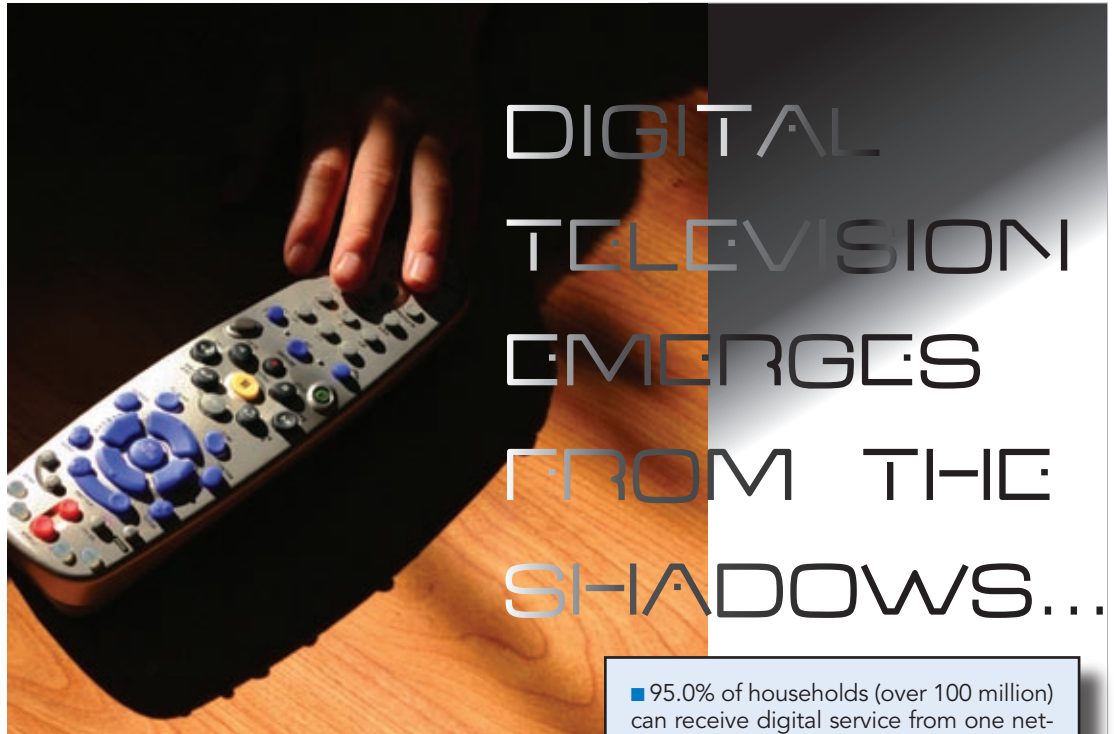


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Advanced  
Television  
Systems  
Committee  
Inc.

News from ATSC, Volume Six, Issue Three, November 2005



## and Consumers See the Light

There are now 1,525 digital stations, serving 211 markets in the United States,\* and television stations across the nation are using DTV to provide the public with stunning HDTV pictures and sound, new multicast program services, and data broadcasting. Proof positive that ATSC DTV technology is fulfilling the promise of the digital television transition to provide new services to the public.

ATSC member company, Decisionmark, has been monitoring the digital transition since the first station went live in 1996 (ATSC Member, WRAL, Raleigh-Durham, N.C.). Decisionmark data shows that the percentage of U.S. households able to receive one or more local network digital broadcast signals nearly equals that of current local analog broadcasts. Specifically, just over 95% of U.S. households are able to receive one or more local network stations in the digital broadcast format.

The future of ATSC DTV is clearly bright. The Consumer Electronics Association (CEA) forecasts sales of approximately 135 million integrated ATSC receivers by the end of 2009. ■

- 95.0% of households (over 100 million) can receive digital service from one network broadcaster
- 91.1% of households (over 96 million) can receive digital service from two or more network broadcasters
- 85.1% of households (over 89 million) can receive digital service from three or more network broadcasters
- 73.9 % of households (over 77 million) can receive digital service from all four major networks broadcasters

(\*Nationwide statistics provided by Decisionmark)

*"Occasionally it's good to take a step back from your every day efforts and assess what you have accomplished. When we consider the magnitude of the DTV implementation effort, the industry's accomplishments are nothing less than extraordinary. Networks and local broadcasters have introduced an array of new services for the public, and the consumer electronics industry continues to bring innovative, cost-effective products to the market place. These new services and products are made possible because of the dedicated companies and individuals who have worked to develop the ATSC DTV suite of standards and recommended practices that propel the industry forward."* – Mark Richer, President, ATSC

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## It's Crystal Clear...

