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ESTABLISHING AN INFRASTRUCTURE FOR A SUCCESSFUL VISUAL COMMUNICATION NETWORK
PRESENTER: DAVID COCO
TUESDAY, JUNE 24, 2008
9 A.M.

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   >> Hello, everyone. I'm Tandra Horn. I'm the president of the graduating
class of 2008. We would like to dedicate this graduation song to our
parents, family and staff and everyone who supported us through the years.
   >> I have never been the one to raise my hand
   that was not me and now that's who I am
   because of you I am standing tall
   my heart is full of endless gratitude
   you were the one, the one to guide me through
   now I can see and I believe it's only just beginning

this is what we dream about
but the only question with me now
is do I make you proud
stronger than I've ever been now
never been afraid of standing out
but do I make you proud
I guess I've learned, to question is to grow
that you still have faith, is all I need to know
I've learned to love, myself in spite of me
and I've learned to walk, the road that I believe
this is what we dream about
but the only question with me now
is do I make you proud
stronger than I've ever been now
never been afraid of standing out
but do I make you proud
everybody needs to rise up
everybody needs to be loved, to be loved
this is what we dream about
but the only question with me now
is do I make you proud?
stronger than I've ever been now
but the only question now with me now
but the only question is do I make you proud
stronger than I've ever been
never been afraid of --
this is what we dream about
now the only question with me now
oh the only question
do I make you proud
is do I make -- do I
stronger than I have ever been
do I make you proud
do I make you proud
do I
this is what we dream about
but the only question with me now
is do I make you
do I make you proud?

    >> I think we're ready to start now. My name is Laurie Ann Maco I'm just
here to pass out the evaluation forms. If you would like a paper copy I can
distribute that. Another way you can do evaluation is on line. I'm also
here to briefly introduce our two presenters. We're thrilled to have them.
This is David Coco and Mary Lyles.
    >> Thank you. Thank you. Good morning to everyone. Thank you for coming
and I just wanted to mention that the video that you've been watching just
when you came in was by a student graduated just last month from Texas school
for the death. Impressive acting but also the group, the class, actually
filmed, edited and produced all of that in a very short time period. We have
a very impressive technical department both for support and developing
production of videotapes. We'll be talking some about that today. I'm going
to give out the interpreting role to the interpreter there. We'll go a
little bit faster. Do you have any questions during the presentation, feel
free to raise your hand. I don't want to go off the point here and start
talking about things you're not familiar with. Before I start, let me ask
you a few questions, how many people are familiar with video relay? VRS?

Okay. We have some. Okay. I will try to give some of the basic details about VRS or maybe some of the international visitors but we will move through that and go on to some of the other aspects. What I'm going to be talking about today is establishing an infrastructure for successful visual communication network and what we mean by this is not just setting up a videophone in an office but talk about all of the components that go together to make the use of this videophone an integral part of an overall infrastructure for a school for the deaf for post secondary education or an agency that works with deaf students. Kind of applies to a variety of different situations. Before I start I thought I would talk just briefly about why use visual communication? Why isn't text good enough? You might realize they have used text communication, TTY, other ways, the last 40 years or so and we have got along with that. Why is visual communication that particular, VRS, an important improvement? One of the most obvious things text communication is much slower. Using visual communication systems feeds up and allows you to communicate faster. The most important one in my mind, though, the second one up there about the limited emotional content that is -- when you're using text communication through typing or paging you really limited to what is on the keyboard right there especially when you have limited language skills you're not going to be able to communicate the full emotional content of what you are trying to communicate with that. You can put smiley faces on there. You can put ha-ha, things of that sort. You're not fully transferring the full content of what you're trying to say. With visual communication you're able to use facial expressions, using sign language, able to communicate exactly what you're saying. Text communication systems require turn taking usually. You type, wait for the other person to type back and forth. With visual you're able to have true bidirectional conversation so you can both talk at the same time if you want. It's obvious that the text communication system are challenging to those with minimal language skills. But we found that the visual communication opens a wide array of opportunities for people that have minimal language skills and we find that students that were not able to communicate protect communication systems are now able to use VRS and other systems. Another one that's important with phone communication systems is the access to voice menus, again, dial for this. Dial 1 for that. With visual communication systems especially VRS you're able to do that. There are really three different options along the spectrum of visual communication systems in my mind that grow from large expensive to small and rather inexpensive. Most of the time in this talk we're going to be talking about the smaller one what I call desk top visual communication system where usually a laptop and web cam or a videophone on top of a television. But the other types that we have are classrooms, that are generally accessible for five to 30 students that each have fancy cameras and other sorts of equipment that can pan and zoom to bring in the whole class. The video quality is usually really good but it requires dedicated network lines usually or something of that sort and then you also have to have tech support using the Texas School for the Deaf you have to have a tech support person in there during the class. One example of that is ASL classes that we offer across the state where the teacher is at Texas School for the Deaf and the students are in hearing high schools all around the states. The second example is what I call office systems. Where you have a smaller screen, have -- less capability of panning the zoom. Still you're able to have five, one to six participants, video quality is good. Sometimes you need tech support for that. Sometimes you don't. You can use the public internet for that. An example of that cinder views that we have. A lot of times we have job interviews where people in other parts of the country are able to call in to have a job interview without having to travel. The third one is mainly designed for one-on-one communication so

