lot of people really liked Inspire, and they were worried about us taking away something that they've been very comfortable with.

But there were very candid discussions that came about as a part of those focus groups that led to some things that we'll get to in a minute in terms of innovations that might not have just naturally occurred if we hadn't been engaged and you hadn't been leading these discussions with clinicians who were fitting our products every day.

Nate Johnson:

Yeah, absolutely. So, my team did a fantastic job of that. So, working directly with different customers too. So, not just one specific customer segment, but maybe it's a VA audiologist, maybe it's a person who buys a lot of Starkey products, maybe it's a person who doesn't buy that many Starkey products.

And doing those focused interviews early on in the process and walking through early screens before there was even any software, and it's just visuals on the computer screen.

Those are excellent tools for us to get feedback on the user experience and help us design the software to, again, efficiency and accuracy. Those are the two things that we're really striving for there.

Dr. Dave Fabry:

Yeah, let's highlight a couple. Thinking back to February in Genesis. I mean, I can tell you for me, as much as I did really find Inspire to be an intuitive and logical way to program instruments, one of the pain points for me personally was that if I had RIC devices that were stock units and I wanted to pull them off, they were all labeled as left ear devices.

And then, with my aging eyes increasingly sort out which one was the left and which one was the right and I put the power of the receiver on. Talk a little bit about what went into the enhancements that we introduced with Genesis AI related to that part of the process.

Nate Johnson:

For sure, Dave. So, the big thing there was we upgraded our receiver cable. So, we went from a Snap Fit 1.0 to a Snap Fit 2.0, pretty innocuous number change. But under the hood there, there's a lot of new technology happening. So, we've added “smarts” to the receiver, so it knows that, Hey, I'm a M size 3 or I'm a P size 4.

Dr. Dave Fabry:

Well, you said M, that used to be a 50 gain, right?

Nate Johnson:

Exactly, yeah.

Dr. Dave Fabry:

So, that was another improvement that we made.

Nate Johnson:

Yup, that was another improvement, exactly. So, we want to focus on the more broad fitting range of the receiver versus just a specific full on gain number there. But adding in that technology, so not only does a receiver know what it is, the fitting software, the ProFit fitting software, as soon as you connect that receiver, it highlights that up on your screen. So, as a professional, it's very easy for you to know, okay, yup, this is the right aid, this is the left aid.

Dr. Dave Fabry:

Streamline that process.

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

Beyond my expectation, we were successful in snapping it on, identifies left, right, the power as you say, and then I'm good to go in the pre fitting part of this. And I think that's just one example, and that came through loud and clear from a number of the other professionals early on.

Nate Johnson:

Absolutely. That was very loud feedback from a lot of different hearing care professionals on what they didn't like about the Inspire system.

Dr. Dave Fabry:

We'll come back to some of those other ones. But now, let's talk about what people can expect. Like I said, your job is never done. When you're in charge of the roadmap and you're in charge of always ensuring we're staying on the cutting edge, not the bleeding edge of technology.

So, that as soon as you get ready to take a little sigh of relief when Genesis AI was launched, you're already working on the six month later update. So, talk a little bit about what people can expect to see shortly out of this next generation.

Nate Johnson:

Yeah, no, that's exactly it. The way that we look at it on the product side is our work is never done. So, we're always striving to iterate and to make new improvements to our technology. And Genesis, like you said, Dave, has been very well received by the field, but there are areas that we knew going into it. You can't build every hearing aid style at once.

Dr. Dave Fabry:

No.

Nate Johnson:

It's a resource bottleneck. So, one of the things that we're super excited about is bringing in a couple of additional zinc air product styles to the Genesis family. So, first being a RIC 312 and then the second being a wireless Bluetooth streaming CIC 312.

So, both of those form factors giving providers and patients additional flexibility. Maybe they don't like rechargeable options for whatever reason. We want the ability to give or we want to give them the ability to have a zinc-air and tried and true technology that's available to them in the amazing genesis line as well.