### Broadcasters Continue to Bring DTV to the Home Front

#### CBS in Fifth Year of Prime-Time HD

The CBS Television Network has completed its fifth year of all prime-time scripted entertainment programming in HDTV. CBS sister network, UPN, is rapidly catching up with 60 percent of scripted prime-time entertainment broadcast in HDTV, and this year, *Late Night with David Letterman* switched to HDTV. Additionally, CBS is now producing the major prime time shows with 5.1 channel surround sound, providing excellent sound quality that matches the enhanced video.

Additional HDTV programming in 2005 included the US Open Tennis Championship and the golf Master's Championship – both which provided exceptional HDTV coverage and exciting finishes. And, with the penetration of HD television sets in consumer homes, digital broadcasting of college football is also rapidly gaining ground. ■



Late Night with David Letterman. This image is the exclusive property of CBS Broadcasting Inc. and may not be archived, leased, sold or distributed in any fashion without consent from CBS. CBS©2004

#### ABC Broadcasts 75% of Prime-Time in HD

ABC currently broadcasts all prime time dramas, comedies, and theatrical movies, typically around 75 percent of the 22 weekly prime time hours, in high definition. Hit shows like *Lost*, *Desperate Housewives* and *Grey's Anatomy* may be viewed in HD where available. Additionally, Monday Night Football, NBA games and other sports programming are available in HD, as well as special events such as the Academy Awards.

This month, *Good Morning America* went HD in the Eastern Time Zone – reaching some 38.6 million TV homes. By February, the technical ability to do separate feeds of GMA in the Central and Mountain time zones should be in place. Recognizing that the aural component is a very important part of the HDTV experience, ABC offers all HDTV programming in 5.1 channel sound.

Currently, 133 ABC affiliate stations, serving about 93 percent of U.S. television households, broadcast ABC HDTV programming. About 65 percent of that potential audience enjoys HDTV with 5.1 channel sound. ABC HDTV is also available to many cable subscribers throughout the U.S., and to DirecTV subscribers in the ABC owned station markets. ■



ABC Prime Time Series "Lost." This image is the exclusive property of ABC Broadcasting Inc. and may not be archived, leased, sold or distributed in any fashion without consent from ABC.

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## Broadcasters Continue to Bring DTV to the Home Front...

### FOX Tops 1,000 Hours of HD Programming

The FOX Network launched its 720p high definition (HD) service on September 12, 2004 with a full schedule of prime time HD, as well as HD NFL games on Sunday. To accomplish this, FOX, along with Thomson and Terayon, developed an MPEG splicer system that is deployed at 120 FOX DTV affiliate stations and covers over 90 percent of TV households.

Since its inception, FOX has broadcast over 1,000 hours of HD including the 2004 World Series, Super Bowl XXIX in February 2005 and all NASCAR races in 2005. Number one hit series, American Idol, is broadcast in full 720 progressive HD video, and also incorporates Dolby Digital 5.1 Surround Sound. The FOX Splicing system allows for the best MPEG encoding of network programs, and provides seamless integration of local content. In addition, the splicer provides for transmission of up to two standard definition (SD) channels along with the HD program during prime time, and one SD channel during sports broadcasts. The BP5100 has the ability to overlay logos, bugs and station ID information without suffering full decompression/re-compression of the HD video



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signal. Another unique feature of the system is the ability to merge local PSIP data with network PSIP data. FOX continues to improve its HD quality and plans to upgrade to dual pass MPEG encoding by the end of this year. ■



The Supernatural. This image is the exclusive property of The WB and may not be archived, leased, sold or distributed in any fashion.