that the video quality is fairly good compared to the other two. It's improved tremendously over the last few years. You usually require minimal tech support and you're able to do it over the public internet. There's a cost much reduced compared to the other two. One example of that is video relay or VRS. In this talk here I am mainly going to be focusing on this system, this type of system right here. The main reason for that is that's the one that has changed so rapidly over the last few years. That's where a lot of the new programs at Texas School for the Deaf are showing up at. I want to mention some of the basic details about what VRS is. The high speed internet connect deaf people who want to make phone calls. To a VRS interpreter and they are usually a hearing person at the other end. Who uses the regular phone system from the center on -- you are able to access anybody that has a phone. The VRS in the United States is free to the consumer. It is sponsored by federal funds. They provide Spanish to almost all of the companies. There are some companies that provide other languages so you can access almost any language from the hearing person side if you can get it to translate into ASL. A lot of the consumer equipment is free from some providers. The main purpose of VRS when it was set up is to provide functional equipment and access to the telephone system for deaf consumers. A lot of the other things that are built in that I will mention here are really auxiliary program that are built around VRS but it uses the same equipment, a lot of the same training. The real main focus of my talk here is to talk about the building blocks that go together to make a successful system for visual communication systems. Let me just show you how I put this up here. At the very top there are seven blocks here that I envision to make a successful system. The top two access an educational program. Are really the two reasons behind why you need the system. They are kind of the reason for all of this. At the bottom here are the physical components, the network and hardware that go together to make the actual physical system. These three in the middle, the business partner, the training and the policies, are the three components of the system that actually hold together the hardware and the network at the bottom and the reasons at the top there. I call them the glue of the system. They are able to make the system work. The point of this talk is that when you install, set up a system, a lot of times the technical people will say, you need hardware. A lot of times you talk with the teachers. They say you need an educational program. If you talk to other people, maybe the business department they will say you need business partners. You need the money. The point of this talk is you need all of these put together and the people need to understand the role of all these and how they interplay together to have a successful system. Access -- I'm going to talk a little bit about how visual communication -- access. A lot of this might be obvious to some people but when you start off from scratch, it's not always obvious what the end product, what the end result is going to be. Expanding career opportunities for deaf staff, a long time ago, it was kind of an accepted notion that if you wanted to run an office you had to have a secretary who was hearing, who could answer the phone. Kind of a common no brainer if you want to run an office where most of the people are calling in that are hearing you've got to have somebody that answers the phone. Nowadays with VRS that's no longer true. We can have deaf secretaries at different agencies and they are able to run the office just as efficiently as a hearing secretary. In fact this year as Texas School for the Deaf the summer program we have three separate offices and awful these offices are run by deaf administrators and by deaf secretaries. So that the whole program itself is run by people that use VRS or other tools to access and people outside have complete access. We have 24-hour answering machines. 24-hour video so that they are able to contact them at whatever time. Educational opportunities for students in the past, students were limited to