Dr. Dave Fabry:

So, you mentioned the RIC 312. Now, will that be a device that uses NFMI and a telecoil or will it be closer to the mRIC rechargeable now?

Nate Johnson:

So, it's actually a bit of a hybrid between the two. So, it does have NFMI. So, that being said, it'll support CROS, but it does not have a telecoil. So, we're riding in the middle, if you will, between the two different rechargeable options.

Dr. Dave Fabry:

And we've been committed to ensuring in every form factor that as possible that clinicians will have a choice of telecoil for those who want it.

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

But then, also, we don't have to have every product duplicate or replicate others. Why do clinicians want a zinc-air option rather than rechargeable? Given that we've set the bar very high for our competitors in terms of the Genesis rechargeables with 51 hours out of the RT, 41 out of the micro-RIC and 42 out of the custom and the ITE and ITC models.

Nate Johnson:

Right. So, I might actually flip the question around at some point and ask you that.

Dr. Dave Fabry:

I'll be asking the questions here (laugh).

Nate Johnson:

The different professionals that I've talked to on this, I would say there's two primary themes that come out. One, again, it comes back to battery. Like you said, our Genesis rechargeable products have unbelievable battery life, best in the industry, but there's certain use cases.

If you're a very heavy CROS user and if you as that user have been using the zinc-air technology your whole life, you might just be like, "You know what? I know this works for me and this is what I want." At the end of the day, the user's the one buying the hearing aid.

So, as a professional and a provider, you can tell them the benefits of rechargeability all day long, but that specific person, they might just want that zinc-air. So, that's one.

And then, the other one, which is I'd say a little bit less common nowadays, given the premium battery charger that we have, you can take your charger with you go off the grid for a few days, still rest assured that you're going to have enough power to charge those hearing aids.

But it is those patients that they have different times in their life where they don't have access to power. So, it's very easy for them to just buy a few sleeves of zinc-air batteries and they know that I can go wherever in the world I want. I can go for weeks at a time, and my hearing aids are always going to be working.

Dr. Dave Fabry:

Yeah, I think very important points. The control one in that if someone is indeed, I think the CROS/Bi-CROS example is a great one, because those are people that really depend on that technology. They need it to work and last all day, every day once they start getting used to and depending on that technology.

And then, the other I think is just that when they go off the grid, and I think one of the other parts that hopefully we'll have a little opportunity to talk about at the end is your role in terms of product management is not just for the US market.

Nate Johnson:

Totally.

Dr. Dave Fabry:

This summer I had the opportunity to go and assist in the product launch in South Africa and they have load shedding. And they have varying degrees of load shedding where the power just goes out because of the demands on their grid, and they'll just shut off a region for two hours, four hours, six hours, sometimes longer.

And without that power, I think again, it's another area where people feel like zinc-air batteries, if they've worn them in that style for a long time, they can control how long the battery life is and what they're doing. Or if they're hunters or if they're going off the grid camping and without power, they want to be able to think about with confidence that they'll be able to continue to hear the sounds of nature.

Nate Johnson:

Yeah, 100%. And I'm actually real glad you brought up that international aspect. So, the Genesis launch has been primarily available to US markets. One of the, I'll say, cornerstones of this upcoming launch is actually a lot of the behind the scenes work that goes in to taking Genesis global.

So, if you think about all of the different hundreds of countries that Starkey operates in, and you start to think of user manuals for hearing aids and chargers, the translations on the fitting software, the translations on the mobile app, the voice indicator translations, that if you're hearing personal memory to be able to say that in Spanish, which I'm not going to attempt here.

In all the different languages that our hearing aid support, there's an immense amount of work that goes into the behind-the-scenes side of it to make this and truly take this product global.

Dr. Dave Fabry:

You mentioned the receiver in the canal and the zinc-air RICs and that CROS/Bi-CROS capability. I don't want to let the CIC with the zinc-air slide.