### The WB Delivers 1080i High Definition Programming in 2005

The WB entered the 2005-2006 with all scripted programming now produced in 1080i HDTV, with the exception of two legacy series. This fall, The WB will take viewers on a completely new kind of thrill ride with The Supernatural – a journey into the dark world of the unexplained that delivers the shivers in full HDTV. Other new HDTV shows included in the fall line up are Related and Twins. With the addition of these three new shows, the percentage of non-kids HDTV programming on The WB jumps to approximately 80 percent. As of November 2005, 76 of the WB affiliates are on the air in 99 markets transmitting 1080i HDTV. ■

### Canadian DTV Transition

Canada's transition to digital HDTV continues on pace. Broadcasters are on the air in Toronto, Vancouver and Montreal, with more services planned for the coming year. Pay and specialty services like sports, movies and feature programming are also delivering HD services via cable and satellite.

Canadian distributors are also providing the full range of American over the air services to their customers. HD set sales continues to match those in the US on a per capita basis. Increasingly Canadian producers are producing content shot electronically in High Definition. All in all substantial progress has been made in the last year, but in comparison to their American cousins, the Canadian industry still has work to do. ■

– Mike McEwen, CDTV

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## Broadcasters Continue to Bring DTV to the Home Front...

### NBC Broadcasts 25 Hours Weekly in HD

NBC has been a pioneer in HDTV programming – launching the first regularly scheduled HDTV program in April 1999, with *The Tonight Show With Jay Leno*. Today, the NBC network broadcasts all scripted prime time and late night programming, and most sporting events in HDTV – averaging over 25 hours per week of HDTV programming. Since the Fall 2004 season, all HDTV prime time shows are also presented in full 5.1 channel surround sound. The most recent addition to NBC's HDTV programming lineup is *Saturday Night Live*, which launched in October 2005.

NBC began sports programming in HDTV in 2000, with the NBA All-Star Game. NBC's coverage of the Olympic Games began with the winter games at Salt Lake City in 2002, and each of the games since has had increasing amounts of HDTV coverage. Other notable sporting events covered in HD include NASCAR racing and the Triple Crown horse races.

In 2003, NBC launched an all-HDTV movie channel, Universal-HD, that is distributed over cable and satellite. And in 2004, NBC launched the first commercial DTV multicast channel – NBC Weather



NBC Weather Plus. This image is the exclusive property of NBC and may not be archived, leased, sold or distributed in any fashion.

Plus – which provides national, regional and local weather information in cooperation with NBC owned and affiliated broadcast stations. ■

### Public Television Offers Four New DTV Services

Viva TV, World, Create and PBS Kids Go! are the next generation of public television programming slated to be made available as part of local public television stations' multicast offerings, in addition to an expanded PBS HD. Some of these innovative services target communities and interests under-represented in the single channel world.

Scheduled for HD broadcast in December is, "Christmas with the Mormon Tabernacle Choir," featuring Audra McDonald and Peter Graves. In January, the HDTV four-part series, "The War That Made America," will focus on the critical military importance and strategic diplomacy of Native Americans in the conflict between the English and French for the expansion of their colonial empires during the French and Indian War.

John Lawson, president and CEO of the Association of Public Television Stations (APTS) said, "This exciting programming will be available for free to anyone with a DTV receiver, and to digital cable subscribers... over the next few years, even more services with different programming that appeals to different audiences will be developed and presented by digital public stations. ■



Mormon Tabernacle Choir. This image is the exclusive property of PBS and may not be archived, leased, sold or distributed in any fashion.

## Finegan Standards Medal

Mark K. Eyer, Sony, an active participant in the ATSC Technology and Standards Group (TSG), is the recipient of the Finegan Standards Medal, which honors an individual who has shown extraordinary leadership in the actual development and application of voluntary standards. Mr. Eyer's career has spanned more than thirty years with over a decade devoted to standards work. He is director of the technology standards office at Sony Electronics, chair of the Advanced Television Systems Committee (ATSC) Transport Group, a contributing member of the Society of Cable Telecommunications Engineers (SCTE) and a member of multiple committees of the Consumer Electronics Association (CEA).

## Local News in HD...The Future is Now

One of the most important aspects of a broadcast television station operation is to provide local news, weather and traffic to its community. It's natural that the conversion of local news to HDTV would be an important and exciting step in the DTV transition, and stations across the country are now providing their local news in HDTV.

WUSA 9 in Washington, D.C. became the first television station in Washington, D.C. to present its local live newscasts in HDTV. From buying new studio cameras to stringing miles of cable throughout, the station has literally been rebuilt from the ground up. The advancement is historic for WUSA 9, as the station is not only launching its newscasts in HDTV, but is also launching a new era in Washington D.C. television.