interaction with students inside the room. We have a class of ten students especially if the class goes on for ten years. The students you interact most with are inside the room. Now with video options you're able to access and have them meet with students, mentors, other teachers, outside of the room, outside of the city, outside of the state on a regular basis for very low cost. So kind of expands the horizon of what they are able to do and what they are able to meet. Improved access for hearing and deaf parents. That was kind of a surprising one for us. We found when we first put video relay system in the dorms, we found that we got a lot of calls from parents and they were thrilled with that. They were trying to find out why and the reason was because before the parents had very limited access to calling their children during the week at Texas School for the Deaf. Is it students stay at the school during the week. Go home on the weekends to see the parents. There's a lot of disconnect because they have to use TTY. They are calling and spending a lot more time and the relationship between the students and parents has vastly improved over the last three years since we had video relay set up. The last one is kind of a side effect, it was not intended. At Texas School for the Deaf a lot of the requests in the past for interpreters is for deaf administrators to make phone calls that has been totally reduced because deaf administrators can now make phone calls through VRS. The need for live interpreters at TSD had been reduced significantly. However you probably know all the interpreters are working for the VRS companies anyhow so it doesn't have a very large impact. I want to show a time line of VRS. VRS is a relatively new service. The last four or five years it's really been widespread. We're really proud the first trial was in Austin, Texas. The second one had some stations set up at Texas School for the Deaf. We're very proud of being part of the early start of VRS. By the year 2000 there were statewide service in Texas, Washington state, and then it started being taken on by the federal government, being reimbursed and in 2002 they started being two companies started offering nationwide services. It was really limited because of the hardware and the software that was available. Probably know in 2006 -- well in 2003 source started coming out with videophones. Became more popular and widespread than in 2006 which is used by a large number of deaf people around the country. So this kind of shows a compressed version of what happened over the last really ten years to get where we are today. The main thing I want to talk about today is the educational programs that are made possible by the visual communication system. Most of these are VRS but some are systems -- that were already set up before VRS was there. First I would like to talk about who benefits from these programs. Students, I should mention that we have 500 students at Texas School for the Deaf. Most of them residential. Some of them are day students. We serve those at the school for the deaf. In my department which is the outreach department we also serve 5,000 students around the state who were in summer programs and other things like that. We try to develop programs that benefit everybody in the state but in particular students at TSD. Staff and students will benefit from the program and then the students and parents outside of TSD, inside of Texas. To show you some of the objects in the programs. The next slide I will show you some of the programs we have. We try to have the students develop phone communication skills, interact with deaf mentors in classes from other cities. We offer drop is much, interview training and use VRS for a lot of that because it becomes very important for them to have direct interaction with the interviewer, themselves, provide options for homebound students. That's a very interesting one. We found that a lot of students were having to stay home for medical reasons and so we set up videophones in their home which was relatively inexpensive. A lot cheaper than being able to send teachers out to their house every time to run classes. We found that was a very

