TECHTALK Digital Broadcasting

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On Feb. 17, 2009, television broadcasters across the nation will begin sending out their programming via DTV (digital TV) signals. How will the upcoming TV conversion affect you?

WHY DIGITAL?

Analog broadcasts have worked well for a long time, so, many wonder why they have to make the switch at all, let alone as soon as next year. There are a variety of reasons to go digital, but the primary one is to conserve what has quickly become one of our most precious natural resources: radio spectrum. There's a fixed amount of spectrum, meaning there are only so many frequencies available to handle television, radio, cell phone, networking, emergency, and other wireless traffic. Analog and digital transmissions eat up the same amount of bandwidth, but there's a big difference between the two technologies. Digital transmissions can have compression and other technologies applied that are off-limits to analog transmissions. These tricks let broadcasters squeeze several digital channels into the same amount of bandwidth that one analog channel requires. This is important where HDTV broadcasts are concerned because HDTV transmissions require more bandwidth than standard-definition channels. We have no way to increase available radio spectrum, so we must decrease the amount of spectrum each channel requires. Digital is vital today, where hundreds of channels must coexist.

WHAT ABOUT ANALOG?

An analog TV can not use a digital signal. A DAC (digital-to-analog convertor) must receive the incoming digital signal, convert it to analog, and output the signal to your analog TV. If you have an analog TV and subscribe to cable or satellite (digital or otherwise), you already have the hardware that incorporates a DAC — so few of us will notice the difference once the content switches to all digital.

If you're using an antenna to pull in free OTA (over-the-air) broadcasts, you may have a problem. Right now, broadcasters transmit digital and analog OTA signals simultaneously, but on Feb. 17, 2009, the analog transmissions will stop. If your TV has an analog tuner, you'll need a DAC box to convert the digital signal. If your TV has a digital tuner, however, you'll be able to enjoy OTA broadcasts. Check out the "Are You Ready For DTV?" table for a convenient breakdown.

If your TV was manufactured after March 1, 2007, it has a digital tuner. Otherwise, check the manual or call the manufacturer to see what type of tuner is installed. Keep in mind that even if you have a digital HDTV, it may still have an analog tuner, as crazy as that sounds.

DACs are available in preparation for switch, but they're not free; the NTIA (National Telecommunication & Information Administration) is subsidizing the cost. The most important thing to keep in mind before the transition is that there's no need to panic. Your old TVs won't become worthless, and new TVs will be ready to go once the digital switch is thrown, without you needing to buy any additional hardware, cables, or other accessories.

ARE YOU READY FOR DTV?

Most of us are already prepared to usher in the age of all-digital television, but refer to this chart for each television you have in the house to see what type of hardware you need come Feb. 17, 2009.

Finally, here are some web-sites that have additional information:
Digital TV Transition from FCC - http://www.dtv.gov/consumercorner.html

All about DTV and Coupon Program - https://www.dtv2009.gov/

WHAT TYPE OF TUNER DOES YOUR TV HAVE?	HOW DO YOU RECEIVE YOUR TV SIGNAL?	WHAT YOU NEED FOR THE DTV TRANSITION
An analog tuner	Over-the-air	A DAC (digital-to-analog convertor) box
An analog tuner	Via cable or satellite service	Your existing cable or satellite equipment
A digital tuner	Over-the-air, cable, or satellite service	Nothing extra at all

FAQs about Digital Programming

Will I need to buy a new TV?
Not necessarily.

How can I tell if my TV has a built-in digital tuner?
Consult the owner's manual, look up information about your TV on the manufacturer's website or if your TV set has a connection labeled "digital input" or "ATSC" (for Advanced Television Systems Committee, the DTV format), then it is digital-capable. In addition, a TV labeled "HD Built-In" or "Integrated HDTV" should include a digital tuner.

Will I need to purchase a converter box in order to watch television?
You will need to buy a converter box only if you're receiving broadcasts through an antenna on an older TV - one without a built-in digital tuner.

How much does a digital converter box cost, and where can I get one?
Every US household is eligible to receiving up to two coupons, worth $40 each, toward the purchase of digital-to-analog converter boxes. This is a one-time cost.

Who will the transition to digital affect? Where will the shift occur?
The nationwide switch will affect anyone who receives broadcasts with an antenna on a TV that doesn't contain a built-in tuner.

GO GREEN!
Electronics waste is the leading contributor of lead in landfills. Recycle your old set if you're getting rid of it and don't simply throw it away.