



WORLD

Technology News and Commentary for Deaf and Hard of Hearing People



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**Accessible Technology
in Digital Cinema**

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Board Views



BY DR. ROY MILLER
TDI President

“Assuming that we could convince movie producers to put invisible captions on all of their films, the use of UV glasses would truly make all movies accessible to people who are deaf or hard of hearing, anytime of the day, any day of the week, in any theater of multiplex establishments – without the problems that plague current access technologies.”

Good, But Not Perfect

I used to love to go to movies, but that pleasurable experience stopped for me about twenty-five years ago when I became deaf. For many years, I simply put that on my list of “Things I used to do, but don’t do any more.” For example, while in high school I played football, but I don’t do that anymore. For many years I played baseball, and then softball (both slow and fast pitch), but I don’t do that anymore. In the past, I enjoyed hunting doves, pheasants, and quail. Walking the farmers’ fields in the fall behind my hunting dogs was an activity that I thought would never end, but I don’t do that anymore. And for much of my life I spent time on the water fishing with my sons, but I don’t do that anymore. Yes, there are many things that I once did that I don’t do anymore. I think that we all have such a list, and the older we become, the longer our list becomes.

Generally we don’t stop doing the things we enjoy because they no longer pleasure us, but rather because our life circumstances change. And that’s the way it was with me and the movies. I stopped going to the flicks because I became deaf, and at that time there was no such thing as an accessible movie (except for foreign films with subtitles, but where I lived no theater showed them). But over the years, circumstances again changed as various technologies were developed that again made going to the movies something that I could do.

Over time, I have had the good fortune of experiencing all of the different technologies that are currently used to make movies accessible to deaf and hard of hearing people. I have enjoyed once again being able to view movies, but seemingly there is a problem or two with all of the current access modalities. Yes, movie access technologies are good, but certainly

not perfect.

For example, take open captions. As we all know, with open captions the captions are superimposed on the film and displayed on the screen at the bottom of the picture. For many people with hearing loss this is the ultimate in viewing pleasure. But there are two basic problems. First, very few films are open captioned by the producers. So if we rely on open captions then our movie going experiences are severely limited. Second, very few theaters show open captioned films because the theater owners say they interfere with the viewing experience of hearing patrons. Good, but not perfect!

What about Rear Window Captioning© system? It is a closed caption system, and was developed as an alternative to open captioning in order to avoid the criticism that hearing people did not like to see the captions. With RWC the dialogue of the movie is displayed on a large LED panel at the back of the theater. It is then displayed at the movie goer’s seat on a small reflective plastic panel that is attached to a flexible arm that mounts in the cup holder of the arm rest. The reflective plastic panels are adjusted by the viewer to position the captions where they want them to appear on the screen. But, the flexible arms are often hard to get in the right location to easily view the captions. The reflective panels often are difficult to get solidly anchored in the seat cup holder. And the movie goer basically has to sit very still because any contact with the plastic panel would mess everything up. Then too, very few movies are distributed ready to be shown with the RWC system, and very few theaters have been willing to spend the money to install the system. So again, there is limited access. Good,

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BOARD VIEWS Continued from page 2

but not perfect!

The movie industry's transformation to digital technology opened up new captioning opportunities, and Sony quickly developed its Entertainment Access Glasses. Using holographic technology, these glasses display the captions on their lenses. They seem to floating in the air. Some people like the glasses, but I for one find them somewhat problematic. They tend to be heavy, and many people complain that the glasses hurt the bridge of their nose. If you look away from the screen the captions go with you. They are displayed on your glasses no matter where you are looking, and captions on the wall, your box of popcorn, or your sweetheart's face can be very uncomfortable. And of course, you have to hold your head very still if you want the captions to appear in the same place on the screen, which can produce a mild stiff neck by the end of the film. Good, but not perfect!

The CaptiView Closed Caption Viewing System by Doremi is the latest entry in the toolbox of movie access technologies. The CaptiView system consists of a small, OLED display on a flexible support arm that fits into the theater seat cup holder. The display screen is equipped with a rechargeable Lithium Ion battery, and comes with a privacy visor so that it can be positioned directly in front of the movie patron with minimal distraction to neighboring patrons. It uses wireless transmission of the captions, and if it is working correctly the captions automatically appear when the movie starts. But it has its problems. Its battery may not be charged when the theater attendant gives it to you, or it may go dead at any time during the movie! The display needs switched to the right room in a multiplex theater, and the switch is so small that not everyone can find and use it (it was certainly not designed for

Introducing a new way to read captions.

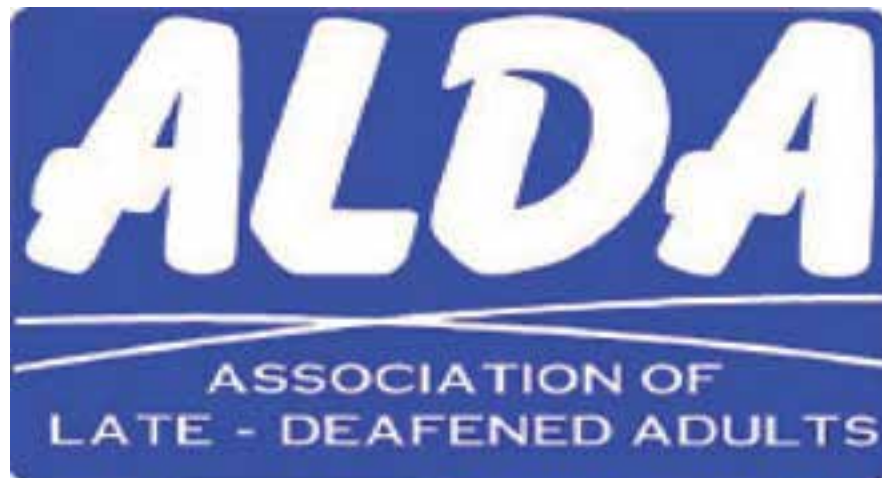
Invisible captions promise to bring accessible captions without bulky equipment

people with arthritis). The flexible arm has the same problems as the arm used with the Rear Window Captioning system. Good, but not perfect!

To me, the most exciting development in movie access technology is the Invisible Captioning project at NTID. This technology uses ultra violet light to display the captions on the movie screen (just like open captions) but they are visible only to people wearing a very light pair of glasses coated with a UV filter. With this technology the captions stay on the screen, they don't follow your nose. Hearing people in the theater are not bothered because they cannot see the captions. There are no batteries to die during a movie. There is no expensive equipment to be installed in the back of the theater. The glasses are light, and there are no problems in mounting or adjusting a

flexible arm. Almost perfect!

I say "almost" because if a deaf person looks away from the screen for a moment they lose part of the film's dialogue, whereas a hearing person still hears all of the dialogue regardless of where they might be looking. This technology is still in the development stage, but I look forward to the day when it becomes commercially available. Assuming that we could convince movie producers to put invisible captions on all of their films, the use of UV glasses would truly make all movies accessible to people who are deaf or hard of hearing, anytime of the day, any day of the week, in any theater of multiplex establishments – without the problems that plague current access technologies. And that would be "almost perfect!"



Capitol Commentary



BY CLAUDE STOUT
TDI Executive Director

“Movies are a vital cultural activity for us to enjoy a richer experience in life along with the other arts like concerts, plays and books.”

Captioned Movies: Introducing Us to Life's Mysteries, Wonders, and Realities

If someone were to ask me to list the top twenty-five things that made a profound impact on us in the deaf and hard of hearing community across America, watching movies with captions would definitely rank high on the list.

I was born almost 60 years ago in 1954. During the first five years of my life, movies were just a blur on television, which back then were in black and white and took forever to come on.

Then I went to the North Carolina School for the Deaf and spent fourteen happy years there. One of the things we often looked forward to were subtitled movies from the Captioned Films for the Deaf, a unit within the US Department of Health, Education, and Welfare (HEW). These movies were shipped in large reels to us every week, and we ran them on 16mm projection equipment. We were thrilled to see Tom going after Jerry, Wiley the Coyote chasing the RoadRunner, and lots of Looney Tunes with captions. As we got older, we began to enjoy less cartoons in favor of family movies for viewers of all ages such as Flubber, Old Yeller, movies starring Jerry Lewis, and others with Elvis Presley.

