



# WORLD

Technology News and Commentary for the Deaf and Hard of Hearing



## TDI Trains Leaders to Change the World

**Pilot Advocacy Training Program Takes Flight - See Page 10**

### ALSO INSIDE:

**Are You Ready for DTV?**

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**COAT Testimony on Capitol Hill**

*See page 26*

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
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**"TDI provides leadership in achieving equal access to telecommunications, media, and information technologies for deaf and hard of hearing people."**

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# WORLD

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## Board Views



BY DR. ROY MILLER  
*TDI President*

## Our “Top Ten” Access Problems

**T**DI is always interested in getting feedback from deaf and hard of hearing people regarding access problems that they might be having with telecommunications and media technology. It's only by checking the “pulse of the people” once in awhile that TDI has a reasonable picture of which access problems are being experienced by the most people. With that in mind, TDI surveyed consumers at the 2006 conferences of three national organizations representing people with hearing loss, namely, the National Association of the Deaf (NAD), Hearing Loss Association of America (HLAA) and the Association of Late-Deafened Adults (ALDA), regarding the telecommunication and media access problems that they were encountering.

Respondents were presented with forty-two (42) different telecommunications and media access problems, including problems with the telephone, television, travel, theaters, pagers and the Internet. And they

were asked to check all of the access problems that they personally had encountered recently. In addition, they were given the opportunity to tell us about any other access problems that they had encountered. When the data was analyzed, the major finding was glaring. Almost all of the access problems encountered by the greatest number of our respondents in one way or another concerned **CAPTIONS**.

The data indicate that five of our “Top Ten” access problems concerned captioning on television. This suggests several things. First, the current rules of the Federal Communication Commission (FCC) are not satisfying the program viewing needs of deaf and hard of hearing consumers (otherwise there would be no programs without captions that they wanted to watch). Second, the current FCC rules are not being fully complied with (otherwise we would have no emergency warning crawls covering captions). Third, the current rules of the FCC are not adequate to ensure

*Continued on page 3*

### Here is a list of access problems reported by respondents to a 2006 TDI consumer survey:

The number in parentheses in front of each item represents the percentage of our respondents who indicated they had recently encountered that problem.

- (73%) No captions were available for a TV program that you wanted to watch.
- (64%) While watching the local news, the captions always disappear during the weather, sports, remote news stories and live in-studio interviews.
- (62%) Captions suddenly disappeared from a TV program that you were watching.
- (58%) Captions for a TV program that you were watching were suddenly covered by an emergency warning crawl, weather alert, or notice of school closings.
- (56%) Captions on a TV program that you were watching were often garbled and had many spelling errors.

Continued from page 2

captioning of the highest quality (otherwise we would not often have garbled captions and spelling errors). TDI has addressed these concerns in several ways. We have advocated for captioning of every program on television with no exceptions, not just all “new programming” and elimination of the current exemption for programs offered between 2:00 AM and 6:00 AM. TDI has petitioned the FCC asking for stricter reporting requirements to be added to their captioning rules, and compliance monitoring of those rules. And TDI has requested that the FCC add minimum quality standards to their captioning rules. Furthermore, we have requested a change in the FCC rules that would require real-time captioning of all local news broadcasts and not allow use of the electronic newsroom (ENR) technology, which is permitted today.

### Three of our “Top Ten” problems concerned captioning while traveling:

- (70%) There were no captions for a movie that you wanted to watch while flying on an airplane.
- (60%) No visual announcements of a gate change were shown in an airport while you were waiting for your next flight.
- (55%) The safety video on an airline flight that you took was not captioned.

This data indicates that deaf and hard of hearing travelers still face many obstacles while traveling, and that airports are still not in full compliance with the spirit of the Americans with Disabilities Act (ADA) nearly twenty years after its passage. It also suggests

that the rules implementing the Air Carriers Access Act, which governs in-flight logistics, need to be updated to ensure safe and enjoyable flights by people with hearing loss. Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN), of which TDI is an active member, filed comments with the U.S. Department of Transportation in 2006 advocating for these improvements.



### Last, two of our “Top Ten” access problems involved captioning of movies, and they were:

- (60%) The movie or theatrical performance that you wanted to see was not captioned.
- (55%) An open-captioned movie that you wanted to see was only shown either at a time or on a day of the week that you could not attend.

This data indicates that although movie theaters are public accommodations (places of entertainment) and come under Title III of the ADA it is obvious that movie theaters have a long ways to go before satisfying the spirit of the ADA for people with hearing loss. **TDI is fully committed to work with other national consumer groups** to get all movies captioned, and plans to do more to mitigate this access problem in the future.

**Almost all of the access problems encountered by the greatest number of our respondents in one way or another concerned captions.**

The sad fact is that this data indicates that over 50% of our respondents have experienced all of these problems recently, regardless of the mandates of the ADA and efforts by the FCC to ensure equal access to telecommunications technology. The bottom line is that “It’s all about captioning” in one form or another, in one situation or another. And until our society automatically incorporates captioning capabilities into every new telecommunications and media technology, many deaf and hard of hearing people will continue to be second class citizens – struggling to obtain audible information that the rest of society receives effortlessly. So please join TDI in its ongoing efforts at “shaping an accessible world,” and help us advocate for solutions that would eliminate all of the entries from our “Top Ten” list of access problems.

## Capitol Commentary



BY CLAUDE STOUT  
*TDI Executive Director*

Once you have the facts you need you will find yourself making the right decision.

## A Special Brief on DTV Transition for TDI Members

**S**ome of you may have been reading or hearing about the approaching transition from analog to digital television and the deadline is coming soon - on February 17, 2009. While some information is clear on this subject, other details aren't. TDI encourages you to become familiar with this subject. There are some good websites that can help you understand more about this change and its impact, and then enable you to make informed decisions for yourself and your households. Your local stations and industry trade associations, such as National Association of Broadcasters, National Cable and Telecommunications Association and others are airing public service announcements on this subject. Some of them are captioned and described.

TDI has previously published some information on the digital television (DTV) transition. We devoted a GA-SK issue to this subject two years ago, and soon you will get some additional material about this in the 2008 Blue Book, as well as this *TDI World* issue. Still, some of you may need a brief introduction or refresher on DTV. And I'll try to give you a smooth entry into this complex, uncertain future by answering some key questions:

### Why has America decided to move on to digital television?

The FCC decided that we need to make more efficient use of the airwaves, and to free up some spectrum (space). Digital TV (DTV) uses less of the airwaves than analog

TV, so some broadcasters will be able to offer you a high quality channel showing programs such as movies and sports. Other TV stations may offer several sub-channels under one main channel such as a local station also carrying a 24 hour news channel plus a weather/traffic channel and maybe a community events channel. By saving some additional spectrum, wireless carriers and public safety officials will be able to increase their coverage and first responders will be in a better position to address our emergency needs.

### What is so great about digital television that we haven't experienced with analog television?

You wouldn't believe the superb quality and high resolution of the picture on the screen. The colors on the screen are sharp and distinctive. According to some who can hear, we understand that the sound output is real nice and clear.

### Will this mean we have to throw away the analog TVs we have at home?

No, you don't have to throw them away. There are two ways you can watch digital television on these old analog TV sets.

1. You would need to subscribe to either a cable service (e.g., Comcast or Cox) or a satellite service (e.g., DirectTV or Dish Network), and either one will provide you digital television programs. Just check and make sure about whether to change set top boxes with your provider.
2. You would need to buy a digital-to-



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analog converter box from WalMart, Circuit City, or other consumer electronics retailer. It usually costs \$60 to \$100. However, the National Telecommunications and Information Administration, an office within the US Department of Commerce has a coupon program. You will need to apply for one or two \$40 "gift card" coupons to buy certain converter boxes. With the coupon, a \$60 converter box will only cost you \$20. You will need to purchase them within 90 days from the day the coupons were sent. Go to [www.ntia.doc.gov](http://www.ntia.doc.gov) for more information.

### How do I go about finding out which make/models of the converter boxes are best for the analog TVs?

When you are ready to buy a converter box, please shop around at a few TV retailers. Ask the salesperson to show you the various models of converter boxes. Those that are eligible for the coupon (CECB) are pretty basic and do not provide many features. Others are more advanced with features such as a DVD player, but you may have to pay full price. Most importantly, be sure to ask for a model that has a "CC" button on the remote control. Ask to test the converter box on an analog TV at the store, before you buy it and take it home. If you are not able to test it at the store for some reason, ask for a written statement from the retailer so that you wouldn't be charged any penalty if you decide to return the converter box for some reason.

### Will there be captions on digital television?

Yes and no. Some digital programs come with captions. If you see some other digital TV programs that are not captioned, do let your local TV stations and FCC know. Programs that were shown on analog TVs are supposed to display captions on digital TVs. If you find some old programs

### Websites we recommend you check for more information:

- [www.fcc.gov/cgb/dro/caption.html](http://www.fcc.gov/cgb/dro/caption.html) (regulations on DTV transition and TV captioning)
- [www.ntia.doc.gov](http://www.ntia.doc.gov) (checklist on buying coupons for converter boxes)
- [www.dtv2009.gov](http://www.dtv2009.gov) (learn and understand about participating in the DTV transition)
- [www.nab.org](http://www.nab.org) (TV broadcasters' information for consumers on DTV transition)
- [www.nctia.org](http://www.nctia.org) (Cable trade group's information for consumers on DTV transition)

that you know had come with captions before, but were not shown on digital TV, let the FCC know by filing a complaint.

### Will this change the arrangements we currently have with cable or satellite service providers?

Yes and no. You can keep your existing service from your provider. However, do check with them on whether you need to upgrade the set top box you received from them. Your monthly service fees may go up a little bit. When your provider sends a technician to your house, ask the technician to show you how the captions work on your TV set with both the digital and analog TV programs. Let your provider know your access to information must be fully satisfactory before the technician can leave your house. After all, you pay the same monthly rates for the service as others in your neighborhood.