successful way to keep the student in contact with the class and they would set up once a day two link up for about an hour to do various tasks. The student really made an easier transition back into the class when he was connected using the videophones. I already mentioned that an improved the hearing parents and the deaf students relationships. And standard options for the parents and the staff. The students and parents outside of TSD are benefiting from the phone communication curriculum that we developed. I'll talk about in a second there. We also had a program that expands the sign language training opportunities. So let me show you a bit about that. Let me tell you the background behind this workbook that we developed and we have a stack of them over here that we -- feel free to pick up on your way out. I think I have enough for everybody in the room if you take just one. This workbook was developed about two years ago in conjunction with a company. What this workbook is a little bit different from what you see marketed out there for VRS. This focuses on developing communication skills that can be applied for any videophone or any type of visual communication. The main focus of this book is for students that read at about a first and second grade level. We found that a lot of the students at TSD were really shying away from text communication modes. We found three students and we did an experiment. I want to tell a little bit about them. It's very exciting to see how rapidly the training can improve the students' passion for using VRS. We found three students who were just going into high school. Ninth graders. And historically they had been labeled as minimal language skill students which means that they could probably communicate one-on-one through signing but when they got into a situation where they had to use text, either through TTY or writing they would usually back off and so we put them into a training class for three days and in this training class we introduced them to making phone calls using VRS. Most of these students, all three of the students had not really made any phone calls before in their life. They were ninth grade at the time where everybody was chatting on cell phones and their pierce were using TTY and text but because of the minimal language skills and lack of confidence in using the phone system they were -- they backed off on that. What we found, though, after three days of training with these students we effectively found that they -- hard to get them to hang up. They experienced great leap in confidence in finding out that they were able to use the phone system to call their friends, to call their parents and they just jumped in like jumping in cold water. They loved it. So as a result of that, we developed a curriculum and a workbook. This workbook and curriculum shows what we went through in three days. You might not realize there are a lot of components in making a phone call that have to be taught to deaf students. Hearing students just pick up by osmosis. A lot of the hearing students automatically know how to use a cell phone. How to make small talk. How to wrap up a phone call. Things of that sort but you have to teach this to deaf students especially if they have no experience using the phone system. This workbook is free, you can have a copy there. It has photo illustrations and talks about basic training for using VRS. Last year we developed a teachers guide which is a CD that also has copies over there. Basically the teachers guide is a set of activities to supplement the workbook. So this that the teachers can take scripts that are given to the students in order to make sample phone calls like for job interviews. Calling up -- and the scripts are in here. You can adjust scripts, the language in the scripts or adjust the outcome. Also an evaluation form in here so you can evaluate as you go through there. There are -- I have a number of copies over here. This is a CD that you put into the computer and you can download it. It's free. There are no restrictions. Feel free to distribute it to your colleagues. If we run out of copies there's a piece of paper here that shows how you can download it from the internet. It's on the internet, also. One of the

things that I should mention about this that we found is that there's an awful lot of marketing out there for VRS products, might run into it every time we have a conference. We think it's great. We found there was a need for more intense training that was not available so that's what this was all about. This is another example of a program where we have a class that is linking up to another class and another city using videophones. This type of thing you can do with other systems but the cost and the need for technical support are very minimal when you use videophones. This is another program that we developed called family signs. This is a free program for anybody in the state of Texas. You can order for families to learn sign language through video phones and what we do is we pair up the families, they are usually isolated in rural areas that don't have access to traditional sign language classes with interpreters. We put them, link them up together and then we go forward and have weekly classes and they are back and forth. Use a curriculum we provide and they teach the families sign language so that they are able to communicate better with their children. The main focus of this is families that are in rural areas in Texas. We use volunteer instructors, but these instructors are usually interpreters that have a lot of experience with sign language itself. Some have experience teaching, also. We have English and Spanish classes because a lot of the interpreters in Texas have some experience with Spanish. It's very popular. One of the -- we're not able to serve all the people that have signed up for this. Co-sponsored by -- you have a question? Why not deaf? We thought about that. The main reason -- the main reason behind that is because we set this up as a program with -- the reason was that we wanted to use the interpreters who already had access to videophones but we are considering incorporating deaf people. It's very difficult to recruit them, that's one thing. Also difficult to make sure that they have a standard level of expertise to teach sign language. It's an idea that's been brought up. I'm going to show just a few of the educational programs that we have at TSD. Some of these I already mentioned. Broken into the three types of systems. This one is a larger classroom. We have an interpreter mentoring. We have interpreters that are around the state that need more intensive training. We have a lot of interpreters at Texas School for the Deaf who have higher training skills. They link up using polycom. We ASL story time where deaf teachers teach an hour a week to different classes around the week. We also have ASL classes where we teach hearing high school ASL classes. In office systems we offer student teaching observation for university students that want to view our classes. We set it up and they are able to watch the class for an hour and have feedback. As I mentioned homebound students, family signs, the successful communication with VRS is the curriculum we use inside TSD started out with three students but over the last two years we probably reached a hundred students that have been trained inside of TSD. Then we have given out probably over 500 of these books outside of TSD, to a lot of number of people. No reason you can't use it outside of Texas. It was developed for the Texas students but it's open for other people. Okay. I'm going to go through the last few real quick so we have time for questions. One of the important parts of the program is to have a business partner and you might look back VRS's companies are the biggest part of the programs. We set up guiding principles for setting up the business partner agreements. The most important one is to remember the primary mission at the school for the deaf is education not marketing. Which is kind of a hard thing to remember because marketing from the VRS company can become very strong. We also enforce that callers have a right to use any VRS providers. A lot of our supporters like to focus just on using their service but we set it up so that any of the students and staff have the capability of using any VRS provider. Our business partners are expected to support the infrastructure and training