Once in a while, we would go to the movie theater in downtown Morganton, N.C. We watched some

movies without captions, like the *Miracle Worker*, *Fahrenheit 451*, *Mary Poppins*, and *The Dirty Dozen*. Sometimes my mother and I went to a movie theater, and I never forget asking her many times what Rhett Butler was telling Scarlett O'Hara in *Gone with the Wind*.

In college, I continued to watch captioned movies, now from the U.S. Department of Education, a major source of funding for captioned movies and television programs years later. As more captioned movies were shown on television, we experienced a slow but steady rise in the hours spent television. Once in a while, movie theaters would offer a first-run movie with open captions, and we would go watch it there as it reminded us of the captioned films of my childhood. My girlfriend Judy (now my dear wife) and I set up many dates late late on Saturday nights to watch foreign films with subtitles at a popular theater near Dupont Circle in Washington, D.C.

Then we were able to have more control over our viewing when videotape recorders, and later DVD players became household accessories attached to our TVs. We were able to watch captioned movies at home on our time. At first, the number of movies were limited, but thanks to a lawsuit by Russ Boltz against five

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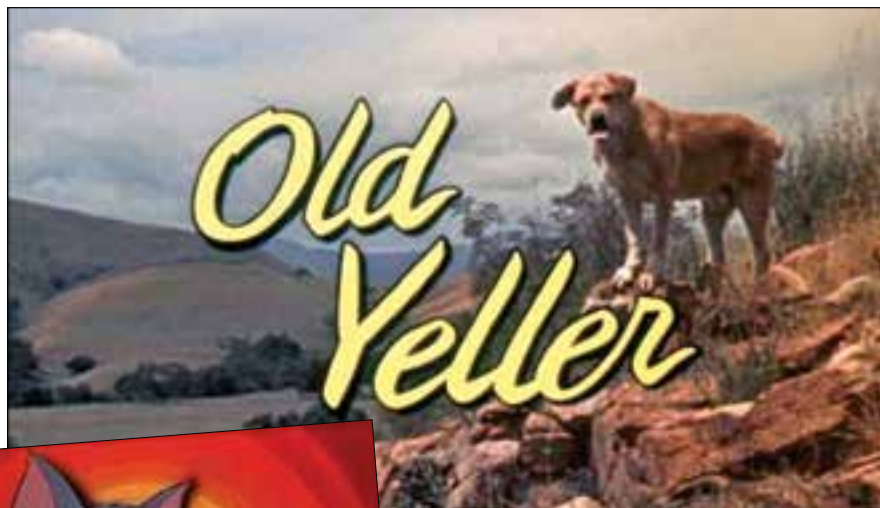
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CAPITOL COMMENTARY Continued from page 4

movie studios in the late 2006 in California, the number of available movies in captions skyrocketed over the years. I still remember renting several home video movies at once on many weekends from the BlockBuster Video store near my home in Germantown, Md.

We are more fortunate now than before that we can access movies with captions. Options include first-run movies at the theater or wait for the DVD to come out, which usually happens after a few weeks run on "VOD" (Video on Demand) from the comfort of our home. Or we can go to a grocery store or a convenience store and rent a movie outside from a box for a dollar and some change. If we wanted to watch older movies, we can download or request a DVD to be mailed to our home from Netflix, which has pledged to caption its entire online library by next year. There are many places on the Internet where we can stream movies to our computer or the family television set. My good friend Jim Hynes tells me he loves the flexibility of being able to watch movies with his iPad on the go because he can pause a movie midway and resume later when it is more convenient.

Please know it has been the last ten to twenty years we have had more access to the movies at home, in the theaters, or on our smart phones and tablets. We are grateful for the lawsuits that were settled in our favor by the Attorney Generals with some states. These legal decisions were spurred when deaf and hard of hearing movie patrons were fed up with the lack of closed captioning, especially by members of ALDA led by its champion, John Waldo. Last but not least, we are grateful for the favorable outcome of the class action suit against



Classic movies like "Old Yeller" (above), and cartoons like "Tom and Jerry" (left) were some of the few movies that were easier to understand despite the lack of details that come with captions.

NetFlix by the Disability Rights and Education Defense Fund with support from National Association of the Deaf.

As some of you may not know, we tried to include full access to the movies in theaters as a part of the Americans with Disabilities Act of 1990, but due to extensive lobbying efforts by the studios and movie theaters via Motion Picture Association of America (MPAA) and National Association of Movie Theater Owners (NAMTO), as a compromise with the U.S. Congress, we chose not to make this an additional provision of the ADA.

More good news... We have continued to engage in some subtle advocacy efforts over the years since 1990 with the Motion Pictures Association of America (MPAA), which represents the major Hollywood movie studios, and with National

Association of Theater Owners (NATO) to gain a fuller experience as movie goers.

Last year, we were thrilled to hear that U.S. Senator Tom Harkin, D-IA has announced his chief sponsorship of two legislative bills with the goal of improving access to the movies in theaters and on the plane. According to the Health, Education, Labor and Pension (HELP) Senate Committee website, the *Captioning and Image Narration to Enhance Movie Accessibility (CINEMA) Act* would amend Title III of the ADA to require movie theater complexes of two or more theaters to make captioning and video description available for all films at all showings.

We also had meetings with the U.S. Department of Transportation to draft amendments to the Air Carrier Access Act that will require airlines to make in-flight movies and other entertainment accessible with captions. The Department has yet to release a

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CAPITOL COMMENTARY Continued from page 6

supplemental notice of proposed rulemaking on this topic.

The second bill introduced by Senator Harkin, *The Air Carrier Access Amendments Act* would amend the *Air Carriers Access Act* to require that air carriers make captioning and video description available for visually-displayed entertainment programming—live televised events, recorded programming, and motion pictures—that is available in-flight for passengers. would require airlines to show movies in captions for their patrons that take flights on their planes. Sen. Harkin and other members of the U.S. Senate HELP Committee have already held a public hearing on these two bills. TDI will continue to watch for future developments and keep you posted on the passage of these two bills by both houses of U.S. Congress.

There are some additional resources that have been extremely useful for our access to movies. In this issue, you will read about a few technologies that help provide captions on movie theater screens. Currently, theaters have several options to buy captioning display from Sony (Glasses), Doremi Labs (CaptiView), and others such as Contacta that help install audio loop technology in some theaters those who need amplified hearing support that allows them to enjoy the movies with hearing aids, cochlear implants, or other assistive listening devices.

If you haven't tried it, please do check the CaptionFish website at www.captionfish.com. It has up-to-date information on theaters near you that offer captions for some of their movies, including schedule and sometimes the technology used to display captions.



Senator Tom Harkin

Last but not least, we are maintaining vigilance around the clock on movies previously shown on television to be shown on the Internet with captions. We have filed complaints with the FCC against Amazon and others that haven't kept up with their obligation to produce captions for some TV programs shown

online. Let us know if you see any TV programs or movies that were shown recently with captions on TV, but not captioned when you saw it on the Internet. Currently programs that were shown in the past year must be accessible. Older TV programs that first aired more than a year ago will be

required to have captions beginning next year.

The more that FCC hears from us when we file complaints, the more action we will see from them. We must hold video program owners, producers and distributors accountable to meet their obligations as per The 21st Century Communications and Video Accessibility Act of 2010 (CVA)

May you enjoy this issue on the technologies and resources that make movie captioning more of a reality. TDI will continue to support your access needs here in the nation's capital. We continue to work closely with trade groups like MPAA and NATO. Movies are a vital cultural activity for us to enjoy a richer experience in life along with the other arts like concerts, plays and books.

The screenshot shows the CaptionFish website interface. At the top, there's a navigation bar with 'Home', 'About', 'Contact', and 'Help'. Below that, a 'Showtimes' section is visible, listing movies and their showtimes. The main content area displays movie listings for 'Regal Cinemas 20' and 'Cineplex'. The listings include movie titles, showtimes, and a 'Showtimes' button. On the right side, there are advertisements for 'CaptiView' and 'Doremi Labs'. At the bottom, there's a 'CONVENTION 2014' banner for the 'National Captioning Institute'.