### If I decide to buy a new digital television, what are some shopping tips for me?

When you are ready to buy a new digital TV, shop around in several stores. If possible, go in middle of the week when the stores are not so busy. Check with Best Buy, Circuit City, WalMart, Sears, and other TV retailers. When you meet with a salesperson, ask him or her to show you how the captions work on the TV you are considering. If the salesperson

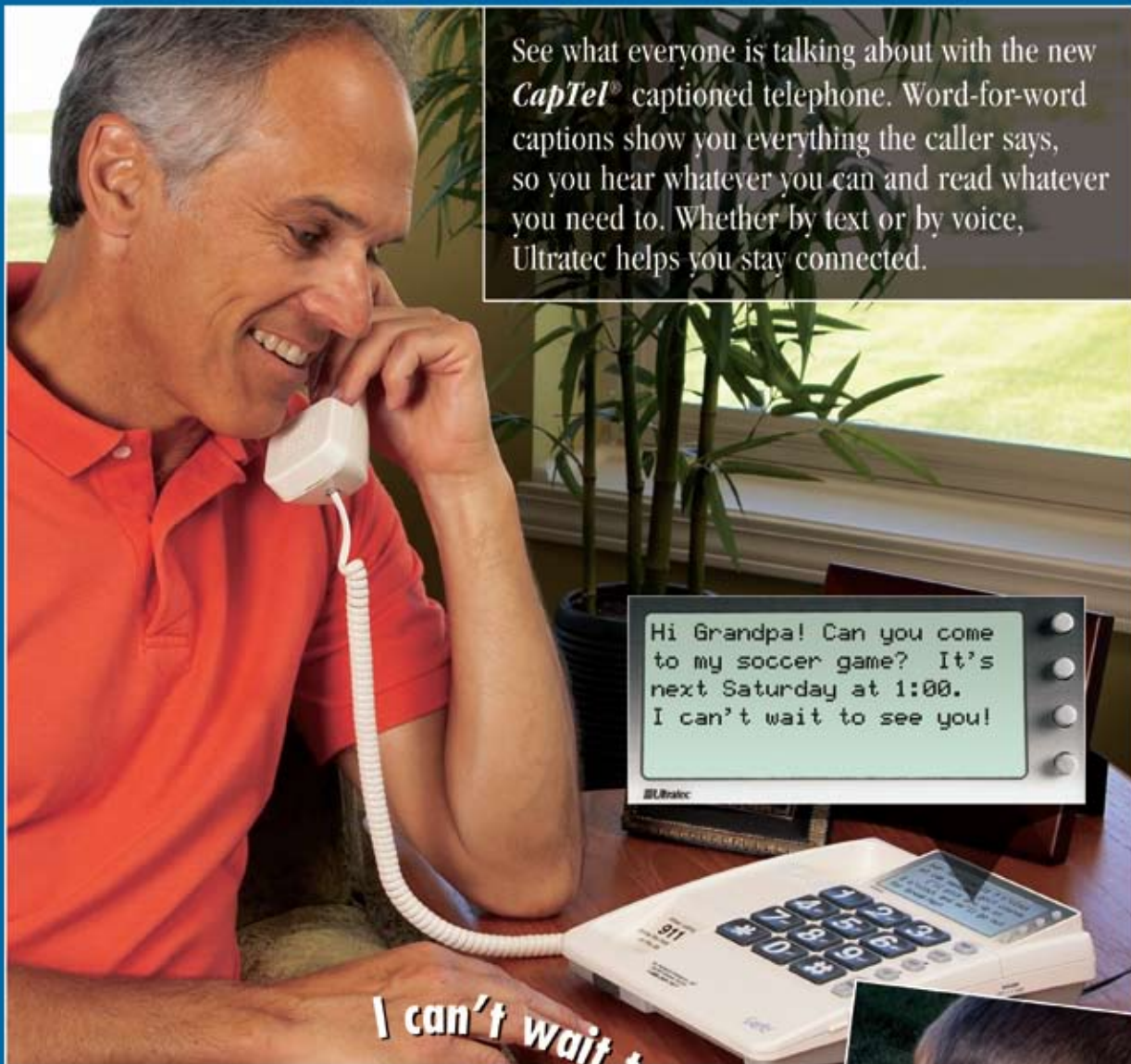
doesn't know much about the subject, ask to work with another sales person manager. Very often, showroom TVs display in-store promotions instead of regular TV programs. Ask them to switch to regular TV programming, and see how the captions are turned on. Check the caption fonts and the background. Experiment with different colors and styles. Ask all the questions you can about a HDTV, or a plasma TV. Each has pros and cons that you must consider and your specific needs before buying your newest digital television set and be the envy of your friends.

All of us at TDI are excited and anxious about this DTV transition. We are excited because the pictures will improve a hundred times and we will feel part of the action. When digital captions are on, you have many more options. We are anxious because we know from others that with new technology, there may be bumps but have no idea how severe the problems will be or if it will only be minor. Some people have said that it feels like Y2K all over again, but with digital TV, and things will happen.

Do contact us at TDI anytime if you need more information, or want to ask us questions. But once you have all the facts you need, you will find yourself making the right decisions. May you have a wonderful TV viewing experience and do share it with your family and friends!



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## Accessible Tech



BY JAMES HOUSE  
*TDI World Editor*

# What Happens in Viva Las Vegas: Broadcast it to the World!

**W**ith apologies to a popular tourism advertising slogan written for the Las Vegas Convention and Visitors Authority in 2002, I admit certain things we see or do in Vegas are not meant to be shared with everyone else. I know not everyone would be interested in my vacation movies. However, I think we can agree that a lot of Vegas happenings do need to be shared. I do know that many *TDI World* readers are definitely interested in captions on everything including DVDs and the Web and even iPhones!

In April, the National Association of Broadcasters (NAB) had their annual convention at the Las Vegas Convention Center, one of the premiere events in the television industry. There is so much to see and do and the annual shindig runs for an entire week. The exhibits themselves run for half a week, and there were at least 2,000 exhibitors occupying the three major halls throughout the entire Convention Center. Many booths covered the full range of products and services, from broadcast preproduction to post production and distribution. There was also an outdoor area for remote newsgathering trucks and other outdoor products. On display was one customized Humvee that was built for reporters to cover the Iraq war in the hostile desert environment. Another interesting vehicle there was a bus that would go in disaster zones to help supplement communication needs and document emergency response activities.

This year (2008) was more exciting because of the upcoming transition

to digital television that is due to be completed on February 17, 2009 – less than a year from now. The industry has also been expanding into digital advertising, you see those ads everywhere, especially in shopping malls, and even on some billboards. There's a lot of potential in digital technology for the players in the industry to expand their offerings. For each analog channel we have today, the broadcaster has the option to upgrade and stay with that one channel and show high definition movies – or the same broadcaster can schedule four programs to run simultaneously. For example, a local station can run programming on its main channel as usual, but also add a 24-hour local news channel similar to CNN as a sub channel, and do weather reports on yet another sub channel.

Now, think of the increased demand for captioning that will quadruple within the next few years. According to the exhibit packet, there were approximately 15 vendors that provide some captioning related services exhibiting at the NAB Convention and I visited practically every one. Some old-timers told me it would take a full three days to view all the exhibits. However, if you plan well, you can maximize your contacts in a much shorter period of time. The NAB website was excellent in helping me plan my visit and make the most efficient use of my time.

I visited about fourteen captioning providers. There were many other companies listed in the NAB Exhibit search engine results because they offer to do captioning but I knew it wasn't the primary focus of their

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Over 111,000 attendees showed up to visit the 1,600 exhibits during the 2008 National Association of Broadcasters' convention in Las Vegas held in April.

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business. With two interpreters in tow, I was able to visit companies such as Automatic Sync, EEG, PeopleSupport, SofTel USA, Talking Type Captions, Video Caption Corporation, X-Orbit, and many others who I felt put a substantial emphasis in their business on captioning. My basic message to these companies was to stay in touch with the end users - the viewers because once you are in tune with us, it will help you do your job much better. I also talked with them about the upcoming digital TV transition and passed out a previous GA-SK issue on HDTV captioning.

One interesting booth that I visited was Computer Prompting and Captioning (CPC). Sid Hoffman recognized me from my old days in the captioning business and he excitedly showed me his latest captioning services and software products. The multi-platform CPC software now allows for offline captioning translated in Asian languages such as Chinese, Japanese, Korean, and others. However, one other feature probably would generate a lot more buzz, especially for those who download captioned movies from Apple onto their iPod or their iPhone as those devices now are capable of showing captions. If your eyesight is good, those captions are readable without a microscope!

Last, but not least, I would like to thank the following captioning vendors for their support and sponsoring my trip to the 2008 NAB Conference: CaptionMax, Closed Captioning Services, Davideo Productions and VITAC.





Cheryl Heppner, co-instructor gives a few pointers about interacting with the community.

## TDI's Pilot Consumer Advocacy Training Seminar

### *Class of 22 Goes Out to Change the World*

**T**wenty-two participants successfully completed the pilot Consumer Advocacy Training last November.

They went back home with tools and resources to be effective advocates toward achieving equal access to telecommunications, media and information technology. The activity-filled two-day workshop was held at the Northern Virginia Resource Center for Deaf and Hard of Hearing Persons (NVRC) in Fairfax, Virginia. NVRC's executive director, Cheryl Heppner was co-instructor with Claude Stout, executive director of TDI.

On the left are some of the actual comments from the participants in the pilot Consumer Advocacy Training Seminar who came from six states and the District of Columbia. Some of the participants were grassroots advocates and others worked in jobs that entailed some advocacy in deaf and hard of hearing community service agencies or cross-disability centers for independent living.

Saturday began bright and early with a continental breakfast at NVRC. There, the participants reunited with old friends and introduced themselves to new people. After the housekeeping items were tended to, the real training began.

On each desk, the participants found a note book with the power points and several supplemental articles and resources that they can use when they go back home after the training

seminar. The two co-instructors opened the training by going into why advocacy is important and the different ways that people can make a difference. Interspersed throughout the power point were profiles of advocates and inspirational quotes from John F. Kennedy, Jean Piaget and other famous people in history.

The first consideration in advocacy is to understand who the stakeholders are. When it comes to ensuring access to telecommunications, media and information technology, consumers who use products and services find that there are three other major groups involved. Industry who create and develop products and services, which may or may not be usable by us. We can find allies among the major players in industry. Because products and services are not always accessible and the businesses sometime wrongly determine that the costs outweigh the benefits that go to a few people, consumers often turn to government agencies for relief through laws and regulations that mandate improvements in products or services for people with disabilities. Over the years, consumers have learned that one party is not always better – find out what the politician's agenda is and learn his or her priorities. That way, when you come up with a proposal, when you know what benefits he or she is looking for, chances are greater for funding.

**“Thank you for everything! I have benefited so much from this experience. Keep this going!”**

**“This is a good model to begin a nationwide advocacy training program.”**

**“Very well done!”**

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After a short break, the participants returned and they all started discussing the major disability access legislations and regulations. Not only did they get acquainted with the Americans with Disabilities Act, they also learned about the Television Decoder Circuitry Act, Sections 255 and 713 of the Telecommunications Act of 1996 and also Section 508 of the Rehab Act of 1973 as amended in 1998.

After lunch the participants learned about the various nationwide consumer organizations that TDI has worked with. Each organization has their own special niche or focus area that addresses a special need or population group. Many of these organization also have state or local chapters and there are many additional local grassroots organizations. There are also several community resources and state offices that can provide invaluable aid with information and logistical guidance for advocacy efforts.

Identifying advocacy issues came next. The participants easily identified the different types of relay services and understood the profound impact that the Internet has made upon the provision of relay services. Wireless telecommunications is only one part of the technological revolution we are seeing now. The ubiquitous availability of the Internet has now driven unprecedented demand for relay services anytime and anywhere.

Telecommunications access takes on critical importance when it comes to emergencies. Everyone needs to be able to receive information and to send information. The growing obsolescence of TTYs in the homes and in dispatch centers everywhere



In a team-building activity, the participants form teams to build a container out of straw that will prevent a raw egg from breaking when dropped.

has made access to 9-1-1 an issue of nationwide importance for many deaf advocates.

