Digital Television (DTV)

FCC Consumer Facts

Background

Digital Television (DTV) is a new broadcasting technology that will transform your television viewing experience. DTV enables broadcasters to offer television with movie-quality picture and sound. It can also offer multiple programming choices and interactive capabilities.

Why Are TV Broadcasters Switching to DTV?

- DTV broadcast technology is more flexible and efficient than today's more widespread broadcast technology, which is called "analog."
- For example, rather than being limited to providing one analog programming signal, a broadcaster will be able to provide a sharp "high definition" (HDTV) program or multiple "standard definition" digital programs simultaneously. Providing several program streams using the digital spectrum is called "multicasting." The number of programs a station can send using the digital spectrum depends on the level of picture detail, also known as "resolution," desired in each programming stream. DTV can provide picture resolution, interactive video, and data services that easily surpass the capabilities of "analog" technology.
- Converting to DTV also will free up parts of the scarce and valuable broadcast spectrum. Those portions of the spectrum can then be used for other important services, such as public and safety services (police and fire departments, emergency rescue), and advanced wireless services.

What is High Definition TV (HDTV)?

HDTV is a type of DTV service. HDTV provides high resolution programming in a widescreen format.

A current analog TV picture can provide resolution of up to 480 horizontal lines. An HDTV picture can provide resolution of up to 1080 lines, providing improved picture detail.

Aspect ratio is a comparison of screen width to screen height. Analog TV has an aspect ratio of 4 by 3, which means the screen is 4 inches wide for every 3 inches high. Widescreen HDTV format has an aspect ratio of 16 by 9.

HDTV programs include Dolby digital surround sound, similar to the sound used in movie theaters and on DVDs.

When Will the DTV Transition Be Complete?

TV stations serving all markets in the United States are airing digital television programming today, although most will continue to provide analog programming through February 17, 2009. At that point, full-power TV stations will cease broadcasting on their current analog channels, and the spectrum they use for analog broadcasting will be reclaimed and put to other uses.

(More) →

How Do I Get DTV?

- Receiving DTV signals over the air requires an antenna and a receiver that can decode the digital signals. In general, an antenna that provides quality reception of over-the-air analog TV signals (VHF and UHF) will work for DTV reception.
- Cable subscribers may need new DTV equipment to view DTV programming in digital format. You should ask your cable provider what you will need and when.
  - Cable subscribers may buy a "Digital Cable Ready" (DCR) or "Plug-and-Play" television that plugs directly into the cable jack and does not require a separate set-top box. In order to receive scrambled programming and premium one-way services, cable subscribers with a DCR TV will need to obtain a CableCARD from their cable company.
  - Alternatively, cable subscribers may lease a separate set-top box from their cable provider or buy one at a retail outlet.
- Satellite subscribers may need new DTV equipment to receive and view high definition digital programming. You should ask your satellite company what you will need and when.
- A list of the operating DTV stations is available at **www.dtv.gov**. Satellite TV providers and most cable television systems are currently offering DTV programming. Subscribers should check with their service provider to see what programming is available in their area.

Will I Need a New TV if I Have an Analog TV?

When full-power broadcast stations stop analog service, you still will be able to use your analog TV with a set-top converter box. Converter boxes for analog TVs receiving over-the-air broadcasts will be available in retail stores at that time. These boxes receive digital signals and convert them into analog format for display on your analog TV.

(More)

Beginning in 2008, your household may be able to obtain up to two coupons worth $40 each toward the purchase of converter boxes. The National Telecommunications and Information Administration (NTIA) has responsibility for administering the coupon program, and will issue rules regarding the coupons in the future. Additional information can be found at **www.ntia.doc.gov**.

If you are a cable or satellite subscriber, contact your provider about whether you will need a converter box for your analog TV.

Digital Receiver Availability and FCC Tuner Requirements

Remember, even with a set-top converter box, your current analog TV will not display the full picture quality of DTV. To enjoy the full picture quality, you must have a DTV set or a separate DTV receiver and a digital display monitor. The FCC requires that many new television receivers sold in the U.S. today include the capability to receive digital TV signals. By March 2007, all TVs (and other devices that are designed to receive broadcast television signals) are required to have digital tuners built in.

What Do DTV Sets Look Like and What Will They Cost?

Most DTV sets have wider screens than current analog TVs. The wider screens allow for wider images that are similar to those you see in a movie theater. DTV sets come in a range of sizes.

As with most new consumer electronics technologies, DTV sets have become less expensive since their introduction a few years ago. Prices are expected to continue to fall over time and will vary depending on screen size, display technology, and other features.

(More)

What Is the Difference Between Integrated DTVs and Digital Monitors?

An Integrated DTV set is a digital television with a built-in digital receiver and decoder. If you have an Integrated DTV and live in an area served by a DTV broadcast station, you only need an antenna (preferably an outdoor antenna) to receive over-the-air DTV broadcast programming. Integrated TVs also can receive and display current analog signals.

In contrast, a digital monitor is not capable of receiving and tuning DTV programming without additional equipment.

A DTV set-top box must be connected between the antenna and the monitor to receive and display broadcast over-the-air DTV programming. Also, if you are a cable or satellite subscriber, you may need a new set-top box to receive digital broadcast content.

Confirm with your retailer that the DTV receiver or set-top box is compatible and has the proper connectors to interface with the DTV monitor that you are purchasing. Many monitors have a built-in analog receiver and can display analog TV programming. They also can display video from DVD players and VCRs through their connectors.

Will Integrated DTVs and Digital Monitors Display HDTV?

Integrated DTV sets and digital monitors do not necessarily display programming in full HDTV format. Some integrated sets and monitors will display DTV in lower-resolution “enhanced definition” or "standard definition” format. So although sets may be marketed with labels or descriptions that imply HDTV resolution, check with your retailer before purchasing if you want HDTV quality.

(More)

Why Can’t We Have Both DTV and the TV System We Now Have?

Broadcast and wireless services depend on the use of the airwaves. DTV technology is much more efficient than the current analog technology and will allow the broadcast of more program content using less broadcast spectrum. Transitioning to digital broadcasting will free up resources for public safety and other new and innovative services for American consumers.

For More Information

For more information about DTV, visit the FCC’s Web site at **www.dtv.gov**.

For information about other telecommunications-related issues, contact the FCC's Consumer & Governmental Affairs Bureau:

Internet at **www.fcc.gov/cgb**.

Consumer Center: 1-888-CALL-FCC
(1-888-225-5322) voice
1-888-TELL-FCC
(1-888-835-5322) TTY

Mailing Address:
Federal Communications Commission
Consumer & Governmental Affairs Bureau
445 12th Street, SW
Washington, D.C. 20554.

###

For this or any other consumer publication in an alternative format (electronic ASCII text, Braille, large print, or audio), please write or call us at the address or phone number below, or send an e-mail to FCC504@fcc.gov.

To receive information on this and other FCC consumer topics through the Commission's electronic subscriber service, click on ***http://www.fcc.gov/cgb/contacts/****.*

This fact sheet is for consumer education purposes only and is not intended to affect any proceeding or cases involving this subject matter or related issues.

4/12/06*-cpb