Web page listing nearest captioned movies at www.captionfish.com

Accessible Tech



BY JAMES HOUSE
TDI World Editor

“Offer closed captions, but please offer more open captioned showings. I recently had a conversation with a deaf man who had cerebral palsy. None of the closed captioned options worked for him because he could not stay still. With open captions, it does not require you to sit immobile like a statue for two hours, and you have a place to put your drink without spilling it on the floor.”

The Reluctant Moviegoer

Like Claude, I do have a lot of memories about movies, both good and not so great. I do enjoy movies from time to time. However, since the theaters have denied us captioned movies for much of my life, I have reciprocated in kind by denying them my hard earned money and ignored their mega tubs of popcorn and drinks, which was worth its weight in fool's gold.

When Regal Cinemas invited me to a symposium many months ago, I jumped at the chance to spend an afternoon at the movies, and thereby suspending my participation in reality for a few hours. This symposium offered a rare opportunity to evaluate several movie captioning technologies in development before they were deployed to movie theaters across the country as part of an industry transition to digital cinema. Digital cinema was the industry's answer to appease the millions of frustrated deaf and hard of hearing moviegoers over the past 85 years since the talkies came. The talkies trampled the golden era of silent films where everyone enjoyed the comedic antics of Charlie Chaplin, Lon Chaney, Greta Garbo, and other silent movie stars.

Regal was showing “The Game Plan”, a Disney film about a football star who wakes up to find a long-forgotten 8-year old daughter at his front door, a gift from a former girlfriend. The afternoon started with about 20 minutes of using the old Rear Window captioning reflectors. Not having so many people in the theater made it easy for me to adjust the reflector, but I was still scarred by two previous experiences.

The first experience was a captioned Star Wars showing sponsored by a large corporation which shall remain unnamed. A representative proudly announced that they jerry-rigged 100

reflectors from items bought from Home Depot for about two dollars each. They were proud to have saved a bundle from the high-quality theatrical reflectors that went for \$30 and change apiece. It showed. Half of the reflectors broke when the patrons tried to adjust them, and many walked out. I hope it was a lesson learned - do not skimp on accessibility.

The second experience was someone pestering me at a movie, asking why I had a rear view mirror when the movie screen was in front of me. This movie was Disney's attempt to glorify car theft, a remake of a legendary cult flick, “Gone in Sixty Seconds” starring Nicholas Cage. The original movie made in 1974 still replays in my mind every now and then. In trying to keep up with the spirit of the movie, I tried to joke that it was so I can see the red lights behind me from the police. In a way it was half true - the red lights were not chasing me, but they were the caption letters reversed on the back wall so I could read the mirror reflection in front of me. That encounter fell flat and did not put me in a frame of mind to really enjoy the movie.

Back to The Game Plan. The movie paused midway through a football game scene, and we switched devices. While I welcomed this new captioning device, it still carried one important disadvantage like the Rear Window reflector - I was still missing a cupholder. Instead of a reflector on a gooseneck, I had a box about the size of jumbo playing cards on a gooseneck. I align the narrow end of the box with the bottom of the movie screen so I could see the movie and read the captions below the image. A big improvement since I did not have to aim the reflector against the rear wall. The captions were transmitted

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The original *Gone in 60 Seconds* featured a 40 minute car chase sequence. The stunt driver star, HB Halicki was killed while filming a sequel in 1989. The Disney version of *Gone in 60 Seconds*, stars Nicholas Cage, a retired car thief forced to steal 50 cars to save his brother from a gangster execution. This version had captions while the original movie did not.

ACCESSIBLE TECH Continued from page 8

to the device, and though it was hard to set up at first, it was easier to read. But those bright white letters certainly gave my eyes a workout. The next device was more of the same - except with green letters, a little bit easier on the eyes.

After about 20 minutes of struggling with the Rear Window reflector and 40 minutes of staring at captions in two different boxes, it was time for an intermission. As the ushers swapped the captioning equipment, we stretched our legs and compared our thoughts on what we have seen so far. When we re-entered the auditorium, they gave each one of us a pair of glasses that had a small screen in front of one eye, and can be worn over your regular eyeglasses if necessary. There is a control where you can enlarge or shrink the letters within your visual field. Someone tapped my shoulder to ask me a question, and I had to look

away from the movie. The captions in the eyeglasses followed me. I could continue following the dialogue, even when I was not looking at the movie. A bit disorienting, but functionally equivalent in a way. It is like being able to close my eyes and listen to a presentation. This was a big leap ahead from what I was used to.

But as far as the whole spectrum of captioning technologies go, the big winner hands down was something that the symposium did not offer. Everyone of us attending would have loved to watch an entire film with open captions where the words are displayed under the movie image. If some people feel that captions ON the screen are distracting, may I offer a very reasonable compromise, which would be captions UNDER the screen. It does not cost anything more than a quick adjustment of the projector so the letters are displayed without the



possibility of blending into light backgrounds.

I realize its a trade off by offering either an open captioned movie at certain showings or closed captioned movies at all showings. Offer closed captions, but please offer more open captioned showings. I recently had a conversation with a deaf man who had cerebral palsy. None of the closed captioned options worked for him because he could not stay still. With open captions, it does not require you to sit immobile like a statue for two hours, and you have a place to put your drink without spilling it on the floor.

Now I have a confession. You can guess I am not much of a moviegoer. But I do still enjoy a cool action flick every once in awhile - only if it is captioned.

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When Crickets Sign



BY BILL GRAHAM
TDI Associate Editor

“I didn’t see it coming, but having access to first-run movies in theaters has changed my social life ... It seems to make getting together with friends more enticing.”

From Mothra to Captioning

I didn’t go to movies as a kid. I grew up on the Southwest side of Chicago—Blue Collar Land, where taverns outnumbered movie theaters 1,000 to 1. Going to the movies wasn’t on the cultural radar. My parents never took me, not once. During my entire childhood, I went to a total of two movies with friends: *Mothra vs Godzilla* and *It’s a Mad, Mad, Mad, Mad World*. For our eighth-grade school outing, my class went to see *The Lion in Winter* downtown. The nuns who picked that one should have had their heads examined—what could normal working-class 13 year olds be expected to get from a movie like that besides spitballs upside the head or gum on their seats?

After finishing college I moved to the far more upscale Lincoln Park area on Chicago’s North Side, where movie theaters were magnets with queues at the box office. I lived just three blocks from the Biograph Theater, where John Dillinger was shot and killed on a date with the Lady in Red. But by then my hearing loss had nosedived into deafness. I only went to the Biograph once, to partake in the midnight

madness of *The Rocky Horror Picture Show*. At *Rocky Horror* tossing rice and squirting water pistols were more important than hearing the dialogue.

In my 30’s what fascination I had with movies primarily amounted to a *Rear Window* experience. I had a girlfriend whose apartment overlooked a courtyard and coach house. From her window we could see into the kitchen of the coach house, which was owned and inhabited by Roger Ebert. Many mornings we’d watch transfixed as he pattered around the kitchen in robe and slippers, coffee cup in hand. Double thumbs up for voyeurism.

When I began to date Karina, foreign films with subtitles came into my life. We rented them from Blockbuster—this was before films in English were captioned--and watched them as an after-dinner treat. After we got married and started a family, our rare evenings away from the kids often consisted of a meal and a foreign movie at an art house theater. We treasured those evenings even as my father turned over and over again in his Southwest Side grave.

Gradually, rear-window captioning and the occasional open-captioned films came into vogue, if you can call it that. The open-captioned movies, of course, were shown at weird hours and were rarely anything I cared to see. *Judge Dredd*? *Bloodfist II*? *Bride of Chucky*? Unclogging the toilet seemed a better option. The rear-window films were of more interest but typically involved a long drive to the theater that required a lot of planning. More often than not, we opted to stay home with the kids for yet another game of Chutes and Ladders.

Today—slap me, am I dreaming?—



WHEN CRICKETS SING Continued from page 11

things are changing fast. The Regal cineplex within ten minutes of my home has the Sony Entertainment glasses for viewing captions in all of the theaters. Another cineplex, also within easy driving distance—has the CaptiView device. I prefer the glasses but I'm not at all choosy—as long as I can understand the movie, I'm good to go.