As far as media access issues goes, only one word dominated this discussion – CAPTIONING. When it seems we have almost conquered 24/7 access to all television programming, the reality remains that programs are still inaccessible to viewers who depend on captioning. And new frontiers have come up that did not exist when the original laws were written. Not only are we dealing with the transition to High Definition television programming, we are also fuming at shows rebroadcast on the Internet minus the captions that were on the television shows in the first place. Again, the Internet has made a profound impact on captioning as well.

Another broad but important area of advocacy is emerging in information technology. Hospitals of all places are the most accessible to people who are

blind or are in wheelchairs, yet they seek to minimize the cost of their obligation to provide access services. Rather they want to overly rely on what appears to be a good money-saving technology of remote sign language interpreters. We understand there are certain advantages but we also know that one solution may not be the best for everyone. Some day more efforts will be made to improve access to electronic games, talking appliances and certain interactive features such as OnStar in vehicles and some computer diagnostic systems used by doctors and auto mechanics.

To become an effective advocate, we must go out and meet people. When you meet them, try to find out what they do. Most likely, these people will have their own networks. As long as you share what you are doing, people out there will take an interest in your cause. Make an extra effort to meet

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THE INAUGURAL CLASS OF 2008:

Front (L-R): Cheryl Heppner, Co-Instructor; Alfredia Harris, NC; Betsy Wohl, DC; Roy Kulick, M.D., OH; Nancy Kingsley, PA; Linda Webb, MD; Pauline Spanbauer, MD; Doreen Solar, VA; Brenda Kelly-Frey, MD; Joyce Lehrer, MD and Fred Hartman, MD. Rear (L-R): Blaise Delahoussaye, MD; Bonnie O'Leary, VA; Joe Duarte, VA; Jaclyn Vincent, MD; Hope Turpin Everson, NC; Terri Vincent, DC; Ken Puckett, PA; Richard Cohen, MD; Nancy Billingslea, MD; Kathleen Niemeyer, PA; Wayne Roorda, NJ; Claude Stout, Co-Instructor and Karen Sheffer-Tucker, MD

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elected officers or those running for office. Talk to them about your ideas for making a change. Whether they are in office or running for office, they can count on you as a resource for certain information that can affect many people like you. Invite them to your group meetings so they can see how their decisions in office can affect more than just a few potential voters. Offer to help work on their campaign committee or serve on various local working groups such as for disabilities or for emergency preparedness.

The participants also learned how to harness the power of the media. Learn to work with the neighborhood and city newspapers, work with reporters on your local and nationwide media outlets. The Internet has fostered many "do-it-yourself" capabilities. Now it is possible and affordable to create your own website, listserv and blogs or vlogs. This makes it easy to invite people, not only in your



Brenda Kelly-Frey (MD) compares teamwork in advocacy with the collaboration of geese in mid flight where all the birds take turns leading the V-shaped formation.

neighborhood, but also around the world to express their opinions.

The final highlight of the first day was the team-building group activities; particularly the "Great Egg Drop" challenge where participants split up

into three teams. Each team had to wrap a raw egg in drinking straws in a way that it would not break when dropped. Two teams managed to drop their egg intact without breaking it.

Continued on page 14



# Microsoft® **Accessibility** Technology for Everyone

[www.microsoft.com/enable/](http://www.microsoft.com/enable/)

**Microsoft®**

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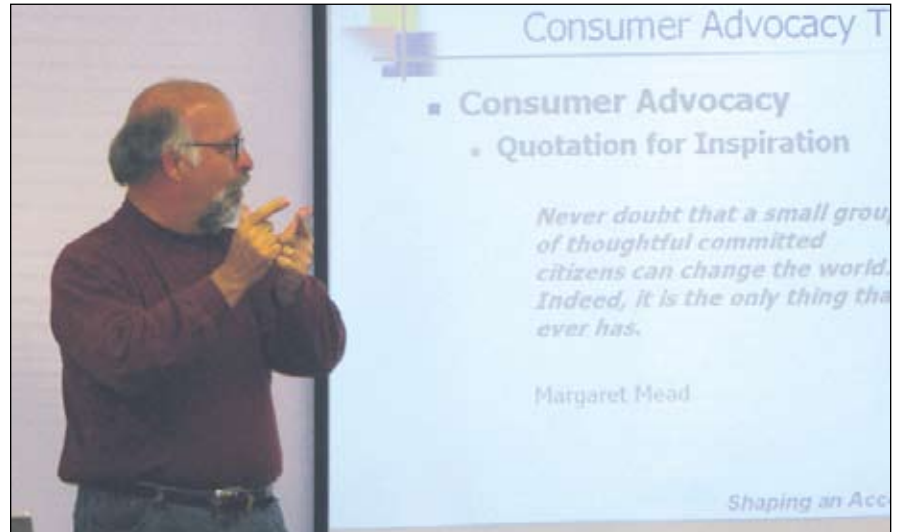
After this activity, the participants posed for a group photo and most of them went out to a dinner.

On Sunday, the participants had more in-depth discussions on advocacy. They learned the importance of documenting their efforts so that future advocates can learn what works well and what doesn't work at all. The power of the written word can endure for many years. One way to document efforts is to write letters. The power point showed samples of how to write effective letters such as recommending a certain practice like captioning the televised council meetings, complain about bad captioning or thanking the city for installing CapTel telephones in public buildings.

After the participants reviewed the individual projects they intend to pursue after the seminar, they were asked to decide on a group advocacy project. They all agreed to continue their collaboration as an on-line chat group "Access Unlimited – Breaking the Sound Barrier" dedicated to eliminating barriers and improving access to air travel. Since the training, they have met regularly on-line in a Yahoo chat room with support from TDI staff and board members.

Near the end of the day, the instructors and the participants all shared tips for successful advocacy. Everyone reminded each other that this kind of work is a constant effort, not a one-time thing. But you don't need to do it alone. The more people that are involved, the better and the numbers do add up. When you speak together as a group, share the credit and take turns being a leader.

Anne Girard, Director of Marketing, Hamilton Relay remarked, "I visited



Claude Stout, co-instructor share an inspirational quote from Margaret Mead.

the training for a few hours, and I went away HIGHLY IMPRESSED! The trainees were constantly captivated by the information that they were learning, and it was wonderful to see positive, meaningful interaction between deaf, hard of hearing, late-deafened, and deaf-blind participants. They were respectful toward what others had to say in discussion, and kept an open mind to new ideas and approaches for consumer advocacy. Everyone was clearly empowered to do more for themselves and the community."

"The success of this inaugural Consumer Advocacy Training Seminar clearly demonstrates a need that has been unmet for many years," says Mr. Stout. Stout added, "While some people embrace new technologies as they come out, we often find ourselves lagging when it comes to accessibility and universal design issues. The trainees all agreed that consumer advocacy, at first glance, might seem to be an insurmountable task. However, once we understood the various avenues of achieving access at the state and local level, it is much easier for individuals and groups to map out a

workable advocacy strategy to reach our common goals."

"Through the power of numbers and the magic of collaboration, people can indeed change the world!" says Ms. Heppner. "I urge businesses and government to actively seek input from consumers and use it to implement changes in design and policy so that no one is left behind."

TDI and the trainees once again express their deepest gratitude to Hamilton Relay for financial support and community commitment for this project. On one evaluation form, a participant said, "Include Hamilton Relay's contact information so we can all directly thank them!" Based on the success of this inaugural Consumer Advocacy Training Seminar, TDI is offering three more workshops in 2008. Locations and dates will be announced.

***With sincere gratitude to: Hamilton Relay—Corporate Sponsorship and Northern Virginia Resource Center for Deaf and Hard of Hearing Persons—Facilities & Logistical Support***

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## Good Consumer Advocates • Great Accomplishments

# TDI's Consumer Advocacy Training Workshops Shine a Spotlight on Great Achievers in History



**Robert Weitbrecht (deceased), James C. Marsters (CA), Andrew Saks (deceased)**

Weitbrecht, Marsters and Saks asked AT&T to allow the deaf community to participate on the telephone network. After many delays by AT&T, they came up with the Baudot acoustic coupler (modem) in 1964 so that we could make calls on the phone using Teletypewriters (TTYs).



**Dr. Frank G. Bowe (deceased)**

As a well-respected national disability advocate, Dr. Bowe flew to Japan and successfully persuaded TV manufacturers to include built-in closed captioning chip to replace the old set-top decoder. Congress then passed the TV Decoder Circuitry Act in 1990, requiring every television set in the U.S. measuring 13" or more diagonally to have built-in captioning capabilities.

**Karen Peltz Strauss (DC)**

Peltz Strauss has committed her entire legal professional life to addressing access issues in



telecommunications for people who are deaf and hard of hearing. Several pieces of legislation were enacted in Washington, DC, thanks to her savvy networking with staff on Capitol Hill. Her comments filed over the years have led to development of regulations at the FCC that assure full access in communication for people with hearing loss.

