

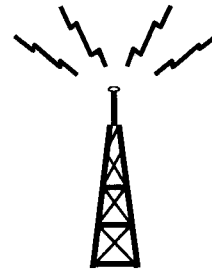
Digital Television Transition

Presentation to the FCC by

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April 19, 2001



The DTV transition is a massive undertaking, involving virtually every sector of the television industry. It requires a complete re-tooling of our video distribution infrastructure – from cameras to studios to transmission towers. It requires consumer electronics firms to develop and build new products that can receive and decipher the new technology. It requires content producers to develop new ways of creating content and new ways of protecting content in a world in which perfect copies can be made with the click of a button. And, perhaps most daunting, it requires television viewers to embrace the changes.

Given these complex challenges, we believe that the DTV transition is going better than many give it credit for, although things are clearly not moving as quickly as some had hoped. I will first highlight some of the significant progress that has been made, and continues to be made, in areas such as DTV technology and the physical build-out. I will then turn to a number of significant hurdles that remain, including the aggressive schedule put in place early in the transition.

One note up front. This presentation is about broadcasting. I recognize that cable and DBS are also playing a significant role in the general transition to digital television. Indeed, DBS is already digital, and cable has spent billions on its own digital transition. But my focus this morning is on broadcasting and the unique challenges we face in the broadcast context.

Major Actions Taken

- Table of Allotments
- Service rules
- 8-VSB transmission standard
- DTV tower strike force
- Initiated spectrum recovery
- Authorization of service and licensing

Let's begin with an overview of some of the major actions the Commission has taken:

- Developed a Table of Allotments. An enormous engineering feat to find an extra 6 MHz of spectrum for every broadcaster in America.
- Developed service rules for the new digital service.
- Established the 8-VSB transmission standard. A standard was recently re-confirmed after extensive testing and analysis.
- DTV Tower Strike Force. An ongoing effort to help resolve tower siting problems quickly and informally if and when they arise.
- Initiated recovery of 108 MHz of spectrum. So far, we have reallocated 60 MHz -- 24 MHz for public safety and 36 MHz for new commercial services. We have begun a proceeding to reallocate the remaining 48 MHz.
- Authorization of service and licensing. This is one of the Commission's primary responsibilities and thanks to an outstanding effort by our Video Services Division, it has largely been successful and timely.

Authorization of Service

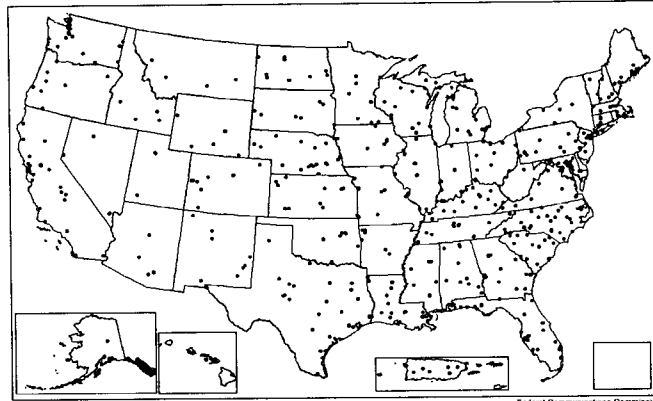
- Granted construction permits for 1090 of 1688 station allotments in DTV Table (65%)
- Granted all routine “checklist” applications
- 598 nonroutine applications involve interference issues or international coordination
- Expedited processing for applicants ready and willing to build DTV facilities

Let’s look at this last point in more detail and review the current status of where we stand on licensing and the physical build-out of new DTV facilities:

- There were a total of 1,688 allotments in the DTV Table. So far, we have granted construction permits for 1,090 of these stations, or about 65%.
- We have granted all applications that generally followed our Table of Allotments – those we call “checklist” applications. We are working as quickly as possible through the remainder that deviate from the Table.
- 598 applications remain pending. Most of these are applications that cause interference to other DTV or NTSC stations, or that require international coordination with Canada or Mexico. We have issued deficiency letters to all applicants with interference problems.
- If any applicant has expressed a readiness to build DTV facilities – regardless of whether its application was “checklist” or not -- we have expedited their processing to ensure that no one that is willing and ready to build is waiting for FCC licensing approval.

DTV Licenses and Permits

Digital Television Licensed and CPed



Free Range: 0.0 to 9999999.0 MHz / Geo Area: World / Lat(N/S) / Lon(W/E) 0000.00-090.00-180.00 0180.00
FCC RefSeq: ALL / Class Of Station: BDTT / Status: CP & LC
Masking selection criteria: 727 links - 0 areas. Source: CDBS(20010110)

Federal Communications Commission
Office of Engineering and Technology
Donald Draper-Campbell

This slide shows the location of DTV licensees and permittees.

