Patti Liptrot: Basically in this presentation I want to cover everything about relay. With a progressive hearing loss, you may be looking for what's available in telecommunications. You can start out slowly by getting a device that fits onto your handset and helps to boost the amplification. There are also phones with built in amplified handsets and are available, for example, from Radio Shack. Then there are phones that you will see demonstrated here which have even more powerful amplification. Ultratec for example makes the Crystal Tone. It has a volume control so you can boost the sound, and it works in conjunction with your T coil on your hearing aid or CI.

Relay has been in existence since mandated by the Americans with Disabilities Act of 1990. It was available before then, but on a very part time, volunteer basis. Some of you may be familiar with Voice Carry Over, (VCO). VCO allows you to speak for yourself but read text to understand what is being said to you. That is back and forth communication that goes through the relay service. You can access relay service in any state in the US by dialing 711. You do have to ask for VCO to be turned on. If you use it all the time, you can have a profile set up with your relay provider, so when you call in, VCO is provided automatically. You tell the communication assistant, CA, the number of the person you want to call. There is no typing involved at all.

There are also two-line VCO, video relay, and enhanced VCO, which are also known as caption telephone. In addition, Krown manufactures a portable device that fits in your purse or pocket. It is called a pocket VCO, and it allows you to go to any pay phone and access the relay. Once you access relay, you strap the device on the receiver end and talk on the other end. There is another device, which you can plug into your cell phone and use for VCO.

As I mentioned earlier, the traditional VCO user would speak directly to the person that she or he wants and when the other person responds, the CA types everything. Now, in
this scenario, the CA is the intermediary facilitating that call. They type everything that is heard on the other line, including background information, like dog barking, baby crying, et cetera.

Now I want to tell you about two-line VCO. To use this, you would need two telephone lines, each telephone with its own number. One would be for your computer or your TTY, your text line, and the second one would be for your standard telephone. That second line also has to have three way calling capability. If you are using a computer, you can reach relay through the Internet, www.hiprelay.com. You are both making and receiving the relay call whereas relay service usually has a different CA at each end. Once that connection is established, you tell the CA, this is going to be a two-line VCO call, ask them if they can understand your voice. They should type back to you “Yes, I can understand you.” Then you explain to the CA: “What I'm going to do next, CA, put you on hold and call so and so and so. I want you to type their voice, not my voice. Understand?” Wait until you get a “Yes” and say, “Okay, I'm going to put on you hold.”

You really want to work with your CA. They don't receive two-line VCO calls very often. It’s a different mind set to go from having one person to having two CAs. You will want to give the CA permission to summarize. They are required by law to type verbatim. However, with this call type they are invisible and taken out of the loop. That is, they are not talking to the person you have called. There is no way that they are going to be able to keep up with someone who is speaking at normal speech rate, which is about 180 words a minute. Our typists type 65 words a minute. Or maybe slightly above, but a typist can’t keep up with 180 words a minute. And in two-line VCO, the CA won't be able to intervene. That is why they are allowed to summarize.

So, you now have called the CA and put them on hold. Then, with the switch hook, which is how you hang up the telephone and how you put them on hold, you dial the number of the person that you want to call. As soon as you have finished dialing, you press the switch hook again, and you will conference in the person that you are calling. This person does not know that the CA is involved unless you tell them. Some people like to let the person called know. That way the person called slows down a little. Some people prefer that the person called not know that it is a relay call. The CA’s job is to type as fast as possible everything that the person you phoned is saying. The CA hears both ends but only types and summarizes what the person you are calling says. They will also empower you by telling/typing to you that the person is talking too fast. If this happens it is your responsibility to say to your party, “I'm sorry, could you please slow down? I didn't quite hear that or catch that,” or maybe you want to reveal there is an operator who is typing everything that your party is saying. Whatever method you want, the CA is going to leave that decision up to you. So, that's two-line voice carry over. You have to remember to work with your CA.

Now. Let’s talk about video VCO for those who prefer to sign during their calls. To use this you use a video a monitor such as a TV and special equipment—either with a D link or a SORENSON. That equipment is free. AT&T, TSM, MCI, Sprint, Sorenson and Hamilton are all in the relay business. Right now all of these companies are giving away free videophones.
Maybe you are saying, “Well, I don't use sign language, so, how am I going to use this?” I think the technology is going to improve to the point that if you can speech read, you are going to be able to speech read on the video or use the interpreters as oral interpreters. If you sign a little bit, wonderful. At Hamilton, we use a D link, that's a videophone, which sits on top of your television set. You need high speed, either DSL or a cable modem, in order for videophone to work. Basically you tell relay service that you want to use VCO. You connect to the relay through your television, give them the number, and they connect you to who you are calling. When they respond, you do not have to say or sign GA as you are able to actually see the interpreter. With your telephone handset plugged into the back of the TV D link, you can hear and watch the interpreter sign in English or just orally interpret, which means mouthing what the person is saying so that you can lip read them. This is available now. If you have grandkids and a videophone or a Web CAM, you can talk with them and you can see each other. It's wonderful to use it for relay.

