Wed, Jan 9, 2008 HLAGR Phonak presentation

Can I ask everyone to sit down so we can get started? My name is Sanford Freed, the past president of the chapter. We have a representative from Phonak here, the leading manufacturer of hearing devices. If you have hearing devices you can turn on the t-coil now. Now we can use it. It's on. It seems to work in my hearing aids. Some of us were having a preplanning meeting before this and the question of computer and internet usage came up.

By a show of hands, how many of you go on the internet at least once a day? How many have been to the Hearing Loss of Grand Rapids website? How many have been to the national website? How many have been to any other sort of hearing loss website that is not the HLA? About half the group. It's a casual survey.

It's my pleasure to introduce Jay Sheehan from Phonak. He will tell you what he is about and he has a lot of interesting things that they do. *(Jay showing PowerPoint presentation concurrently with talking)*

Jay Sheehan: basically my title was FM technology specialist but now it's the wireless technology specialist. We at Phonak specialize in wireless hearing aids. We focus on the manufacture of the hearing aid and the FM receivers to work with it. Even in the best environment you cannot hear sometimes. Even if you are fit well, it's very difficult in some environments. There is a smearing of the signal or the sound in an enclosure. The distance is also a factor. When you reach a certain point it drops out. You need to step closer. That is the lowest technology. We talk about different wireless strategies.

Almost all the systems I will discuss are FM. It also has an application with other technology. The core is the wireless FM waves. I don't like the term ALD; I prefer to use HAT meaning hearing aid technology. The loop in this room is compatible if you have a t-coil. The three main types are loops like in the room now, infrared and FM. Infrared we will not use today. Think of a remote control because it works on an infrared signal. You need to move someone out from in front of the television to get the signal to work; that is how infrared works as well. The upside is that the signal is good and you don't have to change channels to use it.

Loops are another example of hearing assistive technology. You just need to initiate it like the t-coil. It's very user friendly. The downside is that it's not very portable. FM takes advantage of both portability and user friendliness but the cost is a downside I admit. But the way it works for sound is very good.

I will give an update with is going on with the technology. Can you understand me? What are we trying to accomplish with the hearing aid? We try to adjust for the sensitivity. If it's not loud enough we want it louder. We want it fast. People with normal hearing can hear soft things and can go louder without the sensitivity. You can do that with hearing aids now.

These other aspects have to do with timing and pitch. We can't quite figure that out right now. It's getting better each year but not where it needs to be. This shows how well you can understand sentences. When you have a plus 5, the speech you are trying to hear is 5 decibels above the background noise. When it's noisier you drop off. It goes from all to nothing very quickly.

This is where the ALDs come in. I call them the wireless technology. The data up there in terms of documenting the outcomes and making sure it's scientific, no one doubts this. The signal to noise ratio is how we measure it. This technology gives us that.

This shows the hierarchy of it. We know that the hearing aid makes it loud enough. Then we make it comfortable. Some may have a button to push for other environments. Some have a computer that tells it when to go. It can sense when to switch. It tries to provide the best speech pattern.

We have the ability to focus the microphones directionally. It's an advantage when you have two microphones on and you can switch them. The point is that no matter what you have you still require additional assistance to keep up.

This slide shows our production. Phonak is a Swiss company outside of Zurich. We have a separate factory for the FM systems. We have over 30 engineers for the technology. I have not been there yet.

This shows in the past 10 years what we call the FM system is MicroLink. It's small and ear level. You don't need the box style. It's connected to the hearing aid. It's been around for 10 years and each year there are more advances. This is the receiver that was the first MicroLink that was not fused. For the sake of terminology some call them FM boots and some FM audio shoes. If you want to be specific, the audio shoe snaps out of the hearing aid and the receiver snaps on there. Earlier you could not separate the two. The audio shoe is custom to each hearing aid. There are 300 or more shapes and sizes.

