



FCC Issues Coverage Maps of all Full Power DTV Stations



The FCC has recently published a report showing the coverage maps for all full-service TV facilities, including 1,749 stations that have both an analog and DTV facility and 69 stations having only DTV facilities. The maps and data were prepared by Hammett & Edison, Inc., under contract from the FCC and analysis was conducted by the Commission's Office of Engineering and Technology.

The maps show each station's digital TV coverage after the DTV transition date as compared to its analog TV coverage within each Nielsen Designated Market Area. The maps are based on standard engineering techniques used by the FCC to predict coverage. One map is presented for each TV station. The report also includes nationwide maps showing coverage for the ABC, CBS, Fox, NBC and PBS networks.

While the FCC stresses the importance of providing the public with this information, the data provided will clearly be valuable to stations in planning for new translators that might be required to fill gaps in DTV coverage.

The following paragraphs are extracted from the FCC report.

"This Report provides maps showing the analog and digital coverage areas for each of the 1749 full-power TV stations in the United States. We recognize the importance of providing the public with information regarding the estimated coverage of digital signals compared with their analog signals, and expect broadcasters to make this information publicly available and a part of their local DTV education efforts.

The vast majority of TV stations throughout the country will experience a significant increase in the population that can receive their signals. Some stations, however, are expected to experience some losses in the population that will be served by digital service as compared to their existing analog service.

Specifically, our analysis found that after the transition:

Total Viewers

Approximately 89% of stations (1553 stations) will experience an overall net gain in the population that can receive their signals.

Approximately 11% of stations (196 stations) will have an overall net loss of population served.

Existing Viewers

Approximately 11% of stations (196 stations) are predicted to experience some existing population coverage losses of 2% or more as a result of changes in their service area.

In addition, approximately 7% of stations (123 stations) are predicted to experience some existing population coverage loss of 2% when including both losses due to changes in coverage and as a result of technical differences in their digital signal (digital cliff effect).

Approximately 18% of stations (319 stations) are predicted to lose coverage of 2% or more of the existing population they reached with their analog signals. However, about half of these stations are predicted to have an overall net gain in population served.

In most instances the losses result from a broadcaster's choice to modify its service area, often to reach more overall viewers or better conform to its local market. The station may have shifted its coverage, either by a change in transmitter location antenna pattern, power, or some combination of these factors.

In 2004, when establishing the process by which stations elected their final channel for post-transition DTV operation, the Commission stated: “each DTV channel allotment was chosen to allow DTV service thereon to best match the Grade B service contour of the NTSC station with which it was paired. Although we have declined to make full signal replication mandatory, we continue to believe that most DTV broadcasters eventually will replicate their NTSC coverage with DTV service.”

Included in this Report are maps of the entire United States for each of the top four commercial networks (ABC, CBS, FOX, and NBC) plus PBS to illustrate the nationwide gains and losses. Our analyses show that 58.3 percent of the viewers who are predicted to lose reception of one or more network affiliated stations can expect to be able to receive service from another station affiliated with that same network.

The individual station maps are grouped by the 210 Nielsen Designated Market Areas (DMAs) that television stations rely on in connection with viewing patterns. These individual station maps show areas of predicted coverage gain (denoted by green dots), loss (red triangles), and areas in which there may be loss of coverage from the station in question but where the signal is available from another station that is affiliated with the same network (orange diamonds).”

A sample map for one station is shown below. The light green area indicates the DMA and the yellow areas show the city limits of the named large cities.



Station WABC-TV • Analog Channel 7, DTV Channel 7 New York
Expected Change in Coverage
Digital CP (solid): 11.7 kW ERP at 405 m HAAT, Network
Analog (dashed): 64.6 kW ERP at 491 m HAAT

Remedial Measures

The Commission has taken and is continuing to take steps to make every resource available for broadcasters to mitigate any lost service to consumers. Stations that are predicted to lose viewers have several options for restoring service, including use of so-called “translators” (including on-channel Distributed Transmission Systems (DTS) or “fill-in” stations that operate on a different channel); use of another station’s subchannel to be transmitted via multicasting; maximizing the station’s power; changing the station’s channel; or changing the antenna pattern. The Commission has taken steps to facilitate these remedial measures by adopting rules for stations to use DTS and expediting review of applications to maximize and requests for channel change. DTS, particularly, is a feature of digital television broadcasting that was not available with analog, and will provide broadcasters with an important tool for providing optimum signal coverage for their viewers. For some broadcasters that are changing channels or transmitting locations for their digital service, DTS may offer a good option for continuing to provide over-the-air service to current analog viewers, as well as for reaching viewers that have historically been unable to receive a good analog signal due to terrain or other interference.

The Commission also recently circulated a *Notice of Proposed Rulemaking* that proposes the creation of a new “replacement” digital television translator service to permit full-service television stations to continue to provide service to loss areas that have occurred as a result of their digital transition. This proposal would also allow broadcasters to apply for special temporary authority to use such translators while the rulemaking is pending.”

The full report and all the maps may be found at <http://www.fcc.gov/dtv/markets/>. All inquiries about the DTV map study should go to the FCC OET. The designated contacts there are Alan Stillwell (Alan.Stillwell@fcc.gov) and Bob Weller (Robert.Weller@fcc.gov).

The Keys to a Successful DTV Transition Webcast

Thursday, January 15, 2009

1 PM EST / 10 AM PST

Live Q&A Session

As an industry professional dealing with the DTV transition, you will be interested in a live webcast in which Nielsen and leading industry experts will provide you with information that will help to ensure a successful transition to digital. For more information go to <http://www.encodersatnielsen.com/>.

ATSC Publications

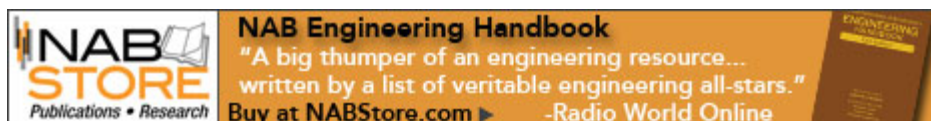
ATSC’s newest Recommended Practice, A/79 “Conversion of ATSC Signals for Distribution to NTSC Viewers,” discussed in *TV TechCheck* of August 11, 2008, has now been formally published on the ATSC Web site. See: <http://www.atsc.org/standards/practices.php>.

The ATSC A/153 Candidate Standard for Mobile/Handheld DTV, discussed in *TV TechCheck* of December 8, 2008, has now been published on the ATSC Web site. See: http://www.atsc.org/standards/candidate_standards.php.

PSIP Update

Just a reminder that a leap second was added to the clock at the end of 2008. If not already done, for station PSIP system times to be in compliance with ATSC A/65, and hence, FCC regulations, the GpsUtcOffset value transmitted in the PSIP System Time Table should be changed from the old value (14) to the new value of 15.

**TV TechCheck* will not be published on January 19, but will return on January 26, 2009.



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