One of the issues that I've seen from working with patients who want the cosmesis and the cosmetic benefits of a small custom device like a CIC that is still connecting to their smartphone, connecting to accessories and even ear to ear.This is no small technical challenge. The issue as well is with people who want that cosmetic benefit, but maybe use a more powerful receiver an M or a P if their ear canal allows it.

And I've known from working with a lot of longtime CIC users, they're most comfortable, as long as they don't have dexterity issues or arthritis or visual issues that preclude them getting a battery in and out of their device, they want to control that as well because of the fact that rechargeable in those small packages in the past has sometimes pushed up against battery life on the rechargeable.

Nate Johnson:

No, totally. I mean the ear is the boss as we like to say here at Starkey. And I think the reality is when you start combining things like rechargeability, wireless, the Genesis circuit architecture, all those things together, they just don't mesh with every ear.

So, by being strategic and intentional in our product line architecture, we're saying for this coming launch, launching a CIC with that 312-form factor, but also bringing the benefit of full streaming capabilities.

You mentioned the challenges that we have, obviously, the human head and the human body just absorbing that Bluetooth frequency, it's a very challenging engineering problem that we have to solve here at Starkey. But I'm pleased to say we've nailed it.

Dr. Dave Fabry:

We've really staked our reputation on small custom devices fitting well, performing well, as you say, entering into the 2.4 gigahertz Bluetooth stage, doesn't go through the head. We got to make it go around. And the engineering challenge for that, as you know, is not trivial.

Nate Johnson:

100%.

Dr. Dave Fabry:

I know patients are going to be really pleased to have that option, bringing that form factor and feature set into the Genesis world with this upcoming launch.

Nate Johnson:

So, let's touch on that a little bit. And actually, before we jump into some of the features I do want to mention with both of these products, the improvements in robustness and quality that we've made on the Starkey engineering side.

So, similar in vain to Genesis, we can't quite say the same things about our zinc-air products as we do with the rechargeable being waterproof, for example, because there's a reason why these batteries are called zinc-airs. They need air to function.

So, we can't seal that off like we can the rest of the rechargeable hearing aids, but everywhere on these hearing aids that can be sealed, it is sealed. So, the same technology-

Dr. Dave Fabry:

Formal coating, nano coating, the mesh and all of the enhancements that we've talked about-

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

... to deliver that IP68 rating on the rechargeable custom and standard products is there in these products.

Nate Johnson:

Still applies.

Dr. Dave Fabry:

But as you say, zinc requires air to operate. If we sealed them off completely, they wouldn't work.

Nate Johnson:

They wouldn't work.

Dr. Dave Fabry:

And then, the other point, the reality, just the practical reality is anytime you have a battery door that's swinging open, there are seams, those are ingress points that allow moisture to come in.

But you say we've still achieved an IP68 rating on the custom and standard zinc-air products. It's not that beyond IP68 that we refer to when we're discussing the rechargeable devices.

Nate Johnson:

Correct.

Dr. Dave Fabry:

But simply because you need air-

Nate Johnson:

You need air.

Dr. Dave Fabry:

... and you have seams. But if someone jumps in the shower, gets in the tub, goes through a rainstorm, they still are going to have the confidence that these devices will function after being in a meter of water for 30 minutes.

Nate Johnson:

30 minutes. Totally. Absolutely. And I actually inadvertently torture tested one of them on a recent family trip and dove into a pool, came out quickly after I realized, shook them off and they functioned.

Dr. Dave Fabry:

Oh, I do it all the time too. As you know, my hearing aids go swimming quite regularly on purpose. And I just think that durability really goes hand in hand with Genesis and being able to claim and achieve that IP68 out of a zinc-air battery is nothing short of remarkable. And I know a lot of work effort went into that.

Nate Johnson:

Yeah, it really is.