In order to connect to the hearing aid on the direct audio input, the shell is different on each one. That is why it's customized. This shows the advances over the years. You are not stuck on one channel anymore. You can have a microphone transmitter on the same channel. The technology is synthesized and the hearing aid can pick up many different ones. Schools with a lot of deaf or hard of hearing children benefit from that. Teachers used to have to wear a lot of different systems.

I want to step back and do 101. What are we talking about? Two parts to the FM system: transmitter and receiver. On the transmitter side is a microphone or not. Here is an example of two. Here is an example of two fixed transmitters that require input. This is designed for the television or telephone. That requires other input.

On the receiver side you can integrate it with the audio shoe. On the bottom of this one is a receiver that integrates to the hearing aid. Not coincidentally, the manufacturer is also Phonak. That is another reason why our company is Phonak hearing systems, not just hearing aids. We are strong in both transmitter and receiver. Any questions?

If this is too basic, tell me to speed it up. On the hearing aid side you can have any BTE *(behind the ear)* aid, or you can have the in-the-ear aids for those who were not able to use the FM system. I want to share three of the four listed here. The SmartLink is in my car. We are pressed for time. Steve brought his in. The ZoomLink and the Campus S. The SmartLink is nice because all I have to do is turn it on and just by being close to it I can listen to his transmitter.

Antenna? The antenna transmits and if it's not on you cannot separate it. If you are shopping in a mall you want to separate it by 25-50 feet. To quickly go through the buttons, the three on the top allow the user to select the direction of the microphone. It's silver here on the side and when you turn it on it picks up sound for all around. You don't always want that. If you are in a conference room or a want to hear a baby from another room, you want all around sound.

If you are confused as to which one you have on.....Are you on? What that did was turn my on. I heard the tones and it set my hearing aids to pick this up. We will have a demo later. In a situation where it's noisy I want to cut the noise. It's like an acoustic flashlight. When you have a mag light that adjusts to focus on what you want to see, you can go wide or narrow. When it's wide it picks up sound from all around. When you focus the beam you get a narrow beam and it's concentrated. It's the same idea. When you have a noisy environment and want to hear one person you want this mode.

The buttons can act as a remote control. I would lose mine. I don't know how I manage to keep all this stuff. My remote is on my keys. Without them I don't get far. It's true. There are other options like on my watch, which I lost. Keys I cannot function without. That works for me.

Sometimes people don't want two remotes so you can change it. You can change the manual and FM programs. One has the system on and one is to isolate the microphone. The other two are volume up and down. I don't personally recommend that. People use it as a crutch. You need to use common sense and ask people to repeat or such. That is my soapbox. I just know that there is a lot of work in making the chips and sometimes we don't use the full range of that if we mess with the volume.

The other two buttons are green and red. They control the Bluetooth technology. Earlier today I was driving and did not know the Michigan law. If I did this here, would I get pulled over? I did not want to chance it. I did hands-free. With any Bluetooth, you need to pair the device to recognize that this serial number and this one

recognize each other. Ideally you should do it only once, but you often need to do it quite often.

The second thing to do is make sure you are connected. You need to do that each day. That is true for any headset each day. If you turn it off on the telephone it shuts off the other one on the headset. It takes a lot of battery power and that is a drawback. There is also a lag time between the speech that you see and the speech that you hear. You don't notice on the phone but right now we have no technology that is not off by a little bit. The newest generation almost eliminates it but Bluetooth up until now has the lag. It's like watching a channel where the sound is off a bit. It's about a half second off. It's getting better.

Battery life and range are more of a concern. If I get a phone call outside of 30 feet I need to go closer. If you are in a restaurant with many people, all of them are within 30 feet so it's not such a bad thing.

I went through the functions of the SmartLink. That has the most functionality. I recommend that because this one was not out. This is the EasyLink. This is just one button to turn on and off. That is great for some populations that cannot handle a lot of confusing programs. That is simple. It corresponds to the directional position not the all around sound. Keep that in mind. Ideally it is worn around the neck of one person. You can also hold it to the person of interest.