**Bill Graham (IL)**

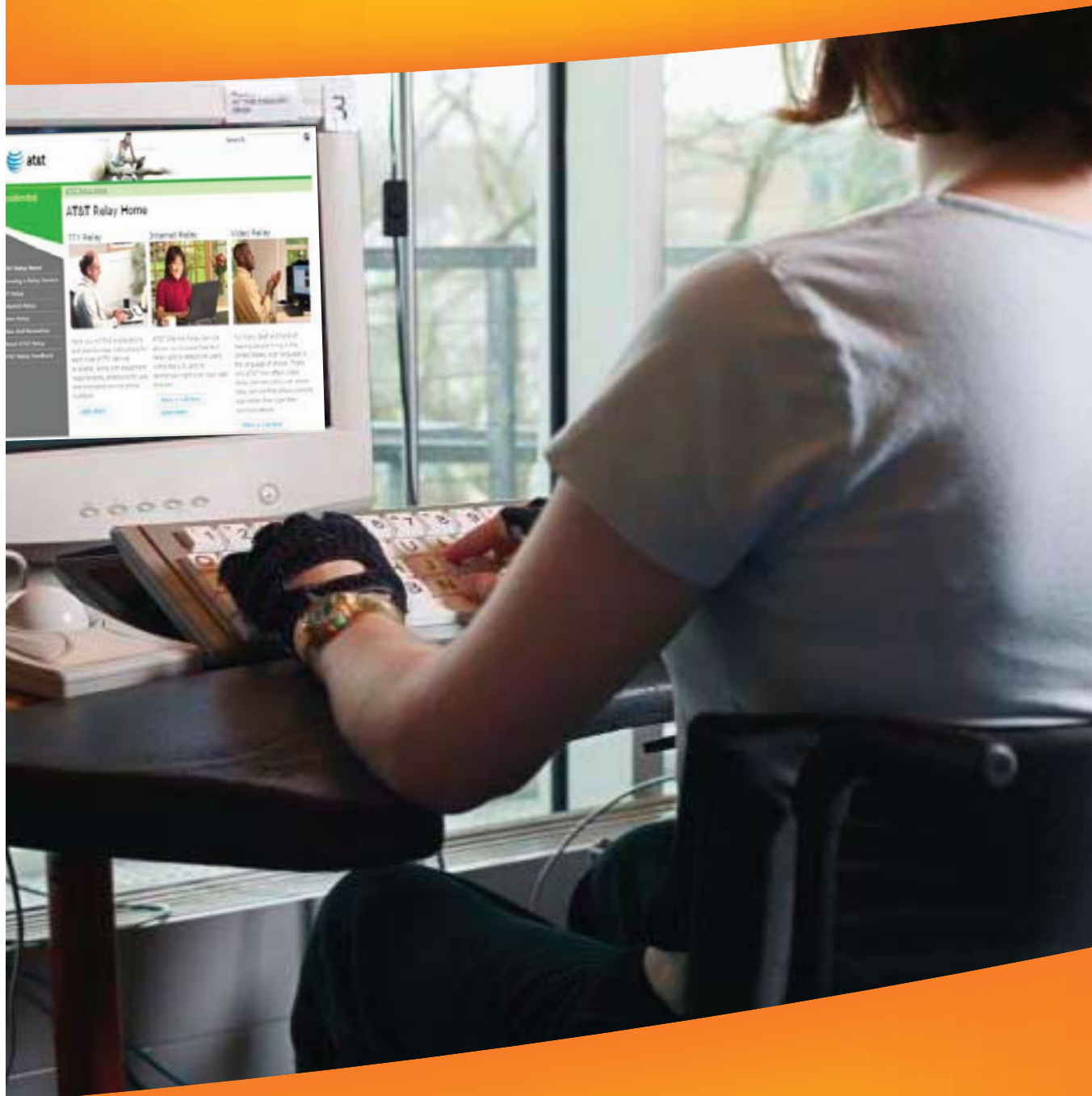
Graham founded the Association of Late-Deafened Adults (ALDA). He and others have made it clear that they prefer to have real-time captions as a communication support service for assembly meetings.



**Pam Holmes (WI)**

Holmes, during her tenure as a consumer representative on the U.S.

[www.consumer.att.com/relay/](http://www.consumer.att.com/relay/)  
[www.att.com/disabilityresources](http://www.att.com/disabilityresources)



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Continued from page 16

Access Board, understood the power of online collaboration. She founded and chaired the National Association of the Deaf's advocacy network committee which met online and took action on telecommunications and technology issues for deaf, hard of hearing and deaf-blind Americans.



#### **Brenda Battat (MD)**

Battat is the Executive Director with HLAA. Since 1989, she collaborated with wireless carriers and hearing aid dispensers to develop hearing aid compatible (HAC) digital cell phones. Recently, she worked to make sure hard of hearing customers have a good shopping experience and user satisfaction as they purchase their HAC phones.



#### **Sheri Farinha-Mutti (CA)**

As an ardent consumer advocate, Farinha-Mutti was the first to employ a vlog to rally other deaf and hard of hearing consumers to send their input to the FCC when it was considering making Video Relay Services (VRS) available with reimbursement from the TRS Fund. In two weeks, more than 5,000

people signed the petition asking the FCC to provide VRS 24/7. Today, she is working to make 9-1-1 services compatible with modern technologies such as videophones, pagers, captioned telephones, and computers.

#### **Ron Bibler (MT)**

As an early purchaser of high-definition (HD) television set, Bibler was the first to alert the FCC that some TV programmers were shirking their captioning obligations when providing HD programs from so-called "new networks." The FCC is now looking into ways to preserve captions by holding programmers accountable during the transition from analog to digital versions of its TV programming.



#### **Russ Boltz (CA)**

When Boltz tried to rent some DVD movies, he often found that in many DVDs, only the movie itself was captioned, but not the special features, such as director interview or comments from the cast and crew. He sued five major studios, and settled out-of-court. The studios agreed they would ensure the DVDs come out with either captions for both the movie and other special features, or be accurate in labeling for five years if the features were not captioned.



#### **Dr. Roy Miller (MO)**

Late deafened at age 47 from neurofibromatosis, Dr. Miller made the transition from teaching political

science to administering a state commission for the deaf and hard of hearing in Missouri. Thanks to his advocacy efforts, the Governor signed legislation requiring that all educational videos sold in Missouri be captioned.



#### **Dr. Howard "Rocky" Stone (deceased)**

"Rocky" Stone was the founder of Self Help for Hard of Hearing People, now called Hearing Loss Association of America (HLAA). After he lost his hearing while a CIA Bureau Chief in Beirut, he became the first Executive Director. He made sure that hard of hearing people, get assistive listening support and other services needed to cope with their hearing loss and maintain their standing in society.



#### **Dr. Jeff Bohrman (OH)**

After many years as a research toxicologist, Bohrman, who has Usher's Syndrome, changed his career in 1992 to run a statewide program to provide services and resources to deaf-blind people in Ohio. Jeff has advocated and researched telecommunications and media technologies and pursued various access issues on Internet Relay with service providers.







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*—John D.*

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## The Digital Television Transition is Coming



# Will You Be Ready?

Big changes are coming to broadcast television. On February 17, 2009, all full-power broadcast television stations are required to stop broadcasting in analog and continue broadcasting in digital only. This is known as the digital television (DTV) transition.

### *Consumer News from the Federal Communications Commission*

#### **Why the Change?**

Some consumers are wondering why we are making this transition. First, all-digital broadcasting will free up important communications channels to be used by police, fire, and emergency rescue personnel. Also, some of the freed up channels will allow for advanced wireless services for consumers, such as wireless broadband. In addition, since digital is much more efficient than analog, it allows broadcast stations to offer programming with improved picture and sound quality, including high definition television (HDTV) programming. Digital broadcasting also allows stations to offer several

programs to viewers at the same time, instead of just one program that is available with analog. This means broadcasters can offer consumers more programming choices.

#### **How Will the DTV Transition Affect Me?**

Not everyone will be affected by the DTV transition in the same way. Consumers who subscribe to a paid service such as cable or satellite TV may not need to do anything, but they should check with their provider to make sure. Consumers who own a digital television (a TV with

*Continued on page 21*

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a built-in digital tuner) and receive over-the-air programming through a broadcast antenna (for example, “rabbit ears” on the TV, or an “aerial” on the roof) can already watch digital broadcast programming, and don’t need to do anything further to be prepared. However, we recommend that consumers perform a “channel scan” on their TV from time to time, particularly after February 17, 2009, because during the transition some digital broadcast stations will change their frequency of operation and others may begin broadcasting in digital for the first time. A channel scan allows your TV to locate and identify available digital signals. A channel scan is activated through the “menu” button on the remote control of most digital TVs; check your TV instruction manual for more information.

If you own an analog television that currently receives over-the-air programming with a broadcast antenna, you will need to take action before February 17, 2009. However, you do not need to purchase a new television set to be prepared for the DTV transition. In order to continue receiving over-the-air programming on an analog TV, you will need a digital-to-analog converter box. As the name suggests, a digital-to-analog converter box is a device that will convert the digital signals from a broadcast television station to an analog format that your television can display. Also, if your existing antenna receives a good quality signal on VHF and UHF analog channels, your antenna should work for receiving digital channels as well, both on an analog TV connected to a digital-to-analog converter box and on a digital television. Digital-to-analog converter boxes are available in stores that sell electronics equipment and through various online and mail order retailers. The cost for a basic converter box is between \$40 and \$70. This is a one-time cost.

## Digital-to-Analog Converter Box Coupon Program

In order to help consumers pay for digital-to-analog converter boxes, the federal government is offering each U.S. household up to two \$40 coupons that can be applied toward the cost of eligible converter boxes. The “TV Converter Box Coupon Program” is being administered by the National Telecommunications and Information Administration, which is part of the Department of Commerce. The number of coupons available is limited and applications for coupons must be received by March 31, 2009. Coupons can be requested in one of four ways:

Call the Coupon Program's 24-hour hotline at 1-888-DTV-2009 (1-888-388-2009), TTY: 1-877-530-2634 (English TTY) or 1-866-495-1161 (Spanish TTY)

Apply online at [www.dtv2009.gov](http://www.dtv2009.gov)

Mail a coupon application to: P.O. Box 2000, Portland, OR 97208-2000

Fax a coupon application to 1-877-DTV-4ME2 (1-877-388-4632)

## Closed Captions

The FCC has published consumer advisories and informational materials about the DTV transition. Closed captioning is one of many topics addressed in these consumer advisories. Closed captioning continues to be available in digital televisions and digital television programming. Here is some guidance and information about closed captioning as this transition takes place:

### Digital-to-analog converter boxes used with analog TVs

Analog TVs manufactured after June 1993, with screens 13 inches or larger measured diagonally, will be able to display closed captions when a digital-to-analog converter box is installed.

If you are able to see closed captions on your analog TV as white text on black background before attaching the digital-to-analog converter box, you will be able to see closed captions the same way after attaching the converter box. To see captions in this manner, follow the instructions that came with your analog TV and turn the closed captions on/off through the analog TV or with the remote control that came with the analog TV.

Some (not all) digital-to-analog

converter boxes can generate and display digital closed captions. If you purchase one of these converter boxes, you will be able to change the size, font (style), caption color, background color, and opacity of these digital closed captions. This ability to adjust the appearance of captions is something new and cannot be done with analog TVs and analog captions, unless the TV is attached to a digital-to-analog converter box that can generate and display digital closed captions.

To determine whether a digital-to-analog converter box is equipped to generate and display digital closed captions, ask the retailer or check the user manual that comes with the converter box.

To activate digital closed captions from one of these converter boxes, you must follow the instructions that come with the converter box to turn the closed captions on/off through the converter box or the converter box remote control (not through the television set or the television's remote control). These converter boxes will also come with instructions about how to change the caption size, font (style), caption color, background color, and opacity.

Analog TVs that are smaller than 13

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inches, and TVs manufactured before July 1993, are not required to display closed captions. However, consumers may be able to see closed captions on these TVs if the digital-to-analog converter box is equipped to generate digital closed captions.

## Digital TVs

Digital TVs (with a built-in digital tuner) manufactured after June 2002, with screens 13 inches or larger measured diagonally, must be able to display digital closed captions. You will not need a converter box for these TV sets.

Digital TVs can receive digital television signals over-the-air with "rabbit ears" on the television set or with an outdoor rooftop antenna. Consumers should follow the instructions that come with the digital TV and turn closed captions on/off through the digital TV or with

the remote control that comes with the digital TV. Consumers with digital TVs should also follow the instructions that come with their digital TV to change the appearance of digital closed captions, including the caption size, font (style), caption color, background color, and opacity.

## Pay Television Services (Such as Cable or Satellite TV)

Some televisions (such as "cable-ready" TVs) are connected directly to a pay television service and do not require a set-top box. These televisions control the receipt and display of closed captions. Follow the instructions that came with the television and turn closed captions on/off through the television or with the remote control that came with the television. Closed captions on analog TVs appear as white text on a black background. Consumers with digital TVs should follow the instructions that came with their digital TV to change the

appearance of digital closed captions including the caption size, font (style), caption color, background color, and opacity.