Dr. Dave Fabry:

So, let's then transition a little bit into some of the features. Now, Edge mode has been a feature dating back to 2020, in January of 2020 when we launched Edge AI was the first derivation of Edge mode. We improved it with Evolv to allow even more.

And we saw from Michelle Hicks and her team that patients increasingly are using Edge mode in lieu of manual programs and finding that they actually prefer overall the Edge mode application plus the personal program as we call it, that automated environmental classifier. What about Edge Mode Plus in Genesis and now in this latest area, what improvements can they expect?

Nate Johnson:

So, obviously, with Genesis, having the ability to control whether you want to control for comfort or speech clarity, that was the game changer for Genesis. So, now, with this launch, what we've done is further trained our DNN algorithms with more data. So, that's the thing about DNN, it's all about data.

Dr. Dave Fabry:

It's all about data and input and scenes.

Nate Johnson:

The more data that we can collect, the better we can train these algos. And now, where we are in this launch here, we're able to make the actual sound quality for the patient even better than it was in Genesis while utilizing those same settings that they really like.

So, whether they're trying to hear in comfort, you have a selection for that. Whether you're trying to hear speech in a coffee shop, you have a selection for that. So, we're super excited to get this out in the field.

Dr. Dave Fabry:

So, it's great to hear that we've continued to double down on DNN and using that onboard DNN accelerator in this case now too.

Nate Johnson:

Yup, absolutely. So, that's a big feature of our Genesis Neural processor obviously is taking some of that processing away from the cloud and doing it onboard the hearing aid. So, when you're able to do things onboard, it's smarter, it's faster, all the above.

Dr. Dave Fabry:

Well, and it really is no accident that this mode began as Edge mode, as Edge computing in the sense that for individuals who want to use the double tap. They don't even need to have their smartphone with them. People may not realize that that Edge computing, that Edge mode in that sense can all be done at the level of the ear.

Nate Johnson:

Yeah. And I think on top of the different sound quality benefits that you just highlighted, to me, that's one of my favorite things about this feature is it's the quick double tap. And if you like it, awesome. If you want to revert back to your personal boom, you're done.

Dr. Dave Fabry:

I like it. And within the app, we can set it. And even the end user, the hearing aid wearer, can change to make it more or less sensitive from the default position. If they find that they're inadvertently bumping it in the summer, they're putting sunglasses on and taking them off, all of that allows for that personalization. And then, fail-safe, they can still just use the app if they want.

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

But the ability to just have everything on the ear and go about their day without always having to think about bringing their phone with them is a nice feature, and it truly is Edge computing in that sense.

Nate Johnson:

It really is. And it just checks all the boxes for us at Starkey.

Dr. Dave Fabry:

One of the other areas going back to Inspire was with regards to the feedback canceler initialization. That was a pain point for me sometimes because no matter what I did, I would tell the patient, "Okay, now, I know you're going to hear a loud sound. It's going to be short."

"I know you can hear it, so you don't need to say anything and I prefer you didn't." But then, as soon as they'd sit, it would go, "Eeh, eeh, eeh" and then they're like, "Oh, I heard that" or, "It's loud." Have we made any improvements in that regard?

Nate Johnson:

Yeah, we actually have, Dave. So, that was a great feature in this coming launch that we've modified. So, we've modulated that noise where it starts low, at a low decibel level, slowly ramps up and just doesn't rise to that level of uncomfortability that you mentioned there.

And we're getting the same results from the feedback canceler. So, in this situation, we're helping the patient because they're not hearing that, like you said, it's a loud noise that can jar you for a second. And then, we're helping the hearing professional as well.

They don't have to go through and explain, like you just said, "Here's what you're going to going to hear. I know it might be a little bit jarring, but just don't worry about it."

Dr. Dave Fabry:

But I know some clinicians have actually in the past not used the initialization stimulus because of that reason. And with Genesis, there now is an important reason for them to always initialize the feedback stimulus. Why is that?