opportunities. You might realize it but VRS is a big business. Over the next year it's projected to -- VRS will be paid $657 million a year so it's becoming very big business and it's growing. That's a 30% increase over the last year. A picture. Okay. We already talked a bit about training but in addition to training the students themselves we have training programs for staff and also for parents. We also offer deaf and hearing consumers that come to Texas School for the Deaf for a variety of workshops our summer programs and opportunity to learn how to use VRS. We have special programs for students minimal language skills, basically, go through this workbook and the teacher's guide and develop different activities and transitional students who are getting ready for the real world have a special class that they take where they have to do job interviews and information gathering using VRS. When we first set up video phones at Texas School for the Deaf it was a lot of confusion about what sort of policy should be applied. Is this a telephone? Is this a computer? Is this a toy? What is this thing? What sort of policies apply to it? Over the last three years where we develop a consensus agreement that the VRS, the videophones, are essentially telephones for deaf people. All of the policies that are applied through telephones can be applied through videophones themselves. In fact in our policy guide there is really no mention of videophone. Only mention of telephones. Any time you look at a telephone policy we apply that to videophones. We really haven't had to change anything. There has to be a mindset, people have to become familiar with the technology and understand how it works. There are a variety of network issues that have to be considered, bandwidth is important. Firewalls is also important at school for the deaf because you want to maintain the security as a system. We like to have a set up for a variety of different videophones. And we also like to have a backup network. We realize that when we have the deaf people using these as the primary communication system then we have to make sure that they have access at all times if the network goes down, which it does rarely, when it goes down we want to have another backup system. We use cable modem for that so they are able to access it at any time. I talked pretty much about this before. Let's move on to the next one. Kind of a wrap-up of this. And I -- just mainly emphasizes that if you want to build a system got to consider all of these building blocks, not just one of them. On the next slide I want to show just some of the resources that we have at Texas School for the Deaf. We have four permanent distant learning classrooms that have dedicated T-1 lines. They have excellent video quality. We have Green screens that you're able to mix the speaker with the computer background. We have a mobile cart for video conferencing. For desk top video conferencing we have 120 videophones all around the campus. You can see the new phone outside in the lobby there. 80 web cams that are built in owe adjacent to the Max that we have. Some of the future plans for videophones and others is our goal is really to have a videophone for every staff member both deaf and hearing. Just important for the hearing to have a videophone so they are able to communicate with deaf people offsite directly. Don't have to go through VRS. With other deaf people on campus. So that's been a challenge because you might realize most of the VRS companies are willing to give out free videophones to deaf people but not to hearing people who want to call deaf people. So it's been a challenge to be able to get all of that. Having to call deaf people with incoming calls is still a challenge you might realize. We're trying to work on developing a phone directory and a central videophone we can call for information. One new project that I wanted to mention, we have set up a program that will be started next fall where we're going to have a team of students who will be responsible for videophone maintenance after hours and this will allow the students to take more of an ownership of their videophone. We found that a lot of times the videophones fall in