And go I do. Soon after full-service captioning came to the local Regal, Karina and I invited a deaf/hearing couple to have dinner and see a movie together. Shepherd's pie and *Skyfall*. Fun! Several weeks later, we had a dinner/movie date with another couple. Pad Thai and *Thirty Ground Zero*. Wonderful evening! Next time there was six of us. Red-wine Risotto

and 42....Great getting together, good to see you guys. Let's do this again soon.

I didn't see it coming, but having access to first-run movies in theaters has changed my social life (some would say invented it). It seems to make getting together with friends more enticing. For example, we spent over two years trying to "have dinner" with another deaf/hearing couple who we've known forever. There was always some blocking issue—sick kid, working late, family visiting, vacation, football on TV, whatever. But when we were able to throw in "and see a movie" the scheduling impasse broke before the month was out.

There's just something magical about going to the movies. And if you haven't

done it for a long time if ever, it's existentially liberating to be able to pick any show on the marquee. There are also some practical benefits: Who hasn't felt trapped by never-ending deaf goodbyes? Nobody wants to take out the car keys first and before you know it's way past your bedtime and floodlights are flashing. The movie schedule offers structure--a clear-cut ending that you can leverage for escape. And if you're like me—a guy who loves to be around deaf people but signs poorly and doesn't have much to say--sitting quietly with a group of deaf friends for two hours is oddly relaxing. It's hard to sign or lipread in the dark, so you can just sit there quietly and eat your butter-soaked popcorn. And pick your nose. And enjoy the show.

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Accessible Technology in Digital Cinema



BY NANCY LINKE-ELLIS
CAPTIONFISH.COM

When the Opened Captioned film program first began in 1993, representatives from the Motion Picture Association of America (MPAA) warned us that “our efforts would be obsolete within 5 years.” Open captioned prints became available thanks to TRIPOD, an educational program for deaf and hard of hearing children located in Burbank, CA and later, its successor organization, InSight Cinema.

Universal Studios was the first company to take a pro-active stance and offer open captioned prints. One print was laser etched right onto the film. That print was shipped to various cities for viewing by deaf and hard of hearing audiences. The “special showings” were arranged by local schools and organizations for deaf and hard of hearing people. They would rent a screen for a one-time showing at a local theatre and promote

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within the community with flyers and newsletters. These showings were not advertised to the general audience by the theatre because it was considered a private rental.

Meanwhile, a new technology advanced in the late 70's known as a "platter." This technology allowed a theatre to put all 10-13 reels of one film onto a single spool and play in one or more auditoriums simultaneously. This paved the way for multiplexes to be built in the late 80's and for the creation of an additional audio track for described video (DV) narration for the patrons who are blind or have low vision.

During the early years, 1993-1997, there was no Internet or email access. Patrons sometimes waited months for a print of any given film to arrive in their city. There was ample notice, but with only one or two showings being offered, work schedules had to be juggled, baby sitters scheduled, and so forth. If they missed that show, they had to wait for the video to come out. Very few videos were captioned during that time. The advanced notification led to near capacity audiences, but on a very small, limited scale.

As the word spread about open captioned films in new releases, audiences clamored for more cities, more films, a larger variety of genres, and many more play dates and show times that fit their schedules better.

The cities that participated in the Tripod Captioned Films/InSight Cinema programs were chosen for their density of schools, agencies, organizations and clubs for deaf and hard of hearing people. Thousands of flyers were snail-mailed to groups everywhere a film played, but the core audience remained within its own community.

In the fall of 1996, *Titanic* was released and became the tipping point of the captioned movie movement. Paramount Pictures joined the program, providing eight prints that the studio booked in collaboration with Tripod. It played in over 200 cities to sold-out audiences despite the lack of Internet or social media networks.

As audience demand for more captioned movies increased, it became known that through the efforts of its director, the late Jack Valenti at the MPAA had gotten an exemption for open captions in the American Disabilities Act (ADA) just before it was signed into law by President George H. Bush in 1990. At this point, there was no closed captioned technology for movies.

The legal mandate for closed captions on television didn't come until the 1996 Telecommunications Act (with 100% new programming required by 2006). For movie theatres, there was still only open-captioned prints or subtitled foreign films.

In the mid-1990's, the National Center for Accessible Media (NCAM), a non-profit arm of WGBH, a public broadcasting station in Boston, rolled out its Rear Window Captioning Systems, which became known as MoPix. This was an auditorium based closed captioned system in which an LED sign on the back wall of the auditorium displayed captions in reverse, and patrons had to borrow a clear reflector placed in the cup holder. Soon thereafter, DTS, a digital audio company, introduced CSS, a system that projected open captions right onto the screen.

By 2005, it became clear that the combined technologies could not meet the demands of the growing

**"In the fall of 1996,
Titanic was released
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movement."**

ACCESSIBLE TECHNOLOGY Continued from page 15

population of its movie patrons who were deaf and hard of hearing. They wanted all films, all the time, in every auditorium. While areas with a higher population of deaf and hard of hearing people received more films, many smaller cities and towns were completely excluded. Lawsuits were filed and put into motion in various states using a variety of legal approaches. Even though open captions were specifically excluded from the ADA, the availability of a closed captioned system was seen as the answer by some advocates.

It's hard to understate the enormity of this technological changeover. It was the first since film was invented. 35mm projectors had to be replaced by digital hard drives. Unlike sound systems and proprietary projections, the intent was to create one global standard, similar to a television broadcast signal. This standard had to be robust and secure to thwart piracy and bootleg videos while providing broader accessibility.

At the same time, engineers were working to vote on a single worldwide digital projection standard, and research and develop future solutions for the forthcoming digital conversion. It took the Society of Motion Picture & Television Engineers (SMPTE) nearly 10 years to establish the digital projection systems that we see today.

Theaters were reluctant to spend money on equipment for a limited audience, or because of the strong preference for open captions by deaf and hard of hearing patrons. They believed that if we were patient, solutions would come for a better digital cinema experience. Deaf and hard of hearing audiences grew annoyed and gave up going to movie theatres altogether in favor of Blockbuster and Netflix DVD rentals.

With an influx of films and little mainstream marketing, attendance

of deaf and hard of hearing patrons declined. One reason was that the audience had a flood of films to choose from; they were accustomed to being told when a film was playing, in some cases weeks in advance. They did not have the mindset to look in a newspaper at the last minute for show times, and exhibitors had little knowledge to market and draw such a niche audience spontaneously. There was no marketing plan beyond InSight Cinema.

Before the arrival of Captionfish, a web and mobile based search engine specifically targeting deaf and hard of hearing audiences in 2009, the information trickled down to audiences with hearing loss outside of the traditional deaf community. The number of accessible screens remained under 1,000 out of 38,000 total screens in the U.S.

Then the Digital revolution arrived. Widespread use of the Internet became an integral part of life for the deaf and hard of hearing communities. There were captioned television shows, captioned telephones, text pagers, fax machines, Internet and social media, video relay services, as well as Skype.

Thanks to Hearing Accessible Technology (HAT), people had a multitude of ways to spend their consumer dollars: live theatre, concert halls, museums, baseball games, streaming video and Internet content on demand. iPads, iPhones, Android phones and tablets allow for both captions and described content on the go.

In 2012, Regal Entertainment Group, Cinemark Theatres and AMC committed to fully accessible auditoriums by the end of 2013 for both those with hearing and vision loss. Of the 39,000 screens in the U.S., 75% have made the digital conversion,



Williams Digital Sound System for D-Cinema - They have both FM and Infra red systems. There are neck loops that enable users to use infra-red in movie theatres. Hearing aid and cochlear implant users devise their own combination of neck loops and other technology to enhance their own experience.

ACCESSIBLE TECHNOLOGY Continued from page 16

or 36,000. Of those converted, approximately 53% now have accessible equipment in operation. The majority of mid-sized theatre chains, including Carmike, Marcus, Cobb, Harkins, etc. have deployed systems. The real concern is for the smaller chains, mom and pop theatres, and drive-ins, who cannot afford \$100,000 per screen for digital cinema conversion in their theatre. They will no longer be able to get films from the studios because of the obsolescence of 35mm prints. They will probably cease operating by 2015, if not sooner.