Build-out Milestones for Affiliates of Four Major Networks

- May 1, 1999 - Markets 1-10
38 of 40 stations now operating
- November 1, 1999 - Markets 11-30
67 of 79 stations now operating

- The Commission has established build-out milestones for DTV.
- So far, there have been two milestones. The top four network affiliates in the top ten markets were scheduled to be on the air with DTV by May 1, 1999. That build-out is almost complete. Of the 40 stations in this group, 38 are on the air -- 35 with full facilities and 3 with STAs. The remaining two encountered unforeseen delays and we are working with them to get them on the air as soon as possible.
- By November 1, 1999, the top four network affiliates in markets 11-30 were scheduled to be on the air. There are 79 such stations. Of those 79, 67 are on the air -- 58 with full facilities and 9 with STAs. The remainder have received extensions of time to construct, due to problems such as zoning and unforeseen construction delays.
- All told, there are 190 DTV stations on the air today - 143 with licensed facilities and 47 with STAs - collectively serving about 64 percent of TV households. In many large cities, consumers have access to several different DTV signals. Here in Washington, for example, there are five operating DTV stations; in Los Angeles, there are eight.

DTV Product Sales

- Consumer Electronics Association reports 648,000 DTV “sets” sold in 2000
 - 400 percent increase over 1999
 - \$1.4 billion investment
- Caveats
 - Large percentage without integrated tuners
 - Sold to dealers, not public
 - Small percentage of overall sales
- Set prices are falling

•According to the consumer electronics industry, sales of DTV products are gaining momentum:

•Last year, according to the Consumer Electronics Association, sales of DTV sets to dealers reached 648,429, accounting for \$1.4 billion in investment and a 400 percent growth over 1999.

•A couple of caveats about these figures. First, a large percentage of these sets are DTV displays, and do not contain an integrated tuner. For instance, you could use these sets to attach to a DVD player, but not to watch an over-the-air DTV signal. Second, the numbers reflect sales to *dealers*, not sales to the *public*. Third, even if the 648,000 DTV sets were sold to consumers, it would still be a fraction of the more than 25 million sets sold every year in the U.S.

•DTV set prices are still high, but they’re coming down. One manufacturer recently announced that its fully-integrated 61” HDTV set dropped from almost \$8,000 two years ago to \$3,999. For its smaller 38” integrated set, the price is \$2,999. A 32” HDTV monitor is available for \$1,599.

DTV Challenges

- Cable interoperability
 - labeling rules
 - marketplace solutions
 - periodic industry reports
- Digital content and copy protection

•Now let's look at the very real challenges in front of us. The Commission has taken some actions with respect to some of these challenges, such as cable interoperability. However, some of the biggest challenges -- such as increasing the production of digital content and copy protection -- are largely outside the Commission's control.

•With respect to cable interoperability, we have established labeling rules to ensure that consumers know whether and how DTV receivers will operate with their digital cable systems. Second, we have encouraged industry to find marketplace solutions. In February 2000, industry reached agreement on certain interoperability standards, and on an approach to providing information for on-screen program guides. Third, we have required the filing of periodic reports in order to monitor industry progress. The next progress report is due April 30, so we should soon learn more about how these issues are being addressed. We are prepared to help facilitate resolution of remaining outstanding issues.

•Of course, without digital content, consumers are unlikely to purchase DTV equipment regardless of how well it works. Currently, broadcasters are providing only a limited amount of digital content that takes advantage of the technology's capabilities. Notable examples of digital content provision include CBS's HDTV programming, KING-TV's HDTV local news, and some PBS HDTV, multicasting and data transmission services.

•Part of the reason for the lack of digital content is copy protection. Content providers are reluctant to transmit high value digital content in an unprotected environment because, unlike in the analog world, digital copies are perfect and easily reproduced.

•Copy protection technology and licensing is almost entirely outside the Commission's control. However, we are closely monitoring industry negotiations among groups such as the "5C" companies and the major studios. We will continue to monitor those discussions, to give guidance on a case-by-case basis on the interplay between copy protection licensing and our navigation device rules, and to be helpful in any way that we can.

•This is also an area in which Congress may want to consider legislative remedies.

Build-out Challenges

- Remaining major network stations in large markets
- May 1, 2002 - small market stations and remaining stations in large markets
- May 1, 2003 - noncommercial stations

That's not to say that we do not have our share of challenges at the FCC.

First, build-out challenges.

- As I noted above, there still are some delays getting the big stations in the big markets on the air. The problems have ranged from local zoning to tower siting to equipment. We are working with each licensee in their efforts to resolve these issues.

- The greater challenge will be in the smaller markets, and the smaller stations in the big markets, all of which are scheduled to be on the air about a year from now – by May 1, 2002. Then there will be a further challenge in 2003, when all noncommercial stations are scheduled to be on the air.

- Just this past Sunday, the *New York Times* ran an extensive article on the difficulties faced by many public television stations raising the money to convert to digital. PBS officials estimate that about one-third of the 347 PBS stations are at risk.