Nate Johnson:

Given the variances that you see, especially you as a hearing care provider and professional in the different vent sizes on earbuds, and even if it's a closed dome, we know they're not perfectly closed. So, those vent settings that we get from running that feedback initialization are critical.

Dr. Dave Fabry:

So, every time you fit a new patient with Genesis devices, always use the feedback initialization. I think this will be a welcome adaptation to have that stimulus come on more gradually.

And I would encourage people to always do it every time to take into consideration the fact that the slit leaks and the vents and the dome tips or the custom one, personalizing that is really important. Can you talk a little bit about some of the streaming updates that people can expect?

Nate Johnson:

Yeah, sure. So, I mean, I'll say overall, this is an area on Genesis. We've gotten a lot of great feedback about streaming. So, today, when you're running through as a professional, you're able to give your patient a bass boost or a treble boost. Some of the feedback that we've heard is, well, my patient really likes both of them and the way that we're set up is you can't give them both.

So, that's one of the exciting modifications that we're doing in this coming launch is if your patient likes the trebles, if they want it bumped up in the high, they want it bumped up in the low, you can now do them both at the same time with an overall boost.

Dr. Dave Fabry:

That's awesome and very welcome because sound is personal and being able to adjust that for bass or treble even within the same individual for different applications is important.

We know, and as an iPhone user, I've really appreciated the two-way audio on phone calls and yet one bit of feedback that I sometimes get from my patients is that it works great, it's really a benefit for the person on the other end. But it works great for situations where it's a low ambient environment like we are now, or even a restaurant that isn't overly crowded.

But if it gets a little more boisterous sometimes that two-way audio limits the audibility for the person that the hearing aid user is talking to on the other end. Can you talk about enhancements that we've considered with regards to this?

Nate Johnson:

Yeah, 100%. So, this is, again, another very exciting feature that's coming out in this launch. It's a feature update, so we're still using that same two-way audio. Your hearing aid microphones are transmitting your voice, streaming it to your cell phone to your iPhone, and then obviously sending it out to whoever you're talking to.

Like you said, we have had some feedback where it's been challenging in directional situations or in noisy situations. So, what we've done on the engineering side is we're now using both of your hearing aid microphones. So, it's in a challenging background noise environment, you're able to actually parse out your own voice a lot better than you were with the original Genesis software and firmware. And from there, we're doing that same thing, sending it to the phone. And we've heard very good feedback from the listener on the other end where yeah, now they're able to hear you a lot clearer.

Dr. Dave Fabry:

When the hearing aid user is in a noisier environment, this will benefit the person listening on the other end of the phone.

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

Terrific. Offline and airplane mode. Why did we introduce that and explain that a little bit.

Nate Johnson:

Yeah, this is an interesting one. So, we have feedback, especially from our VA customers, they have veterans who maybe work in these sensitive workplaces they're not able to have connectivity features on their phone and on their hearing aid.

So, what this feature does is using a user control, so the hearing care professional can go and program in offline mode. I do a long press, say, I go into offline mode and my hearing aids shuts off all wireless communication until it's power cycled.

So, what this does is it allows us to help those veterans still maintain the usage of their hearing aids and it's a very easy thing to do where I go into my workplace, I turn into offline mode and I want to get out of it when I'm done with the day. Maybe I have my other user control in a power off, I run that cycle and I'm back online.

Dr. Dave Fabry:

I think that's a great feature, as you said, for travelers or for people working in sensitive work environments. And I know people have been asking for that. So, congratulations on delivering that with this latest update. Infield firmware updates, and in-office firmware updates. Cover both a little bit. I know that for some people that's been a pain point for all manufacturers in the sense that when a patient comes in. The good news is there's a firmware update available. The bad news is you end up

having to get a cup of coffee and maybe engage in more small talk than you're comfortable with knowing how busy everyone's schedule is. Talk about that.