All of the major studios now routinely provide caption files and described video for their films. The smaller independents, like IFC, have captions created for the on-demand titles, but not across the board for the big screen. They can't afford to caption it twice so

they go to the platform where it makes the most sense. Warner Bros. became the first studio to caption its movie trailers. And the push is on for all studios to do so.

Williams Digital Sound System for D-Cinema - They have both FM and Infra red systems. There are neck loops that enable users to use infra-red in movie theatres. Hearing aid and cochlear implant users devise their own combination of neck loops and other technology to enhance their own experience.

The first generation of Accessible Digital Cinema (known as D*Cinema) Technology to be on the market consists of two different cup holder devices, a seat mounted device, Sony captioned glasses, dual track ALDs

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Just as deaf and hard of hearing people give feedback and help troubleshoot

problems with technology, so should we have the opportunity to offer our knowledge

and expertise to film related manufacturers before theatre equipment is manufactured.

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ACCESSIBLE TECHNOLOGY Continued from page 17



Another component of the CaptiView system is the Fidelio, which is a wireless audio system that delivers descriptive narration for the visually impaired (VI soundtrack), and amplified sound for the hearing impaired (HI soundtrack) in theaters.

doremi



This system is called CaptiView created by Doremi Labs - Since it enables three languages, the cost of these systems can be partially offset when used with subtitles in other countries.



and Telecoil looping in auditoriums. The traditional use of Infra-red ALDs such as Williams Sound and Ultra Star Laboratories remain in place.

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CaptiView system from Doremi Labs

This is a cup-holder device that has an adjustable goose neck type arm. It was designed as a proprietary device working only in auditoriums using Doremi servers.

USL, Inc is primarily known for their ALDs in movie theatres and live performances venues. This is a small family owned company. In addition to its English and Spanish captioning system, USL also provides an assistive listening system and Descriptive Video. Descriptive narration in specially equipped auditoriums is fed via infrared or FM transmitter to a small portable receiver, enabling blind and visually impaired moviegoers to hear the descriptions on headsets from any seat in the theater.

USL Closed Captioning System (CCS)

This is an infrared system that uses a single emitter to broadcast closed captioned text and two channels of audio into an auditorium. Channel

one is "HI" (SMPTE designation for amplification device for DEAF AND HARD OF HEARING; and channel two is "VI" (for described video for blind and low vision).

USL offers two seat based options: one is mounted the cup-holder; the second is a seat mount device. They are developing captioning glasses that are in the testing phase.

Sony Access Entertainment System

This system includes caption glasses and a receiver and uses Sony holographic technology. Closed captioned data is transmitted from the digital cinema server and received by the glasses' receiver box via a radio frequency. The glasses can display



ACCESSIBLE TECHNOLOGY Continued on page 19

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ACCESSIBLE TECHNOLOGY Continued from page 18

captions and/or subtitles in six different languages.

The Sony Headphones use an additional receiver to deliver both the amplified channel and the described video channel.

The Debut of Digital Cinema Access

As with any first generation technology, there are bumps and glitches. There were issues of audience awareness, education of theatre staff on equipment use and maintenance. Also overlooked in the process was proper signage in theatres, and increased marketing and promotion of their services. On an average Friday night, as many as 30,000 moviegoers stream through the doors of theatres around the country. There is virtually no downtime to get your ticket, popcorn, take your seat, get yourself set up, trouble shoot, ask questions or swap out devices if something goes wrong before the movie starts. Theatres are encouraged to have a cheat sheet to hand out – in Los Angeles, some theatre staffers accompany you to your seat to help set it up and ensure it's working.

The next generation devices need to factor in a more user-friendly design – possibly a plug and play approach that might allow patrons to use their own smartphone or tablet and download the captions when they buy their tickets (similar to the way that some devices need to be programmed for the specific auditorium and film before you can use it).

There are many obstacles in using personal devices at this time, but issues of piracy and audience consideration

(no backlit devices) can be addressed in the manufacturer design phase.

Telecoil Looping in Auditoriums

For assistive listening, there are auditorium-based induction loop systems. This is where a thin wire is placed around the auditorium that converts audio into electro-magnetic waves. Hearing aid users can switch on their telecoil (T-coil) instead of using head phones. It is pure sound, or as much as someone's hearing allows for. It's a very cost effective way to provide superior audio without having to buy and maintain equipment.



One of the issues of loops is that it can bleed into an auditorium next door. A shield is needed to block sound passing through walls. There is a consumer movement right now to Loop America so that all places of worship, schools, pharmacies, civic centers, hospitals, airports, and other public places would install it, allowing hard of hearing users easier access to communication.

Looping systems in auditoriums could ideally be installed during renovations or the building phase of a new multiplex.

The Future of Accessibility

Two new projection technologies currently in development are UltraViolet (for mobile and home devices) and laser projection for theatres. Laser projection has long been considered the perfect solution since it doesn't use bulbs which are expensive and frequently in need of replacement. The implementation of laser projection is a ways off, but the first commercial system, built

by Christie Digital and approved by the FDA, will be installed in the Seattle Cinerama, which is owned by Microsoft co-founder Paul Allen, in early 2014.

Our Community Call to Action

Just as deaf and hard of hearing people give feedback and help troubleshoot problems with technology, so should we have the opportunity to offer our knowledge and expertise to film related manufacturers before theatre equipment is manufactured. The primary issue for us right now is to get people to go to the movies, use these devices and share their positive AND negative feedback. Whether or not you want to use accessible technology, the reality is that until theatre chains see an upswing of people using their devices, there will be no incentive to create more user-friendly equipment for the next generation of deaf and hard of hearing movie patrons.

“Whether or not you want to use accessible technology, the reality is that until theatre chains see an upswing of people using their devices, there will be no incentive to create more user-friendly equipment for the next generation of deaf and hard of hearing movie patrons.”

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(Revised (01/06/2011))



TDI In Action

December 2011 - May 2012

Editor's Note: Frequent references to other consumer groups denotes involvement and support from other leading national organizations serving deaf and hard of hearing people. This may include some or all of the following: Alexander Graham Bell Association (AGBell), American Association of the Deaf Blind (AADB), American Speech, Language, and Hearing Association (ASHA), Association of Late-Deafened Adults (ALDA), California Coalition of Agencies Serving the Deaf and Hard of Hearing (CCASDHH), Cerebral Palsy and Deaf Organization (CPADO), Communication Services for the Deaf (CSD), Deaf and Hard of Hearing Consumer Action Network (DHHCAN), Deaf Seniors of America (DSA), Hands & Voices (HV), Hearing Loss Association of America (HLAA), National Association of the Deaf (NAD), National Black Deaf Advocates, and Registry of Interpreters for the Deaf (RID). Our academic partners include the Rehabilitation Engineering Research Center (RERC) on Telecommunications Access, which comprises the Technology Access Program at Gallaudet University (TAP), and the TRACE Research Center at University of Wisconsin in Madison (TRACE).

21st Century Communications & Video Accessibility Act of 2010:

Video Programming Access Advisory Committee (VPAAC):

The IP captioning rules have been released and published on the Federal Register on March 30, 2012, thus making the rules effective April 30, 2012. The first benchmark fell on September 30, 2012 when prerecorded programs that have been shown on television with captions and then shown online, must include captions. The next benchmark came on March 30, 2013, which applied to live and near-live programming airing within 24 hours of taping. As of September 30, 2013, prerecorded programs that have been edited for the Internet must be captioned. On March 30, 2014 archival programming that aired before the effective date must be captioned. There will be a grace period for the video programming owner, producer or distributor to come into compliance with the rules within 45 days. On the same date in 2015, the grace period shrinks to 30 days and then again to 15 days in 2016. Devices that display video must begin to support captioning (with most of the features available to digital television captioning - CEA 708) no later than January 1, 2014. The consumer groups supported the entire ruling for the most part, except for two items. We have already filed a motion

for reconsideration on two items - coverage of video clips and requiring synchronization of captioning on devices.