- We are prepared to work with all of the small market and noncommercial stations in any way we can – as we have done with the large-market stations – to help them make the transition, recognizing that they may face capital and business realities that the larger stations did not.

Ongoing Rulemakings

- Digital must-carry
- DTV tuners in TV sets
- Navigation devices

Second, we have several ongoing rulemaking proceedings that address various aspects of the DTV transition.

- The most obvious is the digital must-carry proceeding. Last January, we adopted an Order that provided guidance on how must-carry will work in a digital world – including interpretations of the statutory terms “primary video” and “material degradation” in the digital context.

- In defining these terms, we stayed as faithful to the statute as we could. If Congress wants to achieve a different policy result, it could choose to amend the statute.

- We issued a Further Notice on the issue of “dual carriage” – whether cable operators can and should be required to carry a broadcaster’s analog and digital signal during the transition. We also sought comment on:

- the meaning of “program-related” in the digital context;
- the status of retransmission consent negotiations; and
- the channel capacity of cable systems.

- In another proceeding, we are seeking comment on whether we can and should impose a requirement that certain TV sets be required to have an over-the-air DTV tuner, or whether we should impose a labeling requirement for sets that can’t receive over-the-air DTV broadcast signals.

- We also have an ongoing proceeding on Navigation Devices, which seeks to ensure that set-top boxes and similar devices are commercially available.

- We also have a Notice of Inquiry on interactive television that asks whether the FCC should involve itself in this emerging business.

Spectrum Recovery

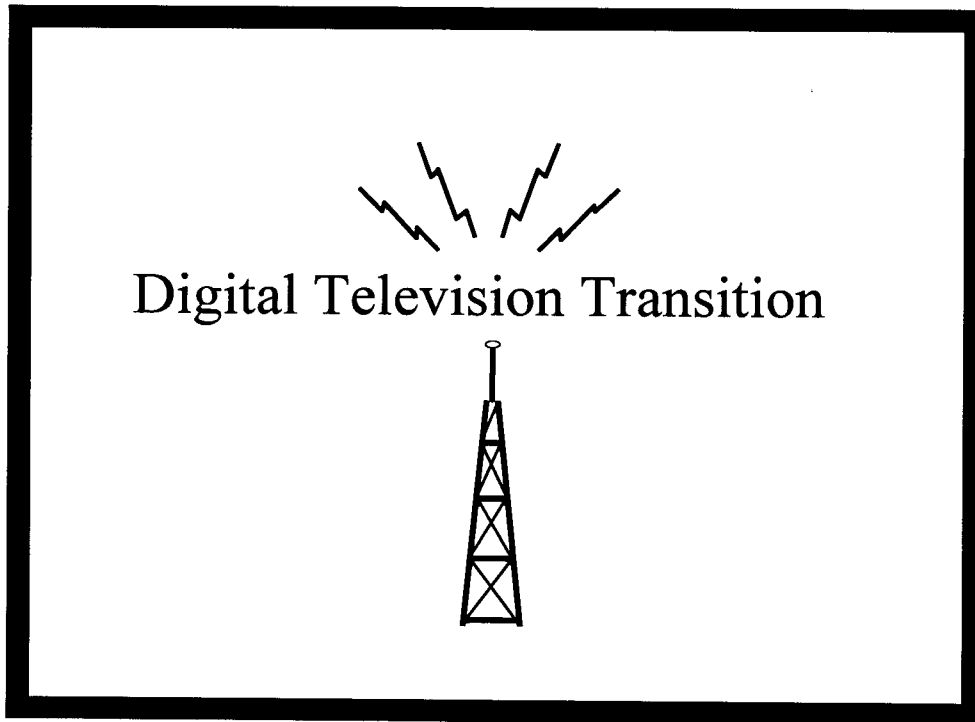
- Reallocated 60 MHz at channels 60-69 with auctions of commercial portion in September 2001
- Must assign licenses for 48 MHz at channel 52-59 by auction by September 2002
- Voluntary band clearing provisions

•Finally, we must recognize that the DTV transition is not happening in a vacuum. There are other parties who would like to use this spectrum for other purposes, like new wireless services and public safety.

•We have already reallocated 60 MHz for public safety and new commercial services in the 60-69 band, as required by statute.

•We are currently scheduled to begin auctioning the channels in the 60-69 band that are available for commercial use on September 12, 2001, and we are required by statute to assign licenses by competitive bidding for the spectrum containing channels 52-59 by September 30, 2002.

•We have adopted rules and policies designed to facilitate voluntary band-clearing agreements among new service providers and incumbent broadcasters on channels 60-69, and have sought comment on similar policies for channels 52-59.



We believe that the transition's success should not be measured only by adherence to a particular timetable. It should be measured by results. Sometimes the deployment and adoption of new technology takes time, and there are twists and turns and complexities that can't be anticipated before the fact. Sometimes patience and a steady hand are called for. We will continue to press the DTV transition as quickly as we can, with consumer welfare as our guiding concern.