Up until last year I recommended the SmartLink but if you don't have a Bluetooth wish... The remote is only for the Phonak hearing aids. If you can figure out how to change it, it's great. The ZoomLink is basically the same thing on the top and has the ability to direct activity but nothing on the back. You don't need the Bluetooth or the remote.

I like this one. On the EasyLink the number is the channel. There are three bars for battery life. You use this device to charge it. They all charge quickly—80% in one hour. Within two hours it's full charge. If you wake up and realize that you did not do it, you can do it before work.

The other two connectors here....One is 3.5mm and one is 2.5mm. They are not interchangeable. I want to stress this because a lot of people think if it fits it will work. Really what you want to do is use the larger jack for any kind of audio source, iPods, Walkmans, computers, I use the GPS. Any kind of audio can be used with this and relays it to the aid.

The iPod is 3.5mm so that plugs right in but the Nano is smaller and you need the adapter. It would be nice if it went into the bottom one, but it does not work like that. The smaller one, the Shuffle, won't work at all. Sometimes you want to use the external microphone and here I have a lapel microphone and a boom microphone. Here is a conference microphone. You can have two on at once.

You can change the channel but there is little need to. When you are fit with a hearing aid, you are set on channel one and there is little need to go off that. There is only one place that can transmit to that. They have the rights to that. Only one transmitter can be on at a time. Many receivers can be one but only one transmitter. Traditionally only one will work now.

This is the MicroBoom. It's very light weight and is popular with teachers now. The lapel microphone was the standard up to now but we got a lot of clothing noise. You can imagine this. We don't want that scratching. It would depend on what the teacher would where. You can hear better here than here.

Guest: I use many different types of systems for the cell phone and I found transmitting into the cell phone was good but why don't the manufacturers put in the effort to increase the microphone technology?
Jay Sheehan: that is a good question. But I suspect that part of the complaint is that when you use the t-coil you use a telephone that was designed for someone with normal hearing. If I had normal hearing I would hold it here. I would talk like this. So the pick up is designed for that use. When I go up here, the design is much different. I suspect that is the reason.

Guest: I use a neck loop or Silhouette with a dangling microphone on a cord which is common.
Jay Sheehan: I don't know. If people still have a hard time hearing you that is unfortunate. I think to be selfish we should worry about ourselves right now.

This is the ZoomLink. Any of the buttons turn the unit on and off. Unlike the SmartLink where you can remove the antenna, this is fixed so you cannot take it off. It's a better design. Don't ever cut this off. Sometimes people don't want to have it there but there is a reason it's this way. Don't cut it.

Here is an example of the larger picture where the receiver is integrated into the bottom. It's still separate. You still have the FM receiver completely inside. There is no other attachment to worry about but you give up a lot of hearing technology like t-coil and directional microphones. I don't recommend it for everyone.

These are the two transmitters that are fixed. I used this in my research. It looks intimidating, but all you do is plug it in. It's pretty straight forward. If there is an intricate system, typically someone works with that. But if you have a basic system where you know what you are working with, just plug it in. If you can hook up a VCR you can hook this up.

The other device is the telecom. It's designed for home use. It's not a conference microphone. There is no microphone on here at all. Some people think that, but it's designed that whatever source you have you plug in here and the telephone here and the jacks. It transmits what you put into it. If the telephone rings, you pick it up and it mutes and brings the sound up. If it's not for you, you press the "whammy" button.

Guest: *(laughing)* That game show is on channel 179—Whammy. It's still on.
Jay Sheehan: if the call is not for you, push the button and you can get the television back. If it is for you, you use the handset. People try to yell through the phone to get your attention. They need to hear you.

