



TODAY, TOMORROW & BEYOND

The U.S. DTV Transition

U.S. Digital TV (DTV) History

- 1987: Federal Communications Commission (FCC) forms Advisory Committee (ACATS)
 - ✓ 23 systems proposed
- 1991: ACATS Evaluates Six Systems
- 1992: FCC decides that each existing broadcast station will be paired with a second 6 MHz channel during a transition period
- 1993: ACATS Special Panel
 - ✓ No Further Consideration of Analog Systems
 - ✓ The Advisory Committee should conduct Supplemental Tests of the Systems with Improvements
 - ✓ FCC/Advisory Committee encouraged merger of best elements of the systems
 - ✓ Grand Alliance formed, proposed system tested

U.S. Digital TV (DTV) History

- 1995: ATSC approves DTV Standard
- 1996: FCC Adopts ATSC DTV Standard
- Congress granted each broadcaster an additional free 6 MHz channel for DTV transition and established transition end date
- 1997: FCC adopts schedule for broadcasters to implement DTV
 - ✓ Adopts Table of Allotments assigning a DTV channel to all existing broadcasters

U.S. Digital TV (DTV) History

- 2002: Manufacturers were required to include digital tuner in TV sets
- 2005 – Final channel election process underway
- 2006 – Congress establishes “hard deadline” for transition on February 17, 2009 and creates subsidy program for DTV converter boxes
- 2007-08 – FCC finalizes DTV Table of Allotments and procedures for construction applications

U.S. DTV Transition

June 12, 2009

Broadcast Analog TV Ended

Digital Only Transmission Begins

Goal of Transition

- **U.S. Government's goal was to reclaim 108 MHz of spectrum**
 - Channels 52 - 69 (698-806 MHz)
 - Reclaimed spectrum to be auctioned or used for public safety applications

DTV Programming

- FCC rules allow broadcasters to use DTV channels at their discretion
 - Broadcasters can provide any desired mix of digital offerings
 - Must offer one free over-the-air programming service with quality equivalent to analog throughout broadcast day
 - Must pay 5% fee on gross revenues for services that are not free
- Most broadcasters provide HDTV plus multiple standard-definition (SDTV) services
 - New programming services have started

FCC DTV Tuner Mandate

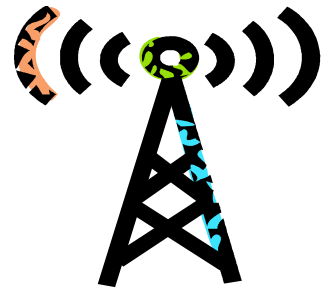
- All TV receivers must include ATSC reception capability
- All ATSC receivers can decode and display HDTV content
 - Even if the display is SDTV

What about all of the old analog sets?

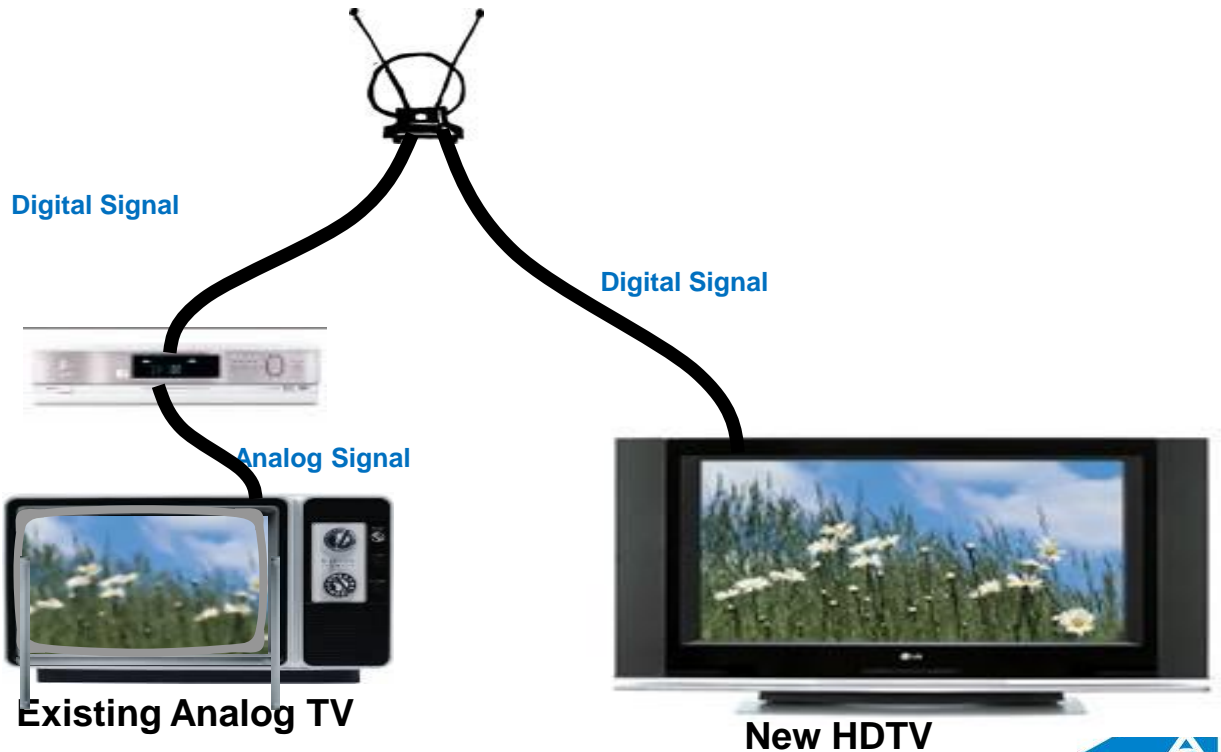


<http://www.mygreenelectronics.org>

Low cost DTV reception on Analog TVs



Digital Transmitter



ATSC Converter

Digital Signal

Digital Signal

Analog Signal

No Noise, No Ghosts

Existing Analog TV

New HDTV



Digital to Analog Converters

- Department of Commerce (NTIA) managed a program for households to obtain coupons that can be applied toward the purchase of digital-to-analog converter boxes to serve existing NTSC analog TV sets:
 - Limit of two \$40 coupons per household.
 - Maximum \$1.5 billion for coupon program.

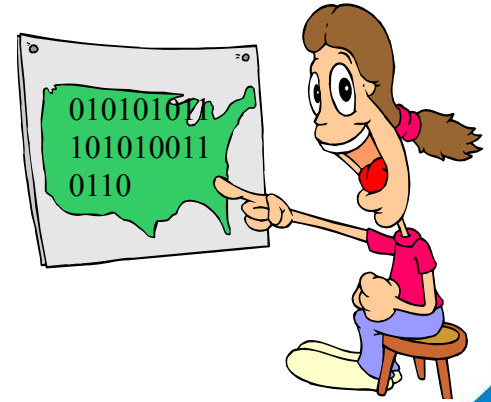
Digital-to-Analog Converters

- Over 64 million coupons were sent out
- More than 2,300 retailers participated
 - Over 34 thousand locations



DTV Transition Catalysts

- ATSC DTV Standard
- Channel provided to broadcasters for transition period
- FCC ATSC Receiver Mandate
- Digital to Analog Converter Program
- Promotion & Education





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