Some televisions are connected to a pay television service through a set-top box. (Note that a set top box that receives cable signals is different from the digital-to-analog converter boxes discussed above. The converter boxes are only needed to convert broadcast signals from digital to analog so they can be displayed on analog TVs, and are not needed if you have cable service). Some (not all) set-top boxes used to receive cable signals can generate and display digital closed captions. If the set-top boxes provide digital captions, consumers will be able to control the caption size, font (style), caption color, background color, and opacity. To determine whether a pay television service set-top box is equipped to generate and display digital closed captions, ask your pay

Continued on page 24



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Continued from page 22

television service provider or check the user manual for your set-top box. To activate digital closed captions and to control the appearance of these captions from one of these set-top boxes, follow the instructions for the set-top box to turn closed captions on/off through the set-top box or the set-top box remote control. These set-top boxes will also have instructions about how to change the appearance of digital closed captions – caption size, font (style), caption color, background color, and opacity.

If you experience problems with closed captions, the FCC recommends taking the following actions:

If you are using a digital-to-analog converter box with an analog TV set that was manufactured after June 1993 and is 13 inches or larger and no captions are visible, contact the manufacturer of the converter box.

If you see a double row of overlapping captions, it may mean that captions are being generated by both the TV and your digital-to-analog converter box or set-top box. Turn off the closed captioning function either on the television or on the box.

If captions are visible on one channel, but not on another channel, this is most likely related to the programming provider. You should contact the television station whose programming does not have captions. The FCC's rules require that most television programming be captioned. If the problem continues, contact the FCC at the number or email address provided below.

Questions about closed captioning issues also may be sent to the FCC's dedicated closed captioning email inbox at [closedcaptioning@fcc.gov](mailto:closedcaptioning@fcc.gov).

You can also get more information by reading the FCC's consumer fact sheets, including the following:

Closed Captioning and Pay Television Services at <http://www.fcc.gov/cgb/consumerfacts/dtvcaptions.html> and Closed Captioning and Digital to Analog Converter Boxes for Viewing Free Over-the-Air Programming on Analog Televisions at [http://www.fcc.gov/cgb/consumerfacts/CC\\_converters.html](http://www.fcc.gov/cgb/consumerfacts/CC_converters.html).

The FCC is committed to monitoring compliance with its rules and assisting consumers through the DTV transition. With some preparation, all Americans can enjoy the benefits of the DTV transition.

For more information about the DTV transition generally, call us at 1-888-CALL-FCC (1-888-225-5322) or by TTY at 1-888-835-5322, email us at [DTVinfo@fcc.gov](mailto:DTVinfo@fcc.gov), or visit our DTV website at [www.dtv.gov](http://www.dtv.gov). FCC consumer advisories and informational materials about the DTV transition are also available in large print, Braille, and on audio disc.

## February 17, 2009: Will You Be Ready?

### What You Need to Know About DTV

#### You have three choices:

1. Connect your analog TV to a digital-to-analog converter box. Digital-to-analog converter boxes are in stores and have a one-time cost of \$40-\$70. To help you pay for the boxes, the U.S. Government is offering two \$40 coupons per household. For more information on the coupons, visit [www.DTV2009.gov](http://www.DTV2009.gov), or call 1-888-388-2009 (voice) or 1-877-530-2634 (TTY). Plus, you should not need a new antenna if you get good quality reception on analog channels 2-51 with your existing antenna. Or

2. Buy a digital television (a TV with a built-in digital tuner). You do not need a High Definition TV (HDTV) to watch digital broadcast television. You only need a digital TV (or an analog TV connected to a digital-to-analog converter box). Plus, you should not need a new antenna if you get good quality reception on analog channels

2-51 with your existing antenna. Or

3. Subscribe to a paid TV service. If your TV set receives local broadcast stations through a paid provider such as cable or satellite TV, it is already prepared for the DTV transition. Cable companies are not required to transition or switch any of their channels to digital. However, if you have an analog TV that does not receive local broadcast stations through your paid provider, you will need a digital-to-analog converter box to watch digital broadcasts on that TV.

#### For More Information:

- \* 1-888-CALL-FCC (Voice)
- \* [www.DTV.gov](http://www.DTV.gov)
- \* 1-888-TELL-FCC (TTY)

#### More Online Resources:

\* A guide on how to set up your digital-to-analog converter box with a VCR: [www.dtv.gov/factsheets/converterbox\\_vcr.pdf](http://www.dtv.gov/factsheets/converterbox_vcr.pdf)

A consumer advisory on video descriptions & the DTV transition:

[www.fcc.gov/cgb/consumerfacts/dtvideodescription.pdf](http://www.fcc.gov/cgb/consumerfacts/dtvideodescription.pdf)

A guide to setting up your digital-to-analog converter box (basic with twin-lead antenna wire): [www.fcc.gov/cgb/consumerfacts/setup-converterbox-balun.pdf](http://www.fcc.gov/cgb/consumerfacts/setup-converterbox-balun.pdf)

#### Three ASL Videos:

The Federal Communications Commission (FCC) now has three videos in American Sign Language on what you need to know about the Digital Television Transition:

1. Overview of the DTV Transition (4 min, 37 sec)
2. What You Need to Know (7 min, 35 sec)
3. Closed Captioning and the DTV Transition (4 min, 15 sec)

They can be run with Flash, QuickTime, Windows Media, or RealPlayer.

Find them at: [www.dtv.gov/video\\_audio.html](http://www.dtv.gov/video_audio.html)



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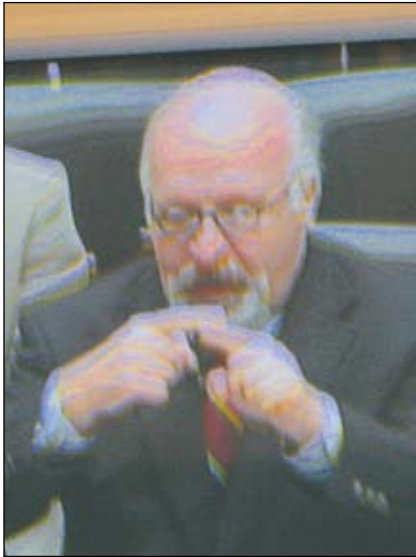
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TDI Executive Director speaks on behalf of the Coalition of Organizations for Accessible Technology (COAT) to the U.S. House Subcommittee on Telecommunications and the Internet on October 17, 2007

Remember, "Just as colors bring out extra meaning in video; captions or video description gives us a complete experience in television viewing."

## Testimony of Claude Stout to the U.S. House of Representatives On the Status of the Digital Television Transition

**C**hairman Markey, Ranking Member Upton, and Members of the House Subcommittee on Telecommunications and the Internet, I am honored to have this opportunity to testify on an issue that affects millions of television viewers with disabilities. My name is Claude Stout, and I am the Executive Director of Telecommunications for the Deaf and Hard of Hearing, Inc. (TDI) and Chair of Deaf and Hard of Hearing Consumer Advocacy Network (DHHCAN). I am pleased to offer my testimony today on behalf of the Coalition of Organizations for Accessible Technology (COAT), a coalition of more than 110 national, regional, and community-based organizations.

If all goes well, digital TV captioning would be the best invention since analog TV captioning. When I was young, I could not understand why my family was laughing at Jack Benny, Lucy Ball, Johnny Carson and other comedians. Now I understand because of the DVDs that are out today with captions. And it was only when I entered Gallaudet in the late '70's that I was able to watch the ABC World News Tonight – not at 6:30 with everyone else at dinner time, but at 11:30 pm with my deaf friends past our bedtime!!! Today with grateful appreciation, tinged with anxiety, we are about to take the next step toward full integration in television.

COAT represents more than 31 million individuals with hearing loss, 10 million individuals who are blind or who have vision loss, and millions of individuals with other disabilities who benefit greatly from accessible television programming. Perhaps even more significant than access to televised news,

information, and entertainment, access to televised emergency information enables these populations to understand and appropriately respond to warnings of hazardous weather and other emergency conditions.

### Introduction and Background

COAT affiliate members are excited by the promise of digital television, the better picture quality, multicasting, and the transfer of spectrum, which, among other things, will enable first responders to be more effective in emergency situations. Like most consumers, we look forward to the benefits of technological advances. Unfortunately, in the history of technological advances, people with disabilities are often left behind.

In fact, we are already witnessing this phenomenon with digital television. Increasing numbers of individuals are seeking to purchase digital television sets or components and systems that provide digital video programming, and as distributors are offering expanded digital programming – and in particular programming in the high definition (HD) format. At the same time, we are receiving increasing reports of significant technical difficulties with the pass through and display of closed captioning.

### Technical Difficulties

Specific problems include overlapping captions, captions appearing in the middle of the television screen, captions running off the edge of the picture, captions exceedingly small, and captions that inadvertently switch to text mode which obscures 95% of the screen image.

A major difficulty for us in the DTV



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transition experience is determining the cause of these closed captioning problems. For example, the failure to receive captions can be the fault of the local TV station or cable TV service that has begun broadcasting or offering digital programming, the inability to pass through captions on the program distributor's set top box, or a failure in the equipment used to receive and display the DTV programming, such as the receiver or its connecting components.

### Confusion over Scope of FCC Captioning Mandates

In addition to these technical difficulties associated with the DTV transition, there is some dispute over the extent to which TV networks now covered by the captioning rules are obligated to continue providing captions as they shift to digital programming.

When a standard definition (SD)

analog network, whose programming has already been captioned, converts to or creates an HD channel with a similar programming line-up, the new HD channel should be held to the same closed captioning obligations as its analog predecessor. However, some broadcasters and cable networks have taken the position that their new HD channel is a "new network" that qualifies for an exemption from the FCC's captioning rules during the first four years of the network's operations. If this is true, consumers would find themselves having to wait an additional four years to see captioning on programming which, but for its HDTV status, would already have to be captioned.

This "new network" interpretation of the captioning rules violates Congress's intent to ensure the uninterrupted provision of closed captions with the onset of advanced technologies. Section 330 of the Act states: "As new video technology is developed,

the Commission shall take such action as the Commission determines appropriate to ensure that closed-captioning service continues to be available to consumers."

### User Interfaces

It is commonplace for television viewers to select their channels and other TV settings from on-screen menus. But if you are blind or have low vision, you cannot access this information through a "point and click" remote control or even use a touch screen. A few individual manufacturers have already demonstrated the technical feasibility of incorporating accessible user interfaces. When accessible user interfaces are required on all video devices, the incremental cost of adding these features will become negligible.

Caption viewers have also reported considerable problems navigating menus, some of which are "hidden"

Continued on page 30

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# More than a videophone.