Guest: what is the range on that?
Jay Sheehan: about 300 feet. I don't miss anything when I take the trash out of my large condo building.
Guest: you can use it mowing the lawn then?
Guest: I am trying to understand the function of that. If I went down, it's in the center of the house and I went down to do the laundry would I still hear the phone ringing? How about the doorbell?
Jay Sheehan: only the audio that you give it with the cord. Not the doorbell or knock then. You need a microphone for that.
Guest: would it also be good for a speaker say at a church or temple?
Jay Sheehan: no.
Guest: it only works when you have something to pick up, a sound source. It's not having a hearing aid where it picks up the sound all around.
Guest: so the loop is to pick up that. This is only for the bell of the telephone. So instead of having a loop system you can use this for the television? How much is that?

Guest: let me ask this. Everyone looks stumped here. All this equipment is good only in a controlled environment like schools or your home as long as you have the devices connected to the transmitter. In the real world when I walk down the street and someone says hey what is up this is not going to help if I don't have my hearing aid on?

Jay Sheehan: these three have microphones on them. These two require audio input to be plugged into them.
Guest: back in the '70s I had the receiver with the cord in my ear. Am I now going back to that technology except for the Bluetooth? Am I in a controlled environment? If the other person does not have the transmitter on, I cannot hear them.
Jay Sheehan: you always need a transmitter and a receiver.
Guest: I understand that. I have to have the receivers on my ear or on my neck. But this does not help me at all when someone says hello to me if I don't have the microphone by them.
Guest: where I use it now is when we are in the car and my wife is trying to talk to me. That is hard sometimes. She wears the SmartLink around her neck and I am able to understand more clearly and it sends the signal to the receiver. I use it in the restaurant and put it on the table and will aim it in the center of the table and it filters out some of the noise and boosts the signal to me.

I use it in the conference room too. I started to hook it to the telephone so when it rings and I pick it up it automatically switches on in 2 seconds and turns the receiver on and in this case I can put it to the hearing aid at the same time. That is how I use

that now.

Jay Sheehan: I use it in the car. My girlfriend and I went to chop down the Christmas tree this year. I was proud to be a part of that, and we sent out pictures. I got calls from the audiologist who said that is great because it shows you have the SmartLink on. Just last year she had it on when we were carving pumpkins. I should start a seasonal tribute.

Guest: I cannot live without the MicroLink in the restaurant. A lot of times I struggle to hear the wait staff. They stand up and it picks it up nicely. I can also hear everyone at the table. Even when I walk across the room to go to the bathroom I can hear.

Jay Sheehan: I like to use it when we shop. We were at Sam's Club last week and someone asked if it was the iPhone. She said no, but I can even now hear when guys hit on her. At Sam's I was at the back wall and they said, so he can hear us now? I was carrying the jumbo size of Diet Coke way in the back of the store and waving to them as well. She knows to turn the microphone off when she is in the bathroom. We have been dating now for 18 months and sometimes I say "you forgot to turn it off" and she says "we are past that". No, we are not!

Guest: the sound decibels are 50-60?
Jay Sheehan: it's not like a phone. The FM signal is always 10 decibels above the program. You can adjust that as well. I had mine up to 14 because I had a hard time focusing but it was still too strong. So I put it as 12. You can program the amount.
Guest: I am thinking of the amplifier on my phone. It's not comparable to the princess telephone that goes FM 0-9, with 9 being 50 decibels. All the ones that you can buy are nowhere near as loud as the old fashioned one that I lease from AT&T.

Jay Sheehan: the older phones used a heavier magnet inside to pull it us.
Guest: you have a Bluetooth adapter to start the hearing aid. If I put it up can I .....
Jay Sheehan: That is a specific kind of device designed to work with just a few things. That is a separate application. If you are interested in only hearing better on the phone, this is not the thing for you. There are much more effective things than this for that function. All of that is only $100 or so. If you only want Bluetooth we can stop right there. How much time do I have left?

Sandy: We generally wrap up around now. You can have 5 minutes.
Jay Sheehan: I want to show the two universal receivers. The world's smallest FM receiver is now even smaller. We can pass that around. The other thing I want to show you is an example for one of our processors, the Freedom. It's an integrated boot style. There are many different kinds of processors.

