



HPA 2009 Broadcasters' Panel

Jim Starzynski

DTV Transition

Cooperate With Government

- All NBC owned and operated stations are broadcasting analog until June 12.
- Continuing consumer outreach and education efforts...
- Additional 4 months of electrical cost, this figure varies with the station
- Newer WNBC analog transmitter hardware assets remain on the books until fully depreciated
- 2 Telemundos switching off analog Feb 17
- Due to tower scheduling, 2 stations may move to digital earlier in June.

Mobile DTV



Intro – What's It All About?

- Live TV that can be received on mobile and portable receivers
- Uses TV stations' spectrum and DTV signals
- Leverages existing investments in TV station infrastructure



Fall 2009 Launch
60 Stations, 35MM HHs

Development

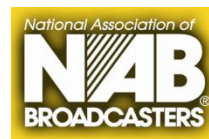


Advanced Television Systems Committee

Sets the Technical Standards
190+ Members – Broadcasters, Professional Equipment, Consumer and IC Manufacturers
www.atsc.org



Open Mobile Video Coalition – Broadcasters' Trade Organization
800+ TV Stations, 4 Networks, ~100MM Homes Passed,
Public and Commercial Stations, NAB / MSTV / ATSC Coordination
www.openmobilevideo.com



ATSC Mobile Tech Overview

Carries mobile/pedestrian/handheld services

Uses a portion of the ~19.39Mbps ATSC 8-VSB payload

- Adds Serial Concatenated Convolutional Coding (SCCC) for robustness
- Adds extra training signals to aid reception in dynamic channel conditions

Provides burst transmission of the M/H data enabling the receiver to cycle power for energy saving

System “tunnels through” physical transmission layer and provides an IP-based architecture with advanced codecs

- UDC/IP transport
- MPEG-4 AVC video compression
- HE AAC v2 audio compression

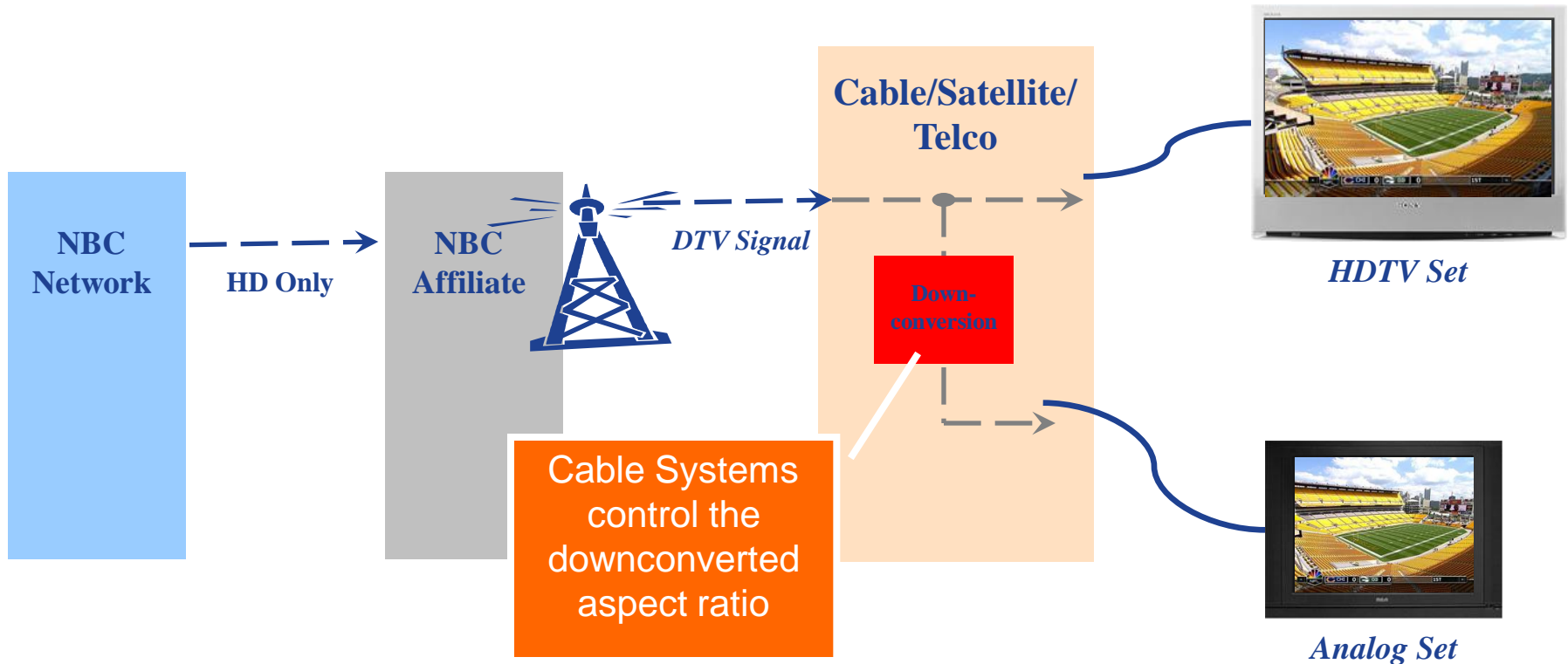
Video format: 416 x 240 (16:9 aspect ratio) / 30, 24,

Prototype Receivers at CES 2009



A.F.D.: Active Format Description

Broadcast Station Distribution



SD VERSION CENTER-CUT IN MANY PLACES

Center-Cut Safe Rules

Protects from Center-cut Down-conversion



*48% of Total
Canvas*

RESTRICTS THE CREATIVE CANVAS

Widescreen Production Value

Center-cut Safe Rules Highly Undesirable to Creative Community



Shooting in Tight Quarters



Sometimes Framing is the Joke



Framing used to tell the story



Theatricals and Legacy Content

- AFD Solves the Aspect Ratio Problem
 - Aspect Ratio codes embedded in video signals
 - Provides dynamic instructions to down-converters to letterbox or center-cut
- NBCU's AFD Strategy
 - Transitioning to single HD distribution path to Local Stations
 - AFD embedded in all HD signals delivered to Local Stations
 - NBC and Telemundo O&O's will utilize AFD end-to-end to control aspect ratio delivery to the home
 - Working with Affiliate Stations to deploy nationwide
- AFD Technology is Ready
 - Supported by all new Professional IRDs – installed in thousands of cable head-ends, satellite LCFs (see www.nab.org/AFDReady for details)
 - Supported by encoder manufacturers to embed AFD into ATSC stream
 - In use today by a number of stations and cable/satellite providers

SPREAD THE WORD!

Digital Television Audio

NBC Universal Programming

- Cable Television Dialnorm Effort Completed, January 2009:



- Working on a Recommended Practice for broadcasters for DTV Loudness
 - 1.) The identification and use of ITU-R BS 1770 as the reference measurement tool for DTV loudness
 - 2.) The creation of straightforward guidelines to improve audio monitoring environments for effective use of DTV's dynamic range
 - 3.) Create guidelines on practical uses of dynamic and fixed metadata through production, distribution and transmission
 - 4.) Provide an explanation of Dolby Digital DRC and contemporary dynamic range processing
- Over 40 contributors, notably including CBS and PBS...
- Work is well underway with completion slated for Spring '09

The image features a blue-themed background. The top and bottom edges are decorated with a blue gradient that includes a stylized globe on the left and abstract, overlapping shapes on the right. The central area is a plain white space.

Thank You!