Now I will move on to CapTel. CapTel stands for captioned telephone. Basically it's the same concept as your television set when you have your closed caption turned on. It's the same thing only with the telephone. It is really a computer, Ultratec developed it using voice recognition technology. With CapTel there is no typing involved for either you or the CA. Instead the CAs are using voice recognition software which is far faster than pure text captioning and thus you can read what is being said with only a very slight lag time. CapTel phone also has an increased amplification, because unlike other VCO relay methods it allows you to listen to what the person is saying and read what you may miss. You don't have to call 711, or an 800 number. It's already built into the phone. You dial the number of the person that you want to call directly and the phone will automatically put the call through to the relay center.

The CapTel operator is not in control of this call, it is your call. You pick up the phone, you dial your number, you see what the other side is saying, and/or you hear what they are saying, but they don't know that a CA agent is there unless you tell them. As a matter of fact, many people who use CapTel forget that there is a CA involved at all. I have some information here. If you are interested in learning more about CapTel you can go to www.captionedtelephone.com to obtain information. It will also tell you at this web site if your state has CapTel capability at this time.

Now I want to tell you about the newest addition to CapTel services: two-line CapTel, which enable you to use 911. Two line CapTel allows you to call any number directly and your number will directly appear on any caller ID machine—which of course is critical if you call a 911 center. You will have the caption but they will have your real number and address instead of the relay number and their location. With one line CapTel however, which enables you to make direct calls, your call goes to the relay center and thus the call center's number and location will appear rather than yours.

There is another advantage of two-line CapTel. You can dial the number of the person you are calling directly, but when people call you, they need to call the CapTel Center with an 800 number and give the operator your number. With two-line CapTel, your
friends just dial your number and you can, by pressing a button either, add the captions in or drop them if someone else in your family does not need them. This also means that both hearing and deaf family members can participate in the same call. This is a wonderful advantage of CapTel when some members of a family are deaf and others are not.

Extensions can be used in your house, also. Not only can you pick up your CapTel phone, but also somebody can pick up the phone in another room and listen in and participate in the conversation, while you have the benefit of the captions. In addition, if you have a CapTel phone, you can have call waiting. In fact, all of the features that you, as a standard telephone user can purchase from your local telephone company, you can use with your CapTel phone.

Again, this is brand new technology. Not all 50 states have CapTel yet. Ultratec and CapTel are collecting feedback to see what works and what doesn't, in order to make this technology better. It's our goal in relay to make it as easy for you with a hearing loss as it is for me, someone with no hearing loss, to use a phone. We are getting closer and closer to that functional equivalent.

What I find is when I talk to people about how they use their telephone and how they use the relay, many times I will find out that they are not using it to capacity. Also, I want to let you know, with the relay, there are wireless devices, such as a Blackberry or a Sidekick. These are cell phones, but with the CapTel phone, a person can make a relay call through the Internet. You could also plug the phone into a TTY and use voice carry over. You can talk into the phone and then read what the person is saying on the TTY display screen.

**Audience Member:** In my house, I have two phone numbers, but there is one line. I can type on my computer, and the phone will still ring.

**Patti Liptrot:** Is one for your computer and one is for your telephone?

**Audience Member:** One is for fax and one for phone. And then I have DSL.

**Patti Liptrot:** Excellent. You can now use two-line VCO. The DSL line will help you with video VCO. That is equally as nice as CapTel. But what you have set up in your home is already everything you need to make a two-line voice carry over call. On your computer, you go to www.hiprelay.com. Dial, or just click, and make a call. You can put the telephone number of your voice line into your computer. They have to be next to each other. Again, you want to let the CA know you’re making the call to the relay and receiving it. That is a two-line call. When the CA understands, tell the CA you are going to put her on hold, that she should listen for the other voice and type everything they the other person says. And say that it’s okay to summarize. Once you do that, you put CA on hold, call the number of the person that you want to call, and hit conference. Now, the three of you are conferenced in. The person you just conferenced in does not know that the CA is involved in this phone call. You will be able to hear the person’s voice. You will not be required to use go ahead, as with traditional VCO. There are two lines
involved. The relay is sending you the text on one line and you are listening to the voice on the other line. The two lines are not in conflict, so you can have interactive conversations. You do want to tell the CA to summarize, though; otherwise the CA is going to get way behind.

**Audience Member:** I can stay on the Internet and make a phone call at the same time. Now, how would I use the CapTel with that? Would I have to get a second line for it anyway?

**Patti Liptrot:** DSL should be able to do it. I'm going to defer that to Pam who works directly with CapTel at Unite.

**Pam Holmes:** Yes. You can use DSL line with CapTel. One thing you don't want to do, if you are in your office, and your office has a digital system, you don't want to plug a CapTel phone into a digital port it has to be analog.

