Digital Television Service Maps - Methodology

The digital television station coverage maps and data presented were prepared by Hammett & Edison, Inc., Consulting Engineers with whom the Commission contracted to show the gains and losses predicted for all individual licensed full-power television stations, comparing existing analog coverage and post-transition DTV coverage. In addition, coverage gains and losses of the major television networks were predicted on a nationwide basis. The methodology and station data considered are:

Method of Analysis: Predictions of coverage were based on a modified version of FCC/OET Bulletin No. 69, which was first published in 1997, and is the method used by Media Bureau to process most DTV station applications.[1] This method uses the traditional television reception model in which viewers are assumed to use a quality VHF/UHF antenna mounted outdoors at 10 meters. All propagation models are statistical, meaning that they predict interference-free coverage with probabilities related to location, time, and confidence, so precise locations of losses and/or gains should not be inferred by these predictions.

Stations and service considered: All full-service stations in the Continental United States, Alaska, Hawaii, Guam, Puerto Rico, Guam, and US Virgin Islands were considered. Of those stations, some did not have a licensed analog facility in operation in October 2008 when the analog data was collected for mapping, so there is no analog baseline for comparison of those stations. The authorized post-transition facilities of DTV stations were used to generate the maps and data. Information from licenses, construction permits, authorizations for special temporary authority and other information submitted by stations was used in determining station operating facilities on June 13, 2009 for preparation of the maps showing coverage on the first day after the transition date. The maps for June 13, 2009 do not include maps for stations that will not have their digital facilities in operation on that date.

On or after June 13, many stations will operate their digital channel on a different channel, at a different power level, and/or at a different antenna height or location than their pre-transition digital operations. The mapping analysis for post-transition coverage considered these modifications to stations' facilities. Because there are no guarantees that the Commission will grant pending applications, such applications were not considered for the post-transition analysis.

Certain stations in Puerto Rico and Reading, PA will be operating distributed transmission systems in the post-transition environment. The improved coverage anticipated by those DTS systems was not included in the analysis.

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[1] The methodology in FCC/OET Bulletin 69 was followed, except that, in the rare cases that error code 3 occurs (KWX=3), the indicated signal strength is used to determine whether service is available. This approach is used in FCC/OET Bulletin 72 for calculating the availability of service using the Individual Location Longley-Rice model for purposes of the Satellite Home Viewer Improvement Act of 1999. This approach is considered a better predictor of the availability of service because it does not simply assume service is available every time error code 3 occurs, such as for locations behind hills.

Baseline for comparison: For each station with analog operations, the station's predicted analog population coverage (2000 U.S. Census) determined from its facilities authorized as of mid-October 2008 was used as the baseline. On a nationwide basis, there are on average 2.56 people in each household, so conversion from population to households was estimated using that constant.

Thresholds of significance: A loss or gain of service exceeding 2% of the analog coverage baseline was considered significant. The population represented by this fraction varies depending upon the size of the population baseline.

Losses of Service: A service loss means that a particular population that formerly received analog service from a station's analog signal is not predicted to receive DTV service from its digital signal.

Net Gain of Service: A net gain of service occurs where the population predicted to be newly served by a station's digital signal (population gain) is greater than the population predicted to experience a loss of service as defined above. For most stations, the number of new potential viewers exceeds the number of analog viewers lost, so that DTV service overall generally provides a net gain in potential viewership.

Nielsen Designated Market Areas

ABC Nationwide Coverage Map
CBS Nationwide Coverage Map
Fox Nationwide Coverage Map
NBC Nationwide Coverage Map
PBS Nationwide Coverage Map

DMA Name and State
1 Abilene-Sweetwater TX
2 Albany GA
3 Albany-Schenectady-Troy NY
4 Albuquerque-Santa Fe NM
5 Alexandria LA
6 Alpena MI
7 Amarillo TX
8 Anchorage AK
9 Atlanta GA
10 Augusta GA
11 Austin TX
12 Bakersfield CA
13 Baltimore MD
14 Bangor ME
15 Baton Rouge LA
16 Beaumont-Port Arthur TX
17 Bend OR
18 Billings MT
19 Biloxi-Gulfport MS
20 Binghamton NY
21 Birmingham AL
22 Bluefield-Beckley-Oak Hill WV
23 Boise ID
24 Boston MA
25 Bowling Green KY
26 Buffalo NY
27 Burlington-Plattsburgh NY
28 Butte-Bozeman MT
29 Casper-Riverton WY
30 Cedar Rapids-Waterloo-Iowa City-Dubuque IA
31 Champaign-Springfield-Decatur IL
32 Charleston SC
33 Charleston-Huntington WV
34 Charlotte MN