Since VPAAC has completed its work on IP captioning, most of the work is now focused on the other issues such as video description, emergency information, and user interfaces. The FCC has set up a Wiki Spaces page where you can monitor the progress of VPAAC from time to time at <http://vpaac.wikispaces.com/>

- On February 8, 2012, Executive Director, Claude Stout and other national consumer advocates participated in a meeting sponsored by Google to discuss IP captioning performance objectives, video interoperability, and other VPAAC working group recommendations for IP captioning.

Emergency Access Advisory Committee (EAAC):

The EAAC Committee issued its recommendations, which included quick implementation of Text-to-911 services where anyone with wireless texting capabilities could call 9-1-1 and send an SMS message to the nearest PSAP. Major selling points for this feature are direct access for deaf and hard of hearing people, and a way to call 911 in situations when speaking would put callers in danger. Texting only needs a wireless telephone connection, available everywhere.

Unfortunately, the Association

of Telecommunications Industry Solutions (ATIS) countered the Text-to-911 concept with a report endorsing IP Relay to 911 instead. The major drawback of IP Relay is less reliability because it introduces a third party into the system. To use IP Relay, you would need robust Internet access, which is not always available in rural areas, and certain inner city neighborhoods. In response, the FCC hosted an Accessibility exhibition where ten to fifteen vendors showcased their text-to-911 technologies.

Shortly thereafter, Verizon announced that it will implement the service on its own wireless networks in a partnership with TeleCommunication Systems. The EAAC Committee has its own Wiki at <http://eaac-recommendations.wikispaces.com/>

- On December 12, 2011, TDI and other Consumer Groups filed comments with the FCC urging that the transition to NG911 systems and the implementation of interim text-to-911 solutions be accelerated. See <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021750414> Reply comments were filed by TDI, et al on February 9, 2012. <http://apps.fcc.gov/ecfs/document/view?id=7021859193>

Advanced Communication Services (ACS):

TDI is currently working on several proceedings on advanced

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TDI In Action

December 2011 - May 2012

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communication services. With Bingham's support, TDI and other consumer groups filed comments and reply comments responding to an NPRM issued by the FCC, which led to a Report and Order. While we were pleased that they made clear to advanced communication equipment manufacturers and service providers offering electronic messaging and non-interconnected and interconnected VoIP communications that the equipment and software for the operating systems within the devices are accessible to people with disabilities. Software downloaded by consumers from third party developers are not required to be accessible.

■ On January 30, 2012 TDI and its academia partners, (TRACE and TAP) filed for partial reconsideration with the FCC regarding its report and order, and further notice of proposed rulemaking that was issued on October 7, 2011. Specifically, the commenters contend that the Commission incorrectly concluded that the CVAA does not impose regulatory obligations on providers of software that the end user acquires separately from equipment used for advanced communication services. <http://apps.fcc.gov/ecfs/document/view.action?id=7021857329>

■ On February 13, 2012, TDI and other consumer groups submitted comments to the FCC in response to its NPRM on advanced communication services addressing exemptions for small businesses and defining interoperable video conferencing services. <http://apps.fcc.gov/ecfs/document/view.action?id=7021860096>

This was followed up by an ex parte meeting on March 7, 2012 by TDI, NAD and TAP with officials of Consumer and Governmental Affairs Bureau at the FCC followed by reply comments reiterating the consumer groups' opposition to the ACS exemptions.

Comments: <http://apps.fcc.gov/ecfs/document/view?id=7021898813>

Reply comments: <http://apps.fcc.gov/ecfs/document/view?id=7021900506>

VRS Reform:

Throughout the winter and spring, there were a number of meetings between officials at the FCC on the eighth floor, the staff of the Consumer and Governmental Affairs Bureau, and representatives of consumer groups, including TDI, NAD, ALDA, and CCASDHH. These meetings were primarily focused on the FCC's serious consideration of shifting to a new methodology to reimburse vendors for provision of VRS. Currently, FCC reimburses VRS providers on a per-minute method, and they are strongly considering implementing the per-user method. We have continued to express some strong reservations about this new method. We have filed comments and reply comments for the FCC's NPRM on VRS reforms. Basically, we were asking that we stay with the per-minute method to reimburse VRS providers, but that we are open to their shifting to a new method, which ZVRS is advocating for, a hybrid method. The hybrid method would use a half of the per-minute method, and a half of the per-user method. Here is how this would work, according to ZVRS: the VRS providers would get a certain sum per month for the number of customers that pick them as default providers, but when the customers

make calls via VRS, the providers that handle the calls would get the per-minute reimbursement for these calls. In this scenario, we would be able to dial around if the default provider doesn't respond in a timely manner, or is not providing us quality service. The VRS providers would have the incentive to maintain and expand their own clientele, as well as to generate a larger monthly call volume from providing the VRS services for their regular and special customers. This would hopefully give the providers the incentives to maintain or improve their quality of VRS services.

■ On January 20, 2012, Stout took part in the taping at Gallaudet TV Studio with other key consumer advocates, FCC officials, and industry representatives to give views on the key aspects of the FCC's NPRM on VRS reforms. The production was done by www.ideafornews.com

■ On February 8, TDI, NAD, and ALDA met with officials of Consumer and Governmental Affairs Bureau, FCC to discuss a number of details with the VRS NPRM. <http://apps.fcc.gov/ecfs/document/view.action?id=7021859001>

■ Again, on February 15, TDI and NAD filed expartes with FCC on their participation in the roundtable discussion on February 13 with FCC officials and other stakeholders on the VRS NPRM. <http://apps.fcc.gov/ecfs/document/view.action?id=7021860515>

■ On March 1, TDI and other groups were represented in a meeting with officials of Consumer and Governmental Affairs Bureau and Office of

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Strategic Planning, FCC to discuss a possible hybrid rate structure for reimbursement to VRS providers, and other concerns with the VRS FNPRM on proposed reforms for its Video Relay Service program. <http://apps.fcc.gov/ecfs/document/view?id=7021898206>

- This was followed by another meeting on March 5 where TDI and other stakeholders had a meeting with officials of Consumer and Governmental Affairs and Wireline Competition Bureaus at the FCC to discuss a number of details with the VRS NPRM.

<http://apps.fcc.gov/ecfs/document/view?id=7021898205>

- TDI and nine other consumer groups filed comments with the FCC for its FNPRM on VRS reforms on March 9. <http://apps.fcc.gov/ecfs/document/view?id=7021899659>
- Then on March 14, TDI and other consumer groups met with representatives from the VRS industry at NAD to review the industry's response to the consumer groups' recent comments to the FCC on its VRS NPRM. The industry also shared their own individual corporate comments for the NPRM.
- On March 30, TDI signed on with DHHCAN and other consumer groups on reply comments with the FCC for its FNPRM on VRS reforms. <http://apps.fcc.gov/ecfs/comment/view?id=6017027377>
- On May 31, TDI joined DHHCAN and other consumer groups and submitted a joint exparte letter to address a few additional topics raised in reply

comments in the FNPRM on VRS structure and practices. <http://apps.fcc.gov/ecfs/document/view?id=7021921072>

Television Closed Captioning Exemptions:

- On December 1, 2011, TDI and five other groups submitted comments to the FCC supporting its proposal to change the language in its rules to reflect the CVAA's "economically burdensome" language while continuing to apply section 713(e)'s four-factor standard to petitions for individual captioning waivers. <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021748970>
- Between January and May 2012, TDI and other consumer groups filed their opposition with the FCC to petitions from 23 video producers seeking to exempt their programming from the Commission's closed captioning rules.

IP Captioning Petitions for Reconsideration:

- Following the FCC's IP captioning order, TDI and other consumer groups filed a petition for reconsideration of the Commission's decisions to exclude video clips from the IP captioning rules and not to impose captioning synchronization obligations on hardware manufacturers. Simultaneously we had to prepare opposition to industry petitions for reconsideration that would have harmed our interest in full

access to captioned programming. Some of those petitions are for "blanket waivers", which ask that specific categories of devices be exempt for two years, regardless of manufacturers, much like what the infamous Anglers Order did for TV programming. This is different from previous individual waivers where a company asks for more time to bring specific products into compliance. TDI and its pro-bono attorneys also coordinated several ex parte meetings with FCC staff and industry members regarding the Commission's rulemaking on Internet-protocol closed captioning.