Nate Johnson:

Absolutely. So, this is one that we're super excited about on the Starkey engineering side. And you alluded to it in our fitting software conversation about Inspire and why we have to make the switch over to a new architecture. This is one of those core reasons whys.

There comes a point in time where you're building on something that's 15 years old, software gets outdated just like everything else. There's improvements that the engineers make and they figured out how to make this much, much faster with our new architecture.

So, as a hearing care professional, what you're going to find is for your patients that maybe you want to have a patient come back to the office for this update to let's just say give them a more detailed tour of the new features and functionality, you're going to expect three to four minutes.

Dr. Dave Fabry:

That's remarkable, binaural.

Nate Johnson:

Binaural, yup, using noah link wireless programmers. You're going to expect three to four minutes and those things are going to be fully updated with this new firmware. And that's solely because of our architecture decision to move to this new ProFit platform.

Now, the other option you have as a hearing care professional, so let's just say you have a patient who's maybe a little more technologically savvy. They're able to do some of these things easily on their own, they can do it all by themselves on the mobile application.

Dr. Dave Fabry:

Just great. I've done it and it works seamlessly.

Nate Johnson:

It is. It's really awesome. So, you'll get a little notification bubble from our My Starkey app says, "Hey, you have a new set of a new firmware that's available for your hearing aids. Do you want to update?" You click yes. We do something called a dual firmware image load.

So, in the background, it loads it all up, installs it on your hearing aids, it works flawlessly. And it's literally between one and three minutes right now from a speed standpoint, depending on the quality, the connection and those sorts of things.

Dr. Dave Fabry:

I can tell you I've done it a couple times myself on my own devices, and it's been a couple minutes for binaural set.

Nate Johnson:

That's awesome.

Dr. Dave Fabry:

And I think this is truly, and we talk about the transition from the traditional generation to the boomers. And as a boomer, it's comforting to me to know that although hearing aids still, with all the improvements and all of the reliability and quality improvements, ultimately hearing aids, the components not only become obsolete by new technology, but they break down.

But if I know over the five to six years that I expect these devices to be functioning, that I can stay current or more current on the feature set that is allowed is a nice peace of mind for me that to know that throughout the life of the hearing aids, they're going to be performing at their best possible function throughout that entire life.

Nate Johnson:

Absolutely. I would say in today's day and age, with the speed and the rapidity at which our sound quality algorithms are advancing, like we just talked about DNN, you bought your Genesis hearing aids six months ago, we're pushing out a new firmware update that's going to make those sound even better. So, that's amazing.

Dr. Dave Fabry:

And we're not going to be pushing these out as often as the smartphone manufacturers do. It seems like every other day I'm doing an update. So, clinicians don't need to worry about that aspect.

But when there is an improvement in the DNN algorithms, your patients with confidence know that they're getting the updated settings either in the comfort of their own home through the app or in the office with the professional, depending upon how they want to manage this.

Nate Johnson:

Exactly.

Dr. Dave Fabry:

It's really up to them.

Nate Johnson:

That's exactly it. We want to give the professional the tools and the ability to, if you want to counsel your patient to do it on their own, great. If you want to do it yourself and have them come into the office, you're in charge. They'll likely do whatever you tell them when it comes to those hearing aids.

Dr. Dave Fabry:

Yeah. I think chockfull of improvements. And I'd be remiss, we're nearing the end of our time, but I'd be remiss if I didn't mention that September is healthy aging month. And really, healthy aging month shines a light on the fact that people, we say hearing care is healthcare.

And really looking at every age in our lifecycle, wanting to live as healthy as possible including how hearing connects to the other comorbid conditions and overall health and wellness. We've led the industry in this area since 2018 when we were the first with Livio AI to introduce embedded sensors and hearing aids that can track physical activity and social engagement.

Talk a little bit more about how it is that Starkey views this and you and your role with director of product management, how it is that you're taking this. And without giving away too much about the future, talk a little bit about how that resonates with your role in our company.

