US Digital Television Transition

David Sarnoff Radio Club Tue 17 Feb 2009

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Why Over-the-Air DTV?

- Free (hams are cheap!)
- Over-the-air TV is a form of radio (we are hams!)
- It's fun to experiment with antennas and reception
- Highest quality picture
 - Many cable and satellite signals are further compressed (transmitted at a reduced bitrate)

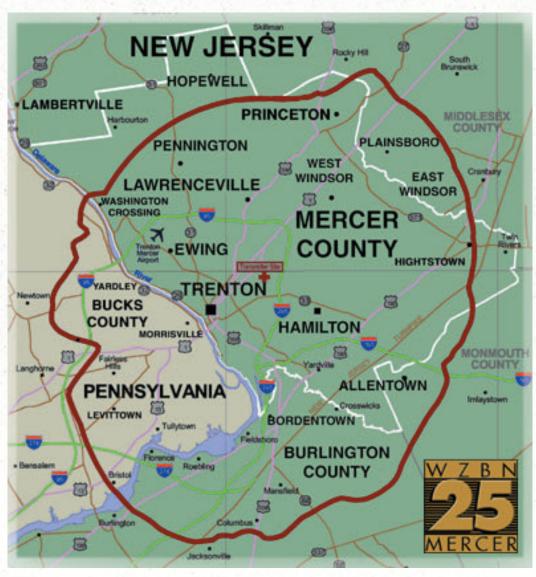
DTV Transition Timetable

- Tue 17 Feb 2009 Initial "final" deadline
 - 220 analog signals terminated prior to 2/17/2009
 - 421 will terminate at midnight 2/17/2009
 - 641 terminated
 - FCC denied 123 stations: at least 1 analog station must remain on the air in each market:
 - "This is not just about whether people can watch their favorite reality show," said acting FCC Chairman Michael Copps. "It's about whether consumers have access to vital emergency alerts, weather, news and public affairs."
 - ~1740 (64%) analog signals remain

DTV Transition Timetable (cont.)

- Fri 12 Jun 2009 New "final" deadline
 - All full-power stations must switch
 - Low power stations may continue as analog
 - Use converter box with "analog pass-through"
 - Use antenna A-B switch
 - Use signal splitter
 - Example: Trenton W25AW, aka WZBN-TV, "New Jersey's Capital News Station"

Typical Low-Power UHF Coverage



What You Need To Receive DTV

- Cable, FIOS, Satellite
 - Unaffected by June 12 transition date
 - Note: Analog signals are gradually being deprecated on cable systems
 - Cable subscribers will eventually require a settop box, integrated "clear QAM" tuner, or CableCARD to receive most channels
- Over-the-Air
 - Newer TV with ATSC tuner
 - DTV Converter Box
 - Very likely a better antenna!

Important DTV Points to Remember

- Many digital stations will move to different channel numbers after transition
 - Rescan for new channels, repeat periodically after transition
- Post-transition Philadelphia area reception will still require a VHF/UHF antenna
 - VHF: 6, 12
 - UHF: 3 (real 26), 10 (real 34), 17, 23 (real 22), 29 (real 42), 35, 52 (real 43), 57 (real 32), etc.

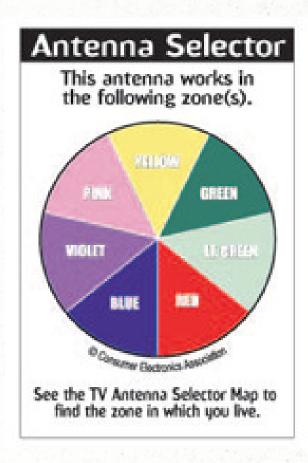
DTV Converter Box Coupons

- https://www.dtv2009.gov/
- Value \$40 each, coupons expire after 90 days
- Order rate ~100,000 coupons/week
- Wait list ~4,000,000 coupons!
- Funding to date: \$1,330,000,000
- \$650,000,000 additional funding in stimulus bill (~14 million additional coupons)
 - May clear coupon backlog in ~2 weeks
 - Holders of expired coupons may re-apply

TV CONVERTER BOX COUPON PROGRAM WEEKLY STATUS UPDATE* Wednesday, February 11, 2009-4:00PM EDT 28,252,611 Households Approved Coupons Requested* 52,429,629 Coupons Mailed 47,902,372 Coupons Expired 15,011,135 Coupons Redeemed 23,407,643 Total Coupon Funding Coupons On Wait List 3.982.732 (\$1.34 Billion) Coupons Active 9.483.594 Total Funds Committed \$1,330,000,000 Committed Total Funds Available Funds Settled \$911,231,519 Available Average Daily Orders** 119,327 Average Daily Orders Last 30 Days 139,143 102,290 Average Daily Orders Last Week Redemption Rate 54.2% Initial Funding Contingent Funding 2,321 / 34,146 Retailers/Locations (\$890 Million) (\$450 Million) Phone/Online Retailers 10/36 188 / 110 Converters/Pass-through fincludes Walt List Coupons "inception To Date COUPON REQUESTS: LAST 30 DAYS January 12 - February 10, 2009 Coupon Status (Does Not Include Coupons on the Wait List) 6.50 16.90 M Coupons Redeemed Mail in Queue 0.33 Coupons Active 0.29 4.42 Contingent Funding Initial Funding (22.25 Million) (11.25 Million)

https://www.dtv2009.gov/Stats.aspx

CEA Television Antenna Marks



CEA-2028 (ANSI) standard



CEA-2032 (ANSI) standard

Outdoor Antenna Color Coding

- Multidirectional
 - Yellow (small)
 - Green (medium)
 - Light green (large)
- Directional
 - Light green (small with pre-amp)
 - Red (medium)
 - Blue (medium with pre-amp)
 - Violet (large with pre-amp)

Antenna Selection Resources

- http://www.antennaweb.org/
- http://tvfool.com/

DTV Reception Resources

- http://www.dtv.gov/fixreception.html
- 1-888-CALL-FCC

Outdoor Antenna Sources

- Radio Shack
- http://solidsignal.com/