- On December 2, 2011, TDI and others signed on to an exparte comment by NAD addressing entities subject to Section 202(b) and their obligations in the matter of Closed Captioning of Internet Protocol-Delivered Video Programming in the implementation of the 21st Century Communications and Video Accessibility Act of 2010. <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021749104>
- On December 14, TDI and other consumer groups plus TAP at Gallaudet had a follow-up meeting with officials from the Media and Consumer and Governmental Affairs Bureaus at the FCC to go over some details in the NPRM on closed captioning of Internet Protocol-delivered video programming. <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021750876>
- Shortly afterwards, TDI the same parties followed up with officials under four different

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Commissioners – Genachowski, Copps, Clyburn, and McDowell – at the FCC on December 19 to discuss details of the NPRM on closed captioning of Internet Protocol-delivered video programming. <http://fjallfoss.fcc.gov/ecfs/document/view?id=7021751452>

- After the holiday season on January 9, 2012, TDI and other groups met with the staff from FCC Commissioner Mignon Clyburn's office on the "video clips" issue, a few days prior to the FCC's report and order with its IP-captioning rules. See <http://apps.fcc.gov/ecfs/document/view.action?id=7021753361> and <http://apps.fcc.gov/ecfs/document/view.action?id=7021753493>

- On February 24, TDI and other consumer groups with TAP met with officials of the Media, and Consumer and Governmental Affairs Bureaus at the FCC to discuss the video clips issue with its IP-captioning rules to ascertain whether any combination of video, distribution service, and player might fall into unanticipated gaps between the new rules under sections 202(b) and 203 of the CVAA, and the revised standards for economic burden exemptions in the IP and TV contexts.

<http://apps.fcc.gov/ecfs/document/view.action?id=7021865346>

- On April 27, TDI and other groups officially filed a petition for reconsideration with the FCC on its Report and Order in the matter of Closed Captioning of Internet Protocol-Delivered Video Programming in the Implementation of the Twenty-

First Century Communications and Video Accessibility Act of 2010 (CVAA). In this petition, we urged the FCC to require "video clips" to be captioned, and that the timing and synchronization obligations be extended to device manufacturers under section 203 of the CVAA. Below are several parts to the petition.

<http://apps.fcc.gov/ecfs/document/view?id=7021914512>

<http://apps.fcc.gov/ecfs/document/view?id=7021914513>

<http://apps.fcc.gov/ecfs/document/view?id=7021914514>

<http://apps.fcc.gov/ecfs/document/view?id=7021914515>

<http://apps.fcc.gov/ecfs/document/view?id=7021914516>

- On May 29, TDI submitted its comments to the FCC Office of Managing Director on whether certain revised information collections by the FCC related to IP closed captioning and apparatuses satisfy the requirements of the Paperwork Reduction Act of 1995.

<http://www.reginfo.gov/public/do/DownloadDocument?documentID=326149&version=0>

Copyright Exemption:

- On December 1, 2011, TDI, Gallaudet University, and the Participatory Culture Foundation filed a proposal in its comments, as well as reply comments, with the U.S. Copyright Office in the Library of Congress to exempt the proposed categories of works including creating or enhancing accessibility features in video programming from the anti-

circumvention prohibitions of the Digital Millennium Copyright Act ("DCMA").

- On February 10, 2012, NAD, HLAA, and CCASDHH filed their own comments supporting the above referenced proposal that some classes of works be exempted from prohibition against circumvention of technological measures that control access to copyrighted works (captioning of video programming via a number of venues). <http://nad.org/news/2012/3/nad-files-comments-copyright-exemption-captions>
- On March 2, the original parties, TDI, Gallaudet University, and Participatory Culture Foundation filed reply comments with the U.S. Copyright Office to recommend that the Librarian grant four exemptions from the anti-circumvention measures of the Digital Millennium Copyright Act for motion pictures and audiovisual works delivered via Internet Protocol or fixed disc-based media for the purpose of improving accessibility, or in the alternative, a broader accessibility-oriented exemption for several classes of work. http://www.copyright.gov/1201/2012/comments/reply/tdi_gallaudet.pdf

Consultation for A Filing by Public Interest Public Airwaves:

- TDI filed comments regarding the Enhanced Disclosure Proceeding under the Standardizing Program Reporting Requirements for Broadcast Licensees docket

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on January 27, 2012, and filed reply comments on February 9, encouraging the Commission to require stations to disclose information on captioning activities and the accessibility of emergency information. In our comments we asked that television broadcasters disclose which programs were not captioned and why. We feel this will tell us more than just merely asking which programs are captioned.

- Comments: <http://apps.fcc.gov/ecfs/document/view?id=7021857027>
- Reply Comments: <http://apps.fcc.gov/ecfs/document/view?id=7021859246>
- TDI filed comments with FCC on April 23, on whether certain existing and proposed information collections by FCC related to closed captioning of video programming satisfy the requirements of the Paperwork Reduction Act of 1995 (PRA). <http://apps.fcc.gov/ecfs/document/view?id=7021913002>
- On May 14, TDI filed comments and other consumer groups signed on, with the Media Bureau at the FCC in response to a petition initiated by Sky Angel to adopt a common-sense interpretation of multichannel video programming distributors ("MVPDs") that deliver what consumer understand to be multiple "channels" of programming. We also urged the Bureau to reject a technical interpretation of MVPDs that would depend on a narrow, cable-specific understanding of "channels." <http://apps.fcc.gov/ecfs/document/view?id=7021917779>

Telecommunication Access:

- On December 4, 2011, TDI issued an eNote to commend TRS providers such as AT&T, Convo, Hamilton, Purple, Sorenson, Sprint, and ZVRS in showcasing their innovative mobile apps for deaf and hard of hearing at the M-Enabling Summit.
- On January 12, 2012, TDI and other consumer groups, including the RERC on Telecommunications Access signed onto comments by HLAA filed with the FCC regarding adoption of the most current hearing aid compatibility standard into the Commission's rules.

http://www.hearingloss.org/sites/default/files/docs/HLAA_Comments_ANSI_HAC_Standards_WT_07-250.pdf

- On February 15 and 27, 2012, TDI went to Capitol Hill with NAD and National Association of State Relay Administrators (NASRA) to meet with the staff of the Senate Finance Committee and the office of U.S. Senator Ron Wyden (D-OR). The meetings were to request an exclusion for TRS in the proposed Wireless Fairness Tax Act legislation that would make it possible for states to levy TRS surcharges on wireless and VoIP carriers.
- In Annapolis, Claude Stout testified before two key committees within the Maryland state legislature supporting Senate Bill 746 and House Bill 1087 on March 6 and March 8, respectively that would authorize the state to require that VoIP and wireless carriers impose a surcharge on their customers' monthly bills to cover the costs of providing

intrastate relay services.

- On March 20, TDI and other consumer groups filed comments with FCC regarding misuse of Internet Protocol (IP) Relay Service. <http://apps.fcc.gov/ecfs/comment/view?id=6017026018>
- On May 3, Stout participated in a meeting at the FCC on captioned telephone relay services. The meeting was initiated by HLAA because a company, Miracom had approached them as well as TDI, and shared its frustrations with delays regarding pending certification to provide Captioned Telephone Service (CTS) under its InnoCaption label. FCC said they want the CTS industry to come up with some standards before any consideration of new CTS applications.
- On May 31, Representatives from TDI and other consumer groups met with officials of Office of General Counsel, and Consumer and Governmental Affairs Bureau, FCC on several issues related to fraud and abuse of Internet Protocol Relay Service. <http://apps.fcc.gov/ecfs/document/view?id=7021921554>

Emergency Preparedness

- On December 5, CEPIN sent out an eNote as a way of distributing a survey by the Interagency Coordinating Council on Emergency Preparedness and Inclusion for People with Disabilities to gather data on people's experience during an earthquake that struck the mid-Atlantic states.

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Excerpts of Claude L. Stout's Remarks for the Farewell Program for Commissioner Michael J. Copps

Federal Communications Commission

December 13, 2011

It is truly a pleasure to be here with Commissioner Copps, his family, and his friends. I was asked to speak on behalf of two groups of Americans citizens who are grateful for his services – the Native American community, and the disability community. I am honored to do this task, as I have been deaf all my life, and I am happily married to a wonderful Native American, my wife, Judy.