Nate Johnson:

Yeah, absolutely, Dave. So, the way that I view it as product manager is we have two amazing opportunities to help hearing aid wearers in more than just helping them here.

So, we have physical aspects, which you mentioned with fall. You already said Starkey with our sensors is the first and only company who's tracking falls and actually sending lifesaving alerts.

And then, the other side of it is the cognitive side. So, by tapping into the uniqueness of where the hearing aid is on the body, being able to help patients and help hearing aid wearers in both of those aspects, it's really an amazing opportunity.

Dr. Dave Fabry:

Really exciting developments. And embedded within a healthy aging month, September 18th through this 22nd is fall prevention week. First day of fall is the 23rd. So, we want to avoid that first day of fall. And so, your point about really a fall detection feature is fantastic and really provides peace of mind to family members and hearing aid wearers alike.

But a fall is already too late if it resulted in a broken hip and often the downward health spiral. So, I think it's great that you have within your vision that this is going to be something we continue to work on, hopefully, with the goal of preventing a fall before a fall occurs.

Dr. Dave Fabry:

You mentioned the connection to cognition and overall cognitive health. Just earlier, just a month or two ago, the initial findings from the ACHIEVE study that looked at patients who were elderly, who had hearing loss.

And were either fitted or not fitted with amplification showed what may have initially been a little disappointing to those of us in the industry where not everyone who fit that bill benefited in terms of cognitive function or decline compared with the control group.

But importantly and central to Starkey's technology was that those at elevated risk of cardiovascular disease, hypertension, diabetes, they reduced cognitive decline by 48% relative to the control population and embedded in those sensors, in addition to fall detection and social engagement is steps, physical activity, exercise and getting up and moving around for musculoskeletal strength.

If people are more physically active, they're going to improve their overall cardiovascular fitness as well as their social engagement, getting out and about more. So, this finding, and we're going to hear more about the ACHIEVE studies moving forward, but it's central to the way that we've, and you've been envisioning this technology developing over the last five years because hearing care is healthcare.

Nate Johnson:

Yeah, absolutely. I mean, Hear Better. Live Better. Right? That's our motto here at Starkey, and we definitely stand behind that and believe that. So, from a cognition side of it, we're doing a few things on the, I'll say on the mobile app and then also the caregiver side where we're proactively pushing out some insights, maybe some notifications.

You'll see on My Starkey app where we're telling you like, "Hey, you met your daily, your week's walking goal, great work." Or even things as simple as usage and interaction. So, we're able to let you know you use your hearing aids a recommended amount this week, great work.

Or maybe you had a rough week for whatever reason and you weren't able to wear them that much. We'll provide some additional encouragement for you to use those things more because of all those benefits that we know about that you just went through, Dave.

Dr. Dave Fabry:

Yeah. And as you said, it really assists the patient and provides peace of mind for their family members and their loved ones.

Nate Johnson:

Absolutely.

Dr. Dave Fabry:

So, we are out of time. And so, I know that many of the people listening to the Starkey Soundbites podcast are professionals. And so, I think you've provided a lot of tips in teasing a little bit about what's coming very shortly and really fleshing out the Genesis AI portfolio is exciting. And I know that they're going to want to get this on their patients as quickly as they can.

I think as well, we have some consumers that listen. I've heard from in the past, consumers that listened and became interested in Genesis AI. And I think the features you've talked about provided both professionals and end users with optimism for the way that they can hear better and live better, as you said so well just a minute ago.

So, for those of you who are listening, we hope that you enjoyed this podcast. If you did, like it, share it with your friends, your network, someone who has hearing loss. And as well, we want to hear from you if you send us an email at soundbites@starkey.com about future topics, so we can bring Nate back or bring other experts on our team to talk about issues that are of concern to you.

So, until that time, Nate, I thank you again for being with us here today. It's been a pleasure having this conversation. We look forward to seeing and hearing from our audience again in the near future. Thanks everybody.