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to activate captions after connecting their digital television equipment – that is comprised of separate receivers, monitors, set top boxes, and recording/playback devices. Often the interface that controls captions is buried several layers into an on-screen menu that is difficult, if not impossible to find. We also hear of deaf and hard of hearing consumers going to hotels and not being able to watch TV simply because there is no way for them to turn on captions.

As you can see, there are some user interfaces on their television equipment that may adversely impact consumers with hearing and vision disabilities – and their families and friends. While our voluntary efforts with digital TV manufacturers have been rewarded by a few design changes – by the addition of a designated closed captioning button on the remote controls for digital-to-analog converter boxes – we know from experience that most manufacturers will not incorporate accessible user interfaces on their television sets or components unless mandated to do so. Virtually all technology-related access features have come about only after they were mandated by federal law – for example, televisions with built-in closed captioning decoders. This is because the disability market – still is not large enough, forceful enough, or wealthy enough – to impact manufacturer product design. No manufacturer wants to be the only one putting resources into accessibility features.

### Barriers to Resolving Concerns

Consumers with disabilities have also encountered significant barriers when attempting to contact distributors of video programming and manufacturers of DTV equipment with concerns about accessing closed captioning or video description. Customer service representatives or technical support personnel are often unfamiliar with closed captioning and video description. Often they are not familiar with telecommunications relay services,

and hang up or otherwise disregard the phone call, or choose not to respond to e-mail requests in a timely manner.

Furthermore, many consumers with disabilities remain unaware of their right to file informal complaints with the FCC, or the Commission's ability to mediate and resolve their problems. Additionally, those consumers with disabilities who may be aware of the complaint procedures often choose not to use those procedures because they find the complaint process too difficult to navigate. This is because the process for filing informal closed captioning complaints with the FCC requires consumers to first notify distributors responsible for the delivery and exhibition of the programming at issue, cite the specific FCC regulation violated, and include detailed complaint content in order for the FCC to pursue the complaint. The FCC's procedures also contain overly complicated timelines and unduly long response times.

As a consequence, when consumers do confront problems with their TV distributor or with the manufacturer of a DTV product or device, most of the time, in utter frustration, they give up and revert to using their "old" television receiving components. While this may be an option now, it will no longer be an option in February 2009.

### Video Description

The Communications Act of 1996 authorized the FCC to conduct an inquiry to assess the appropriate means of phasing video description into the television marketplace. Although the FCC's response to this grant of authority was a modest requirement that broadcasters and other multimedia video programming providers in the top 25 major television markets provide video description on four primetime programming hours per week, this requirement was overturned in federal court a little over a year after it was adopted.

COAT is concerned that, as the digital television transition takes place, the lack of attention given to this form

of accessibility by DTV distributors and equipment manufacturers may seriously impede the ability of video descriptions to reach consumers. To prevent this from occurring, COAT urges the Committee to immediately require that the DTV standard include video description, which is consistent with the recommendation made by the 1998 Presidential Advisory Committee on Public Interest Obligations of Digital Television Broadcasters:

During the period in which the FCC's video description rules were in effect, broadcasters routinely demonstrated the technical and economic feasibility of description by adding this feature to their programs. With the advent of digital television, it is easier than ever for broadcasters to build into the digital structure ways to pass video description along to viewers.

### Conclusion

We call upon Congress to ensure that people with disabilities – including the rapidly growing population of senior citizens who experience reduced vision and hearing with increasing frequency – are not left behind as the DTV transition takes place. On behalf of COAT I thank the subcommittee for this opportunity to share our concerns and urge you to take the necessary steps to ensure a smooth transition to DTV programming for all Americans with disabilities.

Remember, "Just as colors bring out extra meaning in video; captions or video description gives us a complete experience in television viewing."

Continued on page 31

# COAT RECOMMENDATIONS

**In order to smooth the transition to DTV for people with disabilities, COAT urges Congress to mandate the following:**

1. Direct the FCC immediately to clarify that it is the responsibility of broadcast and other networks to continue captioning programs on their HD/digital networks and show pre-captioned programming with captions at all times.
2. Reinstate the FCC's video description rules.
3. Direct that digital televisions be designed so that individuals with vision and other disabilities can access all of their functions, including audio output for on-screen text menus or other visual indicators.
4. Direct manufacturers of DTV equipment to provide a conspicuous means of accessing both closed captioning and video description on digital television equipment.
5. Direct the FCC to revise its complaint procedures so that consumers with hearing loss who are having difficulty accessing closed captions on DTV have a user-friendly means of seeking assistance and resolution from the FCC.
6. Direct the FCC to require broadcasters and multi-channel video programming distributors (MVPDs) covered by the FCC's captioning rules to put into place customer service practices that are easily accessible and capable of responding swiftly to consumer inquiries and complaints concerning the provision of closed captions on DTV and
7. Designate a point of contact to handle such inquiries and complaints.

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# Back to You: Learning from Television



BY NANCY LINKE-ELLIS  
*President, InSight Cinema*

**R**emember when we applauded the passage of the Telecommunications Act of 1996? It seemed like such a huge step forward for the deaf and hard of hearing (DHH) community. Twelve years later, however, DHH patrons have been subjected to an increasingly steady decline in the quality of captions as new technology arrives on the digital scene with warp speed. This has complicated the task of delivering captions to the viewer. Hi Definition TV, Tivo, digital video recorders (DVRs), Direct TV satellite, have complicated the “pass through” issue of getting readable and reliable captions to appear on your home television set.

The finger-pointing continues between stations, captioning agencies, cable providers and television manufacturers have turned captions into a “game” like roulette. Message boards are filled with frustrated DHH consumers who have bought digital sets and cannot get captions or they receive compressed captions with scrambled sentences.

Those High Definition Multimedia Interface (HDMI) cables connect many HD, LCD and plasma screens with TVs, games, movies and other multimedia content. What it can’t do is pass through captions — another one of those “oversights” by media conglomerates in their quest to dominate the market with the hottest, must-have tech toy in town. State-

of-the-Art apparently does not mean State-of-Accessibility.

Industry leader and visionary Karen Peltz Strauss, has formed another new group, Coalition of Organizations for Accessible Technology (COAT). As of March 2008, approximately 175 organizations have come aboard to help resolve issues created by the new waves of technology. Since its inception, there has been an explosion of new technology that has resulted in more obstacles to overcome — multi-platform, interactive and downloadable media content are just to name a few.

Television programming is broadcast over airwaves owned by the public and overseen by the FCC. While that government intervention has been positive (the Telecommunications Act of 1996), it shows little promise of keeping up with technology year to year.

## The Movies Turn to Digital

Movies, on the other hand, which are projected on screens at movie theaters are First Amendment protected literary works. They are not under the jurisdiction of the FCC nor are they subject to mandatory captioning under current federal law.

In some respects, the absence of regulation allows certain freedoms and ability to anticipate new technology.

There is a shift underway to convert motion picture screens from analog to digital. The cost is nearly \$100,000 per screen. In the US alone, there are 38,548 screens in 5,940 theaters. To date, only less than 4,000 screens have been converted to digital. Despite the slow pace of conversion, there is little doubt digital represents the future for motion pictures as it quickens delivery to the exhibitor, expands the potential for content and improves the quality of display. But it’s still in the process of being “put up on its’ legs.” One example is despite the millions of dollars spent, many digital cinema

or D-Cinema servers crashed on February 29, 2008 because they weren’t programmed to read the leap year date. This suggests that there are still bugs to iron out and protocols to be tweaked.

The D-Cinema home standard is still a work in progress. A good example is Toshiba’s exit from the HD DVD arena, giving way to Blu-Ray becoming the standard high definition digital DVD. Interestingly enough, this was a studio driven decision and not market driven. The effort involved in securing a single standard for all digital exhibitors and for all the motion picture studios is daunting. When it is completed, however, it will be an important safeguard for a long time to come.

Worth noting, this change from analog to digital is the first significant change in how motion pictures are displayed since motion pictures were created by Thomas Edison in 1891. This type of sea change does not occur quickly or easily in any industry.

## The D-Cinema Experience vs. Home Theater Systems

Anticipating the conversion to digital, exhibitors and studios are focused on the future and extremely nervous about losing mainstream movie-goers to other forms of entertainment like games (e.g. Microsoft’s Xbox 360 and Sony’s Playstation 3) and the expansive (and expensive) Digital Home Theatre Systems. Hence, the fast acceptance of Blu-ray discs as the newest standard for home viewing.

According to blu-ray.com, the Blu-ray disc format was developed by the Blu-ray Disc Association (BDA) — at [www.bluraydisc.com](http://www.bluraydisc.com), a group of leading consumer electronics, personal computer and media manufacturers, with more than 180 member companies from all over the world. As with conventional CDs and DVDs, Blu-ray plans to provide a wide range of formats including ROM/R/RW. The

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following formats are part of the Blu-ray Disc specification:

BD-ROM - read-only format for distribution of HD movies, games, software, etc.

BD-R - recordable format for HD video recording and PC data storage.

BD-RE - rewritable format for HD video recording and PC data storage.

There's also plans for a BD/DVD hybrid format, which combines Blu-ray and DVD on the same disc so that it can be played in both Blu-ray players and DVD players.

That being said, Blu-ray players will not down-convert the analog output signal unless the video contains something called an Image Constraint Token (ICT). This feature is not part of the Blu-ray Disc spec, but of the AACs copy-protection system also adopted by HD-DVD. In the end it will be up to each movie studio to decide if they want to use this "feature" on their releases or not. The good news is that Sony, Disney, Fox, Paramount, MGM and Universal have already stated that they have no intention of using this feature. The other studios, which have yet to announce their plans, will most likely follow suit to avoid getting bad publicity. If any of the studios still decide to use ICT they will have to state this on the cover of their movies, so you should have no problem avoiding these titles.

It is expected that Blu-ray will replace the DVD format. The Blu-ray format has received broad support from the major movie studios as a successor to today's DVD format. In fact, seven of the eight major movie studios (Disney, Fox, Warner, Paramount, Sony, Lionsgate and MGM) have released titles in the Blu-ray format. Many studios have also announced that they will begin releasing new feature films on Blu-ray Disc day-and-date with DVD, as well as a continuous slate of catalog titles every month. For more information about Blu-ray movies, check out our blu-ray movies section at [www.blu-ray.com/movies/](http://www.blu-ray.com/movies/), which

offers information about new and upcoming Blu-ray releases, as well as what movies are currently available in the Blu-ray format.