35 Charlottesville VA
36 Chattanooga TN
37 Cheyenne-Scottsbluff WY
38 Chicago IL
39 Chico-Redding CA
40 Cincinnati OH
41 Clarksburg-Weston WV
42 Cleveland-Akron OH
43 Colorado Springs-Pueblo CO
44 Columbia SC
45 Columbia-Jefferson City MO
46 Columbus GA
47 Columbus OH
48 Columbus-Tupelo-West Point MS
49 Corpus Christi TX
50 Dallas-Ft. Worth TX
51 Davenport-Rock Island-Moline IL
52 Dayton OH
53 Denver CO
54 Des Moines-Ames IA
55 Detroit MI
56 Dothan AL
57 Duluth-Superior MI
58 El Paso TX
59 Elmira NY
60 Erie PA
61 Eugene OR
62 Eureka CA
63 Evansville IN
64 Fairbanks AK
65 Fargo-Valley City ND
66 Flint-Saginaw-Bay City MI
67 Fresno-Visalia CA
68 Ft. Myers-Naples FL
69 Ft. Smith-Fayetteville- AR
Springdale-Rogers
70 Ft. Wayne IN
71 Gainesville FL
72 Glendive MT
73 Grand Junction-Montrose CO
74 Grand Rapids-Kalamazoo-Battle Creek MI
75 Great Falls MT
76 Green Bay-Appleton MI
77 Greensboro-High Point-Winston-Salem NC

78 Greenville-New Bern- Washington NC
79 Greenville-Spartanburg-Asheville NC
80 Greenwood-Greenville MS
81 Guam
82 Harlingen-Weslaco-Brownsville-McAllen MS
83 Harrisburg-Lancaster-Lebanon-York PA
84 Harrisonburg VA
85 Hartford and New Haven CT
86 Hattiesburg-Laurel MS
87 Helena MT
88 Honolulu HI
89 Houston TX
90 Huntsville-Decatur AL
91 Idaho Falls-Pocatello ID
92 Indianapolis IN
93 Jackson MS
94 Jackson TN
95 Jacksonville FL
96 Johnstown-Altoona-State College PA
97 Jonesboro AR
98 Joplin-Pittsburg MO
99 Juneau AK
100 Kansas City KS
101 Knoxville TN
102 La Crosse-Eau Claire WI
103 Lafayette IN
104 Lake Charles LA
105 Lansing MI
106 Laredo TX
107 Las Vegas NV
108 Lexington KY
109 Lima OH
110 Lincoln-Hastings-Kearney NE
111 Little Rock-Pine Bluff AR
112 Los Angeles CA
113 Louisville IN
114 Louisville KY
115 Lubbock TX
116 Macon GA
117 Madison WI

118 Mankato MN
119 Marquette MI
120 Medford-Klamath Falls OR
121 Memphis TN
122 Meridian MS
123 Miami-Ft Lauderdale FL
124 Milwaukee WI
125 Minneapolis-St. Paul MN
126 Minot-Bismarck-Dickinson ND
127 Missoula MT
128 Mobile-Pensacola AL
129 Monroe-El Dorado AR
130 Monterey-Salinas CA
131 Montgomery-Selma AL
132 Myrtle Beach-Florence SC
133 Nashville TN
134 New Orleans LA
135 New York NY
136 Norfolk-Portsmouth-Newport News VA
137 North Platte NE
138 Odessa-Midland TX
139 Oklahoma City OK
140 Omaha NE
141 Orlando-Daytona Beach-Melboune FL
142 Ottumwa-Kirksville IA
143 Paducah-Cape Girardeau-Harrisburg KY
144 Palm Springs FL
145 Panama City FL
146 Parkersburg WV
147 Peoria-Bloomington IL
148 Philadelphia PA
149 Phoenix AZ
150 Pittsburgh PA
151 Portland OR
152 Portland-Auburn ME
153 Presque Isle ME
154 Providence-New Bedford RI
155 Puerto Rico
156 Quincy-Hannibal-