

### Background

Digital Television (DTV) is a new type of broadcasting technology that will transform your television viewing experience. DTV enables broadcasters to offer television with movie-quality picture and sound. It also offers greater multicasting and interactive capabilities.

#### Why Are We Switching to DTV?

- DTV is a more flexible and efficient technology than the current broadcast system, which is an "analog" system.
- For example, rather than being limited to providing one analog programming channel, a broadcaster will be able to provide a super sharp "high definition" (HDTV) program or multiple "standard definition" DTV programs simultaneously. Providing several program streams on one broadcast channel is called "multicasting." The number of programs a station can send on one digital channel depends on the level of picture detail, also known as "resolution," desired in each programming stream. DTV can provide interactive video and data services that are not possible with "analog" technology.
- Converting to DTV will also free up parts of the scarce and valuable broadcast airwaves. Those portions of the airwaves can then be used for other important services, such as advanced wireless and public safety services (police, fire departments, rescue squads, etc.).

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#### 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 provides resolution of up to 480 horizontal lines. An HDTV picture can have up to 1080 lines, allowing for stunning picture detail.

Widescreen format refers to an image's aspect ratio, which is a comparison of screen width to screen height. Analog television has an aspect ratio of 4 by 3, which means the screen is 4 units wide by 3 units high. The aspect ratio of HDTV is 16 by 9, the same as the wide scope of a movie theater screen.

HDTV programs can include Dolby digital surround sound, the same digital sound system used in movie theaters and on DVDs.

#### When Will the DTV Transition Be Complete?

Television stations serving all markets in the United States are airing digital television programming, although they still must provide analog programming until the target date set by Congress for the completion of the transition to DTV - December 31, 2006. That date may be extended, however, until most homes (85%) in an area are able to watch the DTV programming. At that point, broadcasting on the current (analog) channels will end and that spectrum will be put to other uses.

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## When Will the DTV Transition Be Complete? (cont'd.)

Until the transition to DTV is complete, television stations will continue broadcasting on both their digital and analog channels.

### How Do I Get DTV?

- Receiving DTV signals over the air requires an antenna and a new DTV receiver that can decode the digital signals. In general, an antenna that provides quality reception of over-the-air analog TV signals will work for DTV reception.
- Cable and direct broadcast satellite (DBS) subscribers will need a new DTV receiver and other special equipment to receive DTV programming. A "Plug-and-Play" or "Digital Cable Ready" DTV or other device for digital cable customers plugs directly into the cable jack and does not require a separate set-top box. You must obtain a CableCARD from your cable company to receive high definition scrambled programming and premium one-way services.
- A listing of the operational DTV stations is available at <http://www.fcc.gov/mb/video/files/dtvonair.html>. Satellite TV providers and most cable systems are currently offering DTV programming. Subscribers should check with their service providers to see what programming is available in their area.

### Will I Need a New TV?

Your current television will work until analog broadcasting stops. Even after the transition to DTV is over, you will be able to use your current TV with a converter set-top box. A converter box can be used to receive DTV signals and change them into the format of your current television. Converters for over-the-air broadcasts are available at retail stores.

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But remember, even with a converter, your current analog television will not display the full picture quality of DTV. To enjoy the full picture quality, you must have a DTV set.

Subscribers to cable and DBS services should contact their providers to inquire about converters for those services.

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

Most DTV sets have wider, more rectangular screens than current analog TVs. This widescreen format allows for wider images that are more like those you see in a movie theater. Like current TV sets, a range of sizes is available.

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

### What Is the Difference Between Integrated DTV and DTV Monitors?

An Integrated DTV set is a digital television with a built-in digital decoder or DTV receiver. If you have an Integrated DTV and live in an area served by a DTV broadcast station, you will not need any additional equipment, with the exception of an antenna (preferably an outdoor antenna) to receive over-the-air DTV broadcast programming. Integrated TVs can usually receive and display current analog signals also.

In contrast, a DTV monitor is not capable of receiving DTV programming without additional equipment; it is simply a display device similar to a computer monitor without the computer processor. A DTV set-top decoder must be connected between the antenna and the monitor to receive and display over-the-air DTV programming.



Confirm with your retailer that the DTV receiver or set-top decoder is compatible with the DTV monitor that you are purchasing. Most monitors have a built in analog receiver and can display regular analog TV programming. They can also display standard resolution video from DVD players and VCRs.

### Will Integrated DTV and DTV Monitors Display HDTV?

Integrated DTV sets and DTV 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 that imply HDTV resolution, check with your retailer before purchasing if you want HDTV quality.

### Why Can't We Have Both DTV and the Television 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 material using fewer broadcast airwaves. Transitioning out of the analog format will free up resources for other new and innovative services to American consumers.

#### For More Information

For more information about DTV, see the FCC Web site [www.dtv.gov](http://www.dtv.gov). For information about other telecommunications-related issues, contact the FCC's Consumer & Governmental Affairs Bureau:

Internet at [www.fcc.gov/cgb](http://www.fcc.gov/cgb)  
 Consumer Center: 1-888-CALL-FCC  
 (1-888-225-5322) voice  
 1-888-TELL-FCC  
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