However, the two formats (Blu-ray and DVD) will most likely co-exist for quite some time until HDTV's become more widespread. VCRs don't support recording of HDTV programming consumers will soon need to replace them. Blu-ray recorders combined with hard drives offer a very flexible alternative for those that want to record HDTV. While HD-DVRs already allow consumers to record HDTV, the amount of HDTV programming that can be recorded and archived is limited by the size of the hard drive. Blu-ray recorders will offer a solution to this problem as they allow consumers to record the video to Blu-ray discs and then free up the hard drive. This should make them popular among people that want to archive a lot of their HDTV recordings. The Blu-ray recorders will also offer a lot of compelling new features not possible with a traditional VCR:

**Searching** - quickly browse and preview recorded programs in real-time

**Create playlists** - change the order of recorded programs and edit recorded video

**Simultaneous recording and playback** of video (enables Time slip/Chasing playback)

**Automatically find an empty space** to avoid recording over programs

**Improved picture** - ability to record high-definition television (HDTV)

**Improved sound** - ability to record surround sound (Dolby Digital, DTS, etc)

Dell is leading the way – on March 28th, they announced that they have added a Blu-ray drive (with reading capability for Blu-ray Discs, and read/write capability for DVDs and CDs) to their award-winning Inspiron line of laptops. More impressive, the Inspiron 1525 with Blu-ray drive will only set consumers back a mere \$879. The

computer features a 15.4" 720p screen and HDMI output.

Internationally, multiple languages are the rule rather than the exception, but despite its worldwide dominance in D-Cinema Audio, Dolby shelved its Screen Talk system, (open captions on screen similar to DTS-CSS), in favor of devoting more time to their Dolby 3D system, a sure money winner.

## Personal Captions

Other vendors have explored the use of captions displayed adjacent to or on the screen, which cannot be read unless the patron wears polarizing filtered eyeglasses.

In order for captions to be read with polarizing lenses, the captions must be displayed concurrently with a contrasting light, visible to the patron who does not wear polarizing glasses. That is true whether the lights are displayed on the screen or beside it.

The polarizing glass / light field option, proposed with light boxes to laser lights, has no known installations.

The advent of 3D, which has arrived and deployed in 683 screens, has propelled acceptance of audience goers wearing special glasses (eyewear which can be worn over personal eyewear) in order to have the optical illusion which modern 3D provides. For those who have experienced it, modern 3D is remarkably vivid. How it will work with captions remains to be seen, since every 3D film released – from "Chicken Little" to "Hannah Montana" has not included 3D captions.

The captions are shown above the screen in 2D format. Again, the technology will dictate if and how a DHH patron will be able to experience both the 3D effect and receive captions at the same time. This is a major consideration since the cost of tickets to 3D films is significantly higher than your standard prime evening price.

There are advantages of cinema eyewear:

- No distractions to other patrons

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- Captions can be shown every screen, every show
- Provides closed subtitles, opening language access to a larger audience
- Can have individualized vision prescriptions fitted onto personal caption glasses
- Multi-languages used in same auditorium

For the exhibitor, the opportunity to retrofit existing projection equipment at minimal cost, gain closed subtitles which may result in increased ticket sales, and provide full access for the deaf, hard of hearing and late hearing loss audience, has an intrinsic appeal in an era when exhibitors are pressured economically on the one hand and by regulators on the other.

### New Approaches

In order to overcome the problems inherent in different forms of captioning equipment which require studios to create a number of caption files, SightLine is working to ensure that its software will work with a universal caption file.

MicroVision, Emagin, Lumus and others are working on forms of electronic eyewear suitable for the cinema as well as a host of other functions.

This system is intended to deliver captions from a single file (the D Cinema format discussed above) to an individual patron. While cinema eyewear lacks the comfort and ease of open captions, it raises the prospect of watching captioned films without having to overcome the logistic hurdles of finding a captioned screening.

SightLine Media, a private enterprise which I have helped to found, is both the licensee of Georgia Tech Research Institute and holder of all US patents covering applications for

captioning eyewear. SightLine has been developing software which displays captions and enables 3D viewing in cinema eyewear.

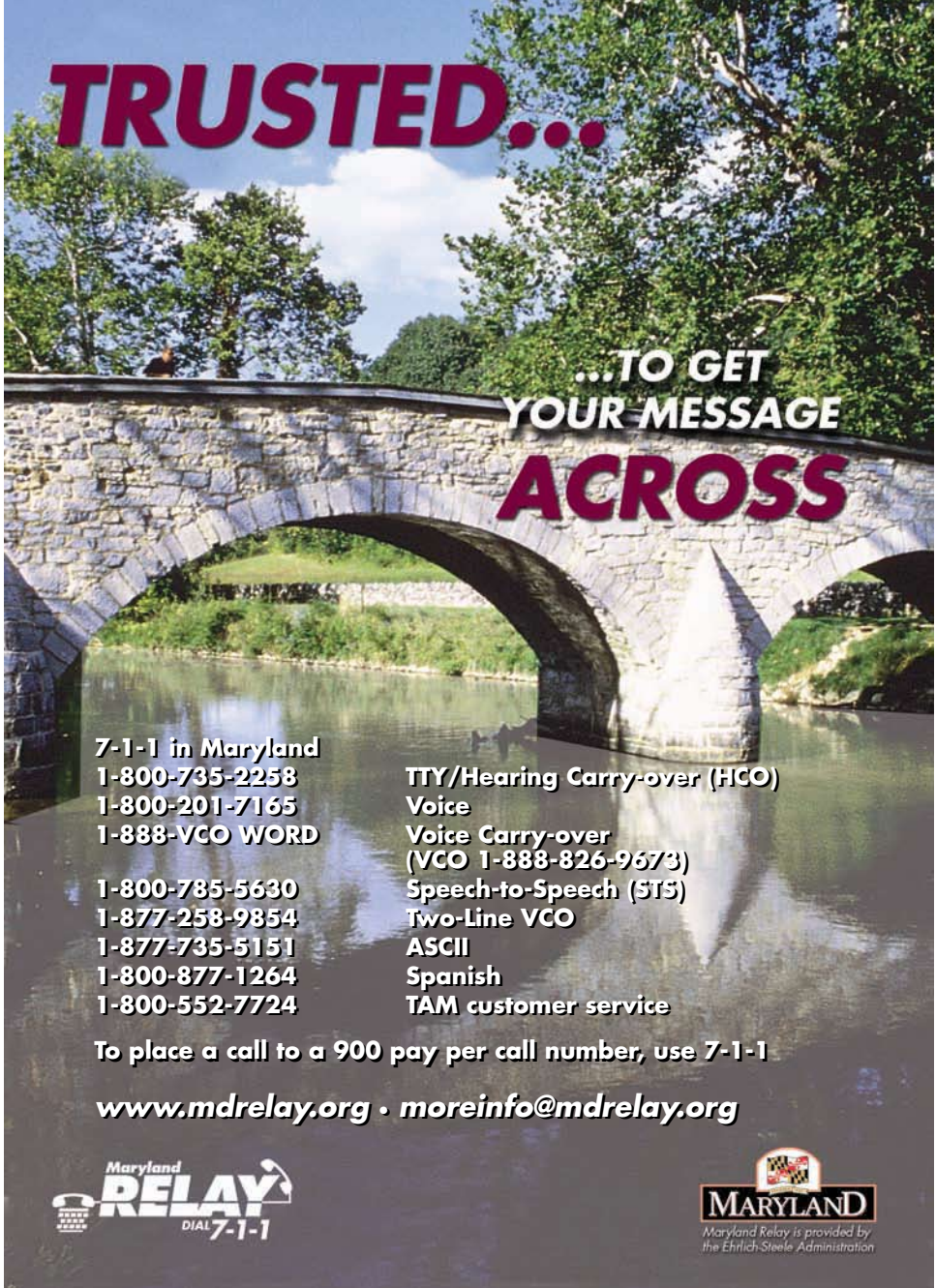
### The Future @ Home

The clear winner of the DVD battle is Sony's Blu-Ray format. It provides an amazing, crystal clear picture, but presented its own problems because of no Line 21 in this HD digital format. Their solution was to create "captions" as Subtitles for the Deaf and Hard-of-

Hearing (SDH).

"SDH" is an American term the DVD industry introduced. It is an acronym for "Subtitles for the Deaf and Hard-Of-Hearing", and refers to regular subtitles in the original language where important non-dialog audio has been added, as well as speaker identification, useful when the viewer cannot otherwise visually tell who is saying what.

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## TDI Holiday Party

TDI hosted its annual holiday party on December 7, 2007. This year, we had the party in a new setting, at the Washington Court Hotel near Capitol Hill.

*Photo Credit: Steve Brenner*



Above: Dr. Roy Miller and Claude L. Stout greet guests to the TDI Holiday Party.



Left: David Birnbaum and Al Sonnenstrahl relax at a table.



Top: Jim House with Elizabeth Spiers (L) from American Association of the Deaf Blind and Carol Sliney (R) from the TDI Board of Directors. Above: Judy Viera, Donna Graffe and Dot Brenner enjoying the TDI Holiday Party.



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The SDH can be created in different fonts, colors, etc. and are "authored" onto the Blu-Ray DVD's menu and turned on / off in the Menu by the Blu-Ray player. SDH has speaker ID's, sound effects, etc, just like closed captions.

The only significant difference for the user between "SDH" subtitles and "closed captions" is their appearance: SDH subtitles usually are displayed with the same proportional font used for the translation subtitles on the DVD and are considered much more attractive to view.

Most subtitles use an outline and shadow in order to reduce the block to a smaller portion of the picture. However, closed captions are displayed as white text on a black band, which blocks a large portion of the view.

Closed captioning is falling out of favor as many users have no difficulty reading SDH subtitles, which are text with contrast outline. In addition, DVD subtitles can specify many colors, on the same character: primary, outline, shadow, and background. In

rare instances, this allows subtitle-caption authors to display text and icons on a translucent band for easier reading. Most subtitles use an outline and shadow instead, in order to block a smaller portion of the picture.

Closed captions may still supersede DVD subtitles, since many SDH subtitles present all of the text centered, while closed captions usually specify position on the screen: centered, left align, right align, top, etc. This is very helpful for speaker identification and overlapping conversation. Some SDH subtitles do have positioning, but it is not as common.

DVDs for the US market now sometimes have three forms of English subtitles: SDH subtitles, English subtitles, helpful for viewers who are Hearing and whose first language may not be English (although they are usually an exact transcript and not edited into Simple English), and closed caption data that is encoded by the end-user's closed caption decoder.

Blu-ray discs use SDH subtitles as the sole method because technical

specifications do not require HD to support line 21 closed captions. Some Blu-Ray discs, however, are said to carry a closed caption stream that only displays through standard definition connections. Many HDTVs allow the end-user to customize the captions, including the ability to remove the black band.

### It comes down to choices.

If successful, new technologies will require the cooperation and support of studios, the exhibitors, the DHH community, advocates and regulators with the possibility of crossover use (theater and/or home viewing capability).

The digital frontier promises to hold many opportunities for caption-users. It's time to encourage manufacturers to explore and find ways together. The goal of receiving captions reliably and comfortably, at the greatest possible number of applications and solutions across the globe, is within reach.