"We're excited to be the leaders in this new technology. HDTV provides our viewers with a dramatic, vibrant and sharp viewing experience. It's like giving them a front row seat in our studio," said Darryll Green, President and General Manager of WUSA-TV.

WUSA broadcasts over 35 hours of HD news and, while most viewers recognize that HDTV incorporates a wider 16:9 ratio format, the most amazing change is actually the clarity of the video. Even those viewers who don't have HDTV sets enjoy the benefit of a clearer, sharper picture.

Production manager, Victor Murphy, has been instrumental in the WUSA transformation to HD and has implemented the technology so that NTSC viewers are not left behind. Video and graphics are provided in 16 x 19 format, but all critical information still remains in a 4 x 3 safe format.

Anchor, Mike Walters, will tell you most anchors have no idea how their image gets from the news set to the television set, and admits that while he is not any different, he can see the dramatic changes the industry is making. Walters noted that the HD transition at WUSA is already fueling viewer interaction because he hears more com-



ments from HDTV viewers than analog viewers. Comments from viewers span the spectrum, and range from what's working and what's not, to clothing that 'pops' and colors that don't. But one thing the comments all have in common is that, while most initially tune in to WUSA-TV 9 because they're mesmerized by high definition and the beautiful picture, they remain tuned in because the programming is informative, welcoming and entertaining. So, while some things may have changed at WUSA, their mission has not – to provide the best quality programming for all their viewers by embracing the future of television. ■



*"Everyone points to broadband as the future, but TV was broadband before broadband was cool. There can be little doubt, HDTV is the future of television, and thankfully at WUSA-TV, the future is now."*

-Mike Walters, WUSA-TV 9 News Anchor



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The ATSC is an international, non-profit organization developing voluntary standards for digital television. The ATSC has member organizations representing the broadcast, broadcast equipment, motion picture, consumer electronics, computer, cable, satellite, and semiconductor industries.

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## Welcome Wagon

ATSC would like to welcome the Leader Instruments Corporation to the ATSC family. ATSC eagerly anticipates their contributions to the DTV standards currently being developed in the ATSC, and we know their participation will have an immeasurable effect on the future of digital television. ■

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### ACAP Goes Live in Mexico

Mexico's Televisa has made the first transmission and demonstration in Mexico of the recently approved ATSC ACAP (Advanced Common Application Platform) standard. ATSC members Televisa, and Aircode, announced they successfully conducted an ACAP test broadcast.

Since August 30th, they have provided live transmission of ACAP services throughout the entire city using the Pico Tres Padres state-of-the-art transmitting station. The two companies are working together to evaluate the potential applications of this technology. They have successfully demonstrated datacasting to personal computers and real-time interactive television based on the ATSC ACAP Standard. Both of these services are a part of the digital broadcasting service roadmap which guides Mexican terrestrial broadcasting stations.

Among the applications currently in service in Mexico, are on-screen information during HDTV soccer matches, programming with interactive puzzle games, real-time information services, TV commerce and audience polling. ■

### Public Television and FEMA Join Forces

With the help of The Department of Homeland Security's Federal Emergency Management Agency (FEMA), the federal government's program manager for the national Emergency Alert System (EAS), along with the Department's Information Analysis and Infrastructure Protection (IAIP) Directorate, the Association of Public Television Stations (APTS) have joined other federal departments and agencies, and several private communication companies and broadcasters, for a series of tests using digital technology to improve America's alert and warning system.

The tests were part of a one-year pilot project to demonstrate how the Department of Homeland Security can improve public alert and warning during times of national crisis through the use of local public television's digital television broadcasts. Utilizing the digital capabilities of the nation's public television stations, and the voluntary participation of cell phone service providers, public and commercial radio and television broadcasters, satellite radio, cable and internet providers, and equipment manufacturers, the tests became the beginning of the Integrated Public Alert and Warning System (IPAWS) program designed to provide critical life saving information to the nation in a timely and effective manner.

Information datacast by a public television station can be received in homes, schools and workplaces via a TV tuner card connected to a computer, a set top box or a digital television set. Datacasting has the unique capability to reach thousands of people in an emergency. It also provides public safety personnel access to information, and the capacity to immediately send emergency storm alerts, weather information, criminal profiles and updates, and other time-sensitive materials instantaneously to computers with DTV tuner cards around the state. ■