

Preface

The nation's 1,600 television stations are converting from traditional analog technology to a digital television format. Digital television (DTV) is a new, more efficient technology for transmitting and receiving broadcast television signals. Digital signals are superior to analog (traditional TV) signals because of their greater accuracy, versatility, efficiency, and interoperability with other electronic media. Because digital signals can carry more information, they can mean more channels, clearer pictures, better sounds, and advanced new functionality.

All of us own the airwaves that broadcasters use to provide both analog and digital TV signals. Broadcasters have been given this special privilege - a license - for free, and in return are required by law to serve the public's needs. Under the Telecommunications Act of 1996, the amount of spectrum given to television station owners was doubled. The policy rationale for this was to enable them to convert their signals from an analog to a digital format. When at least 85% of households in a broadcasting market can receive digital signals, the spectrum currently used for analog channels is to be returned to the government for public safety uses, with some spectrum to be auctioned off to the highest bidder and other spectrum used for unlicensed purposes. Digital television makes broadcasting more competitive and valuable in the market, and should enable broadcasters to better serve basic public needs.

A primary policy rationale for the transition to digital television is high-definition television, or HDTV. This transmission standard contains up to six times

more data than conventional television signals and at least twice the picture resolution, making HDTV images substantially more vivid and engaging, and enhanced by five discrete channels of CD-quality audio.

The move to DTV technology can also significantly expand the number of channels stations can simultaneously broadcast. Instead of sending an HDTV signal, a broadcast station can send as many as six digital "standard-definition television" (SDTV) signals. Although SDTV images are not as sharp as HDTV, they are superior to existing television images. This "multicasting" capacity could allow broadcasters to compete with other multi-channel media such as cable and direct broadcast satellite systems.

Digital TV also enables interactive services through additional data streams that can be delivered to the consumer. Digital television signals can be picked up by both digital televisions and computers and can make broadcasters into "datacasters." The data capacity of DTV makes possible services such as subscription television programming, com-

puter software distribution, teletext, and interactive services, including revenue-producing offerings such as stock prices, sports scores, classified advertising, paging services, "zoned" news reports, advertising targeted to specific television sets, "time-shifted" video programming, and closed-circuit television.

But DTV can offer more than better pictures, more channels, and niche services.

Consumers deserve to know how broadcasters will serve their day-to-day television needs – healthy programming for children, healthy programming for our democracy, healthy programming for our communities, and as much information about the TV that comes into our living rooms as the food that comes into our kitchens.