**Patti Liptrot:** If your computer or fax machine is plugged into the phone, you know it's analog. But you don't want to touch the digital phone system that has multiple lines. The video phones that work with your television and a DSL line you plug into your telephone with a long extension cord. On the phone you can hear whatever degree you are able to hear. However, if you are calling through an interpreter, you see the interpreter on your TV. If your friends and family have the same equipment, you can be talking to them and seeing them on your TV. Also, with video and Internet, you are not paying for a long-distance call.

**Audience Member:** I have a culturally deaf friend who loves the video relay. Will we ever get to the point where we can get rid of our telephones?

**Patti Liptrot:** I can't answer that, but I know some deaf families who cancelled their telephone once they got set up with video relay. That's not a good idea. You really need to have that telephone line if for no other reason but for 911. Telephone is the fastest way that you are going to get help. There may come a day when the technology allows us to find you without having a landline, but not yet.

**Audience Member:** I'm from England and I take a great interest in what you are doing. We have CapTel available in most parts of England. But it's a commercial operation: it costs around $1.50 per minute. Who pays for it over here?

**Patti Liptrot:** The way it works in the United States is each state is responsible to provide relay. That's why some states have Hamilton, some states have Sprint, and others MCI. These companies bid and the state chooses who their vendor will be. When CapTel came out, the states were authorized to be reimbursed. So in each state there is usually a commission called the public utilities commission, or a public service commission and within those commissions there is somebody within that organization that focuses only on relay. They work with Hamilton or Sprint, one of the relay vendors. What needs to happen is the relay administrator in a state needs to work with their relay provider if they want the state to offer CapTel. Right now, CapTel is provided in
conjunction with either Sprint or Hamilton. Probably, a state would ask for a proposal for CapTel service. The state would go through the request for proposal, RFP, process and approve a contract with the relay provider. In addition, some states have fantastic distribution program for equipment; other states don't have any. It varies from state to state.

**Audience Member:** Hamilton or Sprint pays for the actual telephone communication?

**Patti Liptrot:** Actually we send a bill to the state, on a monthly basis. In my state, Wisconsin, all of the telephone companies that do business in the state of Wisconsin pay into a fund that's call the TRS, telecommunications relay service fund. That money is only to be used for relay. Then Hamilton sends a bill to the state of Wisconsin's office in charge of telecommunications and the state pays us with that money. The telephone company has to make sure that their network is accessible under the Americans with Disabilities Act. The only way that they can be accessible to everybody is to have a 24-hour a day, 365 days a year relay service.

**Audience Member:** In my state, everyone who has a telephone line pays 10 cents a month for each line they have. And that money goes to pay for relay.

**Patti Liptrot:** Basically all of us, you and I, are paying for relay. What differs is how the telephone company does the billing. Some have a “universal service fund” on the phone bill. Sometimes it's a pay per line flat rate. That's the money that is set aside for relay.

**Audience Member:** I believe Sprint administers CapTel. If Sprint wins a bid in the state, can both CapTel and regular TTY relay service accommodate together?

**Patti Liptrot:** Sprint provides relay. Right now CapTel is offered through the CapTel center in Madison, Wisconsin, owned by Ultratec. So, a state could say, AT&T doesn't provide CapTel. Georgia has AT&T as their provider for relay. Hamilton and Sprint relay are providers of CapTel. Therefore, if Georgia wants to provide CapTel to the people of their state, they will put out an RFP. It depends on how each state wants to set the RFP up. A state can have one RFP to provide traditional relay and then a separate RFP to provide CapTel, or they can roll it all into one.

At this time, Hamilton has several call centers. Our call centers right now don't relay or facilitate CapTel calls. That happens at a completely separate center. The CapTel center is in Madison, Wisconsin. So, Hamilton provides traditional relay, and then we subcontract with CapTel to provide CapTel service in our state.

**Audience Member:** I imagine the people that have TTY still have the messages written out on the paper.

**Patti Liptrot:** I think that in any of the states, there is always going to be traditional relay. Some states will add on CapTel if there is a request for it. So, you are always going to have the traditional relay with the tape that people can get. But some states will add on CapTel, which does not provide paper printouts. Also, some people who are
speech disabled with no hearing loss at all use the relay. They use speech-to-speech, or hearing carry over, HCO, the opposite of VCO. There are many different groups that rely heavily on relay. Besides relay is mandated by law. And remember 911 has to be accessible to all and everyone uses the telephone in a different way.

Patti Liptrot is the National Account Manager for Hamilton Relay Service. She has earned a Bachelor of Science degree in Deaf Education and Interpreting and is certified by the Registry of Interpreters for the Deaf. Patti has worked in the relay industry since 1992.

This paper was originally presented at the ALDAcon held in Burlington, Vermont in September of 2004.