*Nanci Linke Ellis is President of InSight Cinema and a founding member of SightLine Media LLC. She is on the HLA-CA Board of Trustees and on the HLA-LA Chapter Board.*



## In-Flight Entertainment

# IMS Company and WGBH Enable Closed Captions on Handhelds

**T**he IMS Company, a southern California in-flight entertainment (IFE) solutions provider, and the Media Access Group at WGBH in Boston, have developed a solution for providing closed-captioned media content on IMS' portable in-flight entertainment devices. The initiative, the first use of closed-captions on an IFE portable, is intended to address the increased interest by airlines in providing closed-captioned media following the announcement by the U.S. Department of Transportation (DOT) in February 2006 that it planned to require airlines flying in and out of the United States to provide closed-caption capability on inflight media. "Providing a closed-caption service on portable media players is a solution that can now be implemented cost-effectively on a near-term basis," said Gray. Closed caption content is expected to be deliverable to new portables customers on IMS' PAV-704 and PAV-705 platforms in October 2008, according to Harry Gray, Vice President of sales and marketing.

The solution involves providing captions—text transcriptions of the audio portion of TV shows and movies for people who are deaf or hard of hearing in a player-compatible format and superimposing them on the video at the viewer's discretion. "WGBH currently creates closed captions for most major studio theatrical motion picture releases in the U.S., and, with content provider approval, will convert these captions into the player-compatible format for The IMS Company," said Larry Goldberg, director of WGBH's Media Access Group. WGBH will conform the theatrical captions to airline-edited versions as required by IMS.

Several airlines have previously relied on the closed caption capability of DVDs to accommodate the needs of deaf or hard of hearing passengers. "IMS is proud to be the first portables supplier to enable airlines to meet the needs of their passengers requiring



this capability on an easy-to-use handheld platform," said Gray.

The IMS portable media player (PMP) will store the formatted electronic text on the hard disc. If the viewer elects to view the captions, he can activate them via the graphical user interface/GUI and the text is then synchronized to the video using timecode and displayed on the PMP's screen. If the viewer chooses not to watch captions, they will not be visible, according to IMS' managing director, content and media development, Michael Childers. The term "closed caption" refers to text which is accessed at the discretion of

the viewer while "open captions" are always visible.

Captions, as opposed to "subtitles," reflect all of a program's audio for deaf or hard-of-hearing people, converting not only dialog into text, but also sound effects, music, speaker identifications and the like, which are needed for a more complete understanding and enjoyment of the content. Subtitles convert the spoken dialog from one language to another for hearing viewers, and do not include non-speech information.

The World Airline Entertainment Association (WAEA) and others responded to the DOT Notice of Proposed Rulemaking by explaining that IFE systems do not have the same capability as broadcast television to provide closed captions. Citing the cost of converting existing IFE systems to accommodate captions versus building them into future systems, WAEA sought to defer the DOT requirements for implementation in emerging systems.

Responding to the concerns expressed by airlines and IFE industry groups, the DOT announced in May 2008 that it would defer the requirement for an undetermined time, citing the work of WAEA's Digital Content Management Working Group (DCMWG) and its 0403 Specification as evidence that the IFE industry is migrating toward digital solutions that would facilitate closed captions in future IFE systems. The DOT will "shortly" issue a Supplemental Notice of Proposed Rulemaking (SNPRM) to gather more information on the capability of emerging technologies to provide a captioning solution.

For more information, go to [www.imsco.com](http://www.imsco.com)





# TDI In Action

October - December 2007

## TRS/VRS Issues

- Deaf and Hard of Hearing Consumer Action Network (DHHCAN) nominates Ron Bibler to National Exchange Carriers Association's (NECA) Interstate TRS Fund Advisory Council to represent consumers who use voice to make TRS calls.

## Industry Initiatives

- TDI and other national organizations had a conference call meeting with representatives from Verizon to discuss its ongoing disability access initiatives.

## Outreach

- Jim House took a D-Link videophone and some old GA-SK newsletters to exhibit at the Smithsonian Air and Space Museum in their annual IDEA Day where hundreds of high school children were able to see technology used by people with disabilities.

## Media and Information Technology Access

- TDI, with the help of its pro-bono attorneys at Bingham McCutcheon continues to vigorously oppose 150 new closed captioning waiver petitions, and monitors follow up work on more than 500 oppositions followed in response to the Federal Communications Commission's (FCC) Anglers Exemption Order.

## DTV Transition Activities

- TDI and other consumer organizations jointly filed comments and reply comments in the FCC's DTV Consumer Education Initiative Notice of Proposed Rulemaking proceeding to ensure that the initiative addresses the needs of consumers that are deaf or hard of hearing.

## DTV Purchasing Experiences

- At the DHHCAN October meeting, TDI moderated a discussion between members and Mr. Marc Pearl, Executive Director, Consumer Electronics Retailers Coalition, to review a letter DHHCAN sent last June to four major TV retailers regarding deaf and hard of hearing consumers' negative shopping experience when they shop for high definition television sets (HDTVs).
- TDI participated in the DTV Closed Captioning summit at the AT&T Innovation Center in downtown Washington, D.C.
- TDI signed on to a letter circulated by Coalition of Organizations for Accessible Technologies to Chrysler Corporation to enable display of closed captions on automotive video display devices that play DVD movies in the back seats of Chrysler vehicles.

## Air Travel Access

- Stout, as Chair of DHHCAN, sent a letter to Secretary Mary Peters, U.S. Department of Transportation requesting a meeting between representatives of deaf, hard of hearing, and deaf-blind organizations, and her and others at the Department to discuss air travel challenges for deaf

and hard of hearing Americans, and to provide her with some recommendations in how the Department can assist in making air travel more accessible.

## Emergency Preparedness Access Issues

- TDI received a \$1.36M grant from the Federal Emergency Management Agency (FEMA) to develop an on-online training course for emergency managers to address the special needs population in emergency shelters. Well over 200 organizations submitted concept papers, 120 were asked to submit full proposals and 12 were selected to receive funds.
- Since the award, CEPIN has been collaborating with West Virginia University programs toward tailoring our project's objectives to mesh with their "Disaster Preparedness for Special Populations" course. Their course is a management-level course and ours will serve as an awareness-level pre-requisite for their program.
- Another proposal was also submitted to FEMA to renew funding for the original 2004 grant program. This proposal also calls for reconvening selected members of the development team to review the current program for redundancies and also update it with an eye toward recent technological changes. CEPIN has presented a course deliveries in Reno, Nevada, Santa Fe, New Mexico through its contract with Eastern Kentucky University. Four more deliveries were done in San Mateo, California and throughout New Jersey.
- Several consumer training video

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With Snap!VRS and the Ojo™ video phone, you can enjoy true-to-life video quality anywhere there is a high-speed Internet connection.

Plus, Ojo includes the following features:

**EASY SETUP:** Simply plug into a broadband connection and your Ojo is ready to place and receive calls.



**TAKE IT WITH YOU:** Ojo weighs only 4 pounds and includes its own carrying case. Use it at home, work, school, or on vacation. Just like a cell phone, Ojo remembers your 10-digit telephone number wherever you are.

**BUILT-IN VIDEO MAIL & PHOTO CALLER ID:** Ojo stores up to 20 minutes of video mail within the phone so you never miss an important message – and always know who is calling.

**IT'S FREE!** Deaf and hard-of-hearing customers receive a free Ojo – including free unlimited VRS calls in the U.S. 24x7.

FOR MORE INFORMATION, VISIT:

**[www.snapvrs.com](http://www.snapvrs.com)**





## TDI In Action

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clips have been posted online at the CEPIN website [www.cepintdi.org](http://www.cepintdi.org) "Emergency Kits and Communication Plans" and "Responding to Emergencies involving Deaf, Hard of Hearing, and DeafBlind Populations".

- CEPIN Program Director Neil McDevitt gave a presentation at the Special Needs and Disaster Preparedness conference in Washington, D.C. about developing effective training programs geared toward special needs populations.
- McDevitt also was a guest with Chief Mike Monge from the Fairbault Fire Department on "LIVE RESPONSE", a satellite broadcast and webcast program, underwritten by FEMA to showcase their programs. Preliminary numbers indicated that this was viewed by over 200,000 people. This was an outstanding experience and we have received many requests for information as a result.

### FCC E911 Proceeding:

- TDI drafted and filed comments in the FCC's Wireless E911 Location Accuracy Requirements proceeding to ensure that the E911 system is designed to include users that are deaf or hard of hearing.

### E-911 Stakeholder Council:

- Sheri Farinha-Mutti and Claude Stout met with the Consumer and Governmental Affairs representatives at the FCC to ask them not to grant any more waivers to VRS and IP Relay providers from their obligations to handle emergency calls effective in 2008.

- Stout had a teleconference with David Bahar, a staffer with Rep. Jay Inslee (D-WA, 1st District) on some amendments for the E9-1-1 Modernization bill. The amendments introduced in the House of Representatives focused on requiring the FCC to implement policy initiatives to have VRS and IP Relay providers handle emergency calls made from deaf and hard of hearing Americans, and that there be in place a numbering mechanism to allow for ease of use with telephone numbers, rather than IP addresses for emergency purposes, as well as calls to relay service from hearing people.



Ted Kennedy, Jr. prepares the stage before the Presidential Candidates Forum.

### Presidential Candidates Forum

- On November 2, 2007 TDI took part as a co-sponsor in a presidential candidates forum in Manchester, New Hampshire. It drew more than 600 spectators, mostly people with disabilities and their service providers. The forum, "Equality, Opportunity and Access," focused on issues of importance to voters with disabilities, including the Americans with Disabilities Act, access to telecommunications products and services, the hiring

of people with disabilities in the federal workforce, and access to health care. Five Democratic candidates – Hillary Rodham Clinton, Joe Biden, Christopher Dodd, Dennis Kucinich, and Mike Gravel – took the stage, while John Edwards sent his campaign manager David Bonior. Republican candidate, John McCain called in his responses. This historic forum was captioned live on-line through [www.hovrs.com](http://www.hovrs.com).

### Hearing Aid Assistance Tax Credit:

- Claude Stout represented TDI at an event hosted by Hearing Loss Association of America and AG Bell Association of the Deaf and Hard of Hearing to honor Rep. Chris Van Hollen, MD 8th Congressional District for his efforts on the Hearing Aid Assistance Tax Credit bill. If passed by both houses of U.S. Congress, this would provide \$500 tax credit per hearing aid (\$1,000 credit for two) for children and those aged 55 and over. This legislation is designed to provide some assistance for those who need hearing aids given that Medicare usually excludes coverage as do most private insurance policies.

### Early Hearing Detection and Intervention Act:

- TDI signed on to the letter by Deaf and Hard of Hearing Alliance to House Energy and Commerce Committee Chairman John Dingell asking that this Committee consider reauthorization of the Early Hearing Detection and Intervention Act. In the letter, we indicated that this reauthorization would lead to further modifications of the law, and to demonstrate an ongoing commitment to identifying hearing loss in infants, and to better ensure they and their families are connected to intervention services.



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—Lois

*Licensed mental health counselor*



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"My hearing loss coincided with a jaw injury that happened when I was in my 30's. I learned ASL and now use Sorenson VRS® (SVRS) with Voice Carry Over (VCO). My husband, family, and I love SVRS because we can have natural, back-and-forth telephone conversations again. I can even converse with my 2½-year-old grandson. It's the perfect choice for me! SVRS has brought so much joy into my life."



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