As many of you know, Commissioner Copps has a long track record of working to close the digital divide on Tribal lands--where it is arguably at its worst. Often referring to the lack of services in Native American Tribal communities as a "national disgrace that hurts us all," his focus on the needs of Tribal Nations and his government-to-government work with them has been tireless.

.....

Commissioner Copps has made as one of his top priorities, an enormous commitment to meeting the needs of the disability community, and it has been a wonderful ten-year partnership between him and us in the disability community. Disability advocacy is not limited to just one level, those who work for non-profit groups to represent various sectors of the disability community. It comes from a number of levels, be it the President of the United States, a U.S. House Representative or Senator, a Commissioner or a staff member

from within a federal agency, parents who have children with disabilities, service providers who work with clients with disabilities, a government official designated to enforce access policy, an industry representative with the responsibility to ensure we get access with its company's products and services, and most of all, the person with a disability.



FCC Commissioner Michael Copps

Copps jumped into the effort, without hesitation after when he spoke at the TDI Conference in Sioux Falls, South Dakota in the summer of 2001. He said eloquently, "Every American is a stakeholder in communications because each of us is affected in so many important ways by how the public spectrum is used. Our freedoms, our diversity and our

values all come into play."

TDI was honored when he came once again to speak at our recent Conference last June in Austin, Texas. We presented him the Karen Peltz Strauss Public Policy Award, an award that goes to a distinguished individual who has made outstanding contributions to improving accessibility to telecommunications, media, or information technology in the U.S. through efforts in public policy development. Upon accepting the award, he said, "For broadband to work it has to be available to all and be utilized by all. Its premise is accessibility to everyone--no matter who they are, where they live, or the particular circumstances of their individual lives. Access to high-speed, high-value broadband is a defining right of this new age. Let's treat it as a civil right because that's how it should be seen."

We are very proud of the progress the FCC has made in the ten years under his active leadership and efforts. We had a smooth transition from analog to digital television, and while he was Acting Chairman for a few months, he convened a technical working group to work on captioning issues that arose as a part of the transition. Today, the FCC is addressing disability access on all fronts from within the Commission, not just from one office, the Disability Rights Office. Commitment and sensitivity to addressing all kinds of disability access is at a high record-breaking level today. It warms

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- Over the next few months, CEPIN sent out several eNotes addressing the safe use of candles as an inexpensive source of heat and light, publicizing FEMA's 2012 Ready Toolkit, fire escape planning, and the dangers of carbon monoxide poisoning.

TDI Activities

- On December 13, 2011, Claude Stout gave farewell remarks representing the disability and Native American communities for departing FCC Commissioner Michael Copps at the FCC. (Excerpts of presentation on previous page.)
- Just before the holidays, TDI issued an eNote to reflect on the accomplishments of TDI during the year 2011, and to introduce a video done by two MSSD student interns, Oliver Lee and Mika Bennett-Fraychineaud, followed by another year-end eNote thanking sponsors for supporting TDI during its annual Holiday Party.

- In the new year on January 5, 2012, TDI and other groups signed on to comments filed by NAD with the U.S. Department of Transportation on proposed rules concerning accessibility of air travel web sites and kiosks at U.S. Airports. <http://nad.org/news/2012/2/nad-comments-accessibility-airlineairport-websites-and-kiosks>
- Later on in March 7, TDI and other groups signed on to comments by NAD filed with the U.S. Access Board relating to a rulemaking on its standards for electronic and information technology as well as its guidelines for telecommunications accessibility. <http://www.regulations.gov/#!documentDetail;D=ATBCB-2011-0007-0033>
- On May 3, Stout was taped at Gallaudet TV Studio for a segment on the history of TRS for a federal project related to interpreting services for Vocational Rehabilitation clients.



Rob Engelke

- On May 17 and 18, Stout took part in Ultratec, Inc.'s celebrations honoring the achievement of its Founder and President, Robert Engelke, who received an honorary degree in humane letters from the University of Wisconsin at Madison.

- On May 25, TDI issued an eNote congratulating Mike Ellis on his receiving the Sprint Legends Award, one of the highest honors given from Sprint to one of its own executives who have significantly contributed to the company, the telecommunications industry, and the community.



Mike Ellis

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his heart to hear that those of us who use sign language and using Video Relay Service can now have seamless, natural conversations with our hearing counterparts. He is elated when senior citizens who lose their hearing later in life, can easily resort to using hearing aid compatible phones, and know that captioned telephone relay services are available to keep them in touch

with their families and friends over the phone. He is inspired, knowing that Americans who are deaf-blind will soon for the first time benefit greatly from the FCC's new national deaf blind telephone equipment distribution program. They will no longer have to pay \$5K to \$7K to get a Deaf-Blind Communicator device. He feels more assured that the blind community is benefitting from having some "talking" phones, either high-end or low-end, with audible

menus that cater specifically to their mobile needs, and soon they will no longer be frustrated in accessing televisions with simple interfaces and menus to enjoy more and more programs with video descriptions.

Commissioner Copps, you are truly a champion for native Americans and people with disabilities across the country. We want to thank you for a job remarkably well done in the ten years at the FCC. And we wish you a happy retirement.

Introducing BlackBerry 10

Accessibility menu

Customize your accessibility settings and quickly access features such as TTY settings from the dedicated Accessibility menu.

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Use the front-facing camera for face-to-face video chat with BBM Video.

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Communicate on the go with contacts who are using phones or other mobile devices that support SMS and/or MMS¹.

Hearing aid compatibility

Certain models are rated for use with hearing aids².

Alerts and notifications

Customize your alerts and notifications using tone, vibrate, on-screen alerts or the LED indicator.

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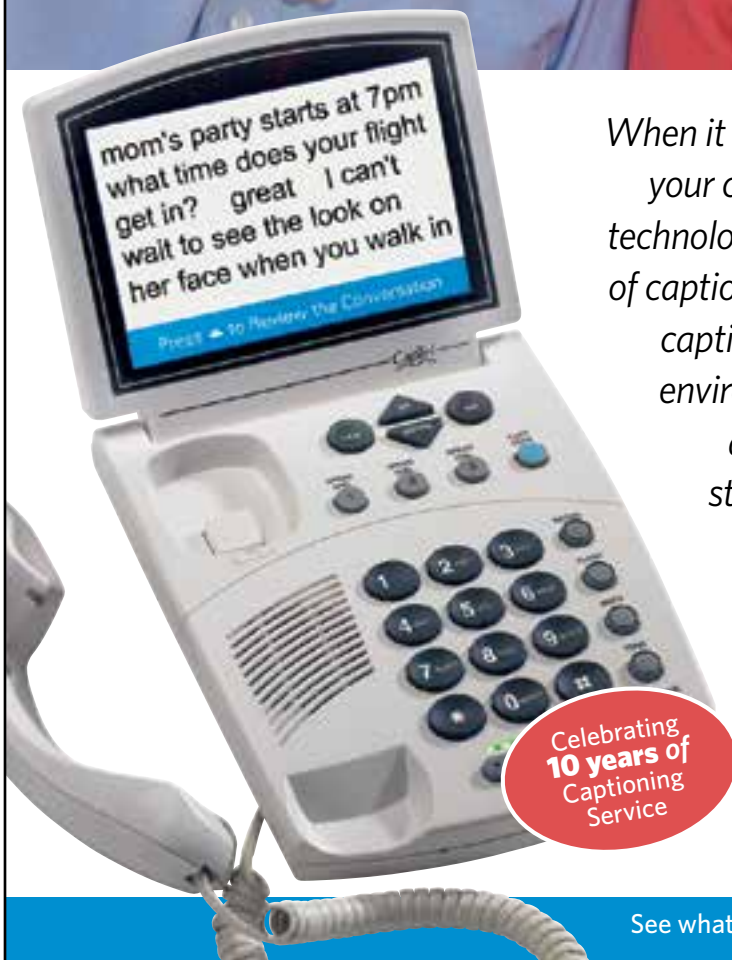
¹Data plan required. Check with your service provider for pricing and details.

²For a list of BlackBerry models rated for use with hearing aids visit blackberry.com/accessibility.

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