The MyLink and the ZoomLink are the most popular combination. This is the transmitter that picks up the sound at the desired source and delivers it to the t-coil. So you basically loop yourself. The other advantage is that you can use it with both

ears. You can adjust the signal to noise ratio on the side. When you boost this up you adjust the gain. It's excellent field strength with very little distortion. It's very successful and has taken the FM market by storm.

This is the kit for larger venues with many different receivers. The iMax at Navy Pier now has this. The Starlight Theater outside also has this. I want to wrap up. All we try to do is maintain a signal over the background noise. You can have both the hearing aid and the microphone on. So if it's a noisy situation you can pick just one.

This is the companion technique. This is the pass around style and the interview style. This is something I want to point out. There are two different programs. You will notice the switch on the side. One is FM only and the other is FM + M. It can improve the ambient understanding around you. That is another first.

The ability to use up to 10 transmitters is now available. There is tons of stuff and I threw a lot at you. People are usually a bit more confused after I talk than before. I will stick around for questions later.

Sandy: if you are interested in learning more about the products, what should they do tomorrow?
Jay Sheehan: Ask your hearing professional for more information.
Sandy: you cannot buy some of these independent of the hearing professional.
Jay Sheehan: sometimes you can find them in catalogs. If you just do the FM unit alone, it does not have to be through an audiologist but I do recommend it.

Sandy: I want to take a few minutes to let you know and emphasize that the chapter produces programs that are of interest to you. Not just me or to a few. But we want ideas for the kinds of programs that you want to see. Nancy, the lovely lady in the back, does all the connecting and coordinating of the programs. Talk to her if you want to see something.

In the next few months, next month our program we will have a pharmacist talking about the interactions of medication and hearing loss. In March we have a really special program. Bill Barkley, who is hearing impaired and visually impaired, used Phonak technology to climb Mount Kilimanjaro. Was he the primary person on this quest?

Nancy: I don't know if you have seen the coverage with him. He is a neighbor of mine. He has a great story. He is trying to get people to realize you can do a lot more than you think you can do. He was not the only one on the Walk, but TV8 did some coverage on him. I can talk about the programs. I just made a change in February. We will have someone speak on emergency preparedness. It's available for people but sometimes we don't think about people with hearing loss. A representative from the Hearing Loss and Deaf Awareness group will come and solicit some feedback. What kinds of things would you like to see in a kit?

In April we are trying to get people interested in the Walk on June 21. For those who may have attended last year, we walked here on campus and raised about $35,000. Some of that came back to us so we could bring in speakers and such.

We also will talk about the Day at the Capitol. Vic Krause has all his connections there and he is right now enjoying the sun, but he will look at the minutes as soon as they are available, I am sure.

I am looking for ideas and suggestions for May and June.

Sandy: it's all about passing on the responsibility for the chapter to all of us. The Walk will be on June 21. The pieces will need to be in place and let me give you an opportunity for a role to play in the walk. You can have a large or small role. Come to me and I will give you directions on where we will meet on Sunday. It's a great group to work with and I want you all to have the opportunity to do so.

Other than that, I have the national group that I want to encourage. Who pays their $25 to join? There are brochures outside. One of the best benefits is a magazine that comes every two months that has great articles on hearing loss, technology, stories and such in it. The $25 is worth just the magazine but there is much more to it. We don't charge for our meetings, you can just come. You can be a member on the national level. Linda brought cookies and punch so enjoy.

Mike Wiersma: there is an article that was in People Magazine. This woman, Janice Schacter, was honored as a hero among us, which is pretty neat. It's a neat award for someone who works with the hearing impaired. That is all.

Sandy: this is such a neat article.

Jay Sheehan: I also have a magazine for you that talks about hearing in general, not necessarily hearing loss. This one gives the overview. We talked about a lot of stuff here. You can all have one of these. I will also give you a brochure on our most popular combination.

Sandy: Any questions?
Jay Sheehan: I have some hats too. I don't have enough for all of you. But I can give you a pop quiz and if you get them right I will give you one. Help yourself.