disrepair because the students only feel that it belongs to the school. We started doing that to have the students be trained and be able to access the videophones and do minor repairs so they can access them themselves. And then I want to mention some of the future challenges. You might not realize but there are 14 different VRS providers out there and if you wanted to call me on my videophone you would have to have the IP number for me and if you wanted to call directly you would have to have 14 different 800 or other phone numbers in order to connect with me. That's a ridiculous situation but it's going to be remedied in the next six months or so. Supposed to be set up by December of 2008 so there will be a one ten-digit number that will be assigned to each videophone so access for incoming calls will be much easier. That will require a lot of changes at the school and really in the nation for how people handle that. Mobile and wireless phones, that's going to represent a challenge. Right now all the videophones for students are in public area. If the students are able to take the videophones in their rooms, outside under a tree, that's going to raise a lot of technology and policy issues that are going to have to be addressed. Some of the older buildings at TSD are not wired and other types of video equipment that is not accessible yet so we have to make changes to that. I think I have gone over time here. I think we have time for questions. Anybody else that didn't get what I was talking about on different slides I would be glass to go back and if you have questions about other things. Sure. Go to the mic. Okay.

   >> In Texas you have a very large state and our state is large, too. We have a lot of people, rural people, who don't have high-speed broadband internet access. And we face that problem, too. How do you handle that?

   >> David Coco: That's very good question. Right now we don't have a program to provide high-speed internet services to the low income families. But we're working with the time Warner which is the provider for the cable company there to set up a program where they provide free high-speed internet service for six months for select families. It's not implemented yet but we started discussions with them. But there's also been some discussion of providing the high-speed internet cost through the universal services fund. The only note is a free TTY program but that really hasn't gone anywhere yet. It's a widespread program. One of the other things we have done which kind of indirectly addresses the problem we have encouraged libraries and schools to set it up, videophones, a lot of the parents that are in our family program instead of using the videophone from home they will go to a library or to a school to communicate with the interpreter for the family program. We're trying to get around that problem but I feel that there's a need for a dedicated fund to bring these families up to the same level playing field as the other families.

   >> You mention that you had business partners, partners being plural. Sorenson are other ones. Are there other VRS vendors with whom you work?

   >> David Coco: It changes every year. We work with sprint, snap VRS, some of the other companies, we work with are MCI so most of the five major ones we work with before. Some of the other ones have smaller projects but we work with all five of them. Sure. Sure.

   >> I'm just the time cop. I don't have a question. Got about five minutes.

   >> Hello. I was interested in the idea about students who are training to be teachers observing classes. Do you have any issue there is about permissions from parents? Is it quite straight forward to get agreement from all the parents?

   >> David Coco: It's a challenge. We have to get permission from the parents in order to videophone, to video the students when we do that. One time there was one student who did not want to be -- the parent did not want the student to be videoed so we had to set up a very framed way so the camera

would only pan and wouldn't pan that side of the room. Most of the time
we're able to get releases from all of the parents so that we are able to
include them.
    >> I'm curious about whether or not any of the systems can talk with one
another? Can Sorenson talk with Polycom? Is there some kind of standard
interoperability.
    >> David Coco: That would take a long time to explain. The systems,
sprint actually uses a system that was developed by Sorenson. They use a
variety of other system s.
    The simple answer is sometimes yes and sometimes no. The Polycom can
communicate with the other ones. It's usually not cost effective to do that.
The videophones are able to communicate with each other. The web cams are
able to communicate with each others. Usually the answer is yes but it's not
always simple. A lot of times you have to have more technical knowledge.
The easiest way is for a videophone to talk to another videophone and most
all the videophones out there are Sorenson right now so it becomes very easy.
There are a lot of challenges with that. A lot of the challenges come with
people's unfamiliarity with the technology. Does that help? Does the man
have a question? No question. Okay. Any other questions or comments or
other things about what you're doing at your school? Thank you. Thank you
for coming. And I hope everybody got a copy. Looks like we ran out of those
there.
    >> We ran out of books.
    >> David Coco: If you're interested in getting a book you can contact me
through the website that is written on there. I will be glad to provide you
one. I'll mail it to you. Thank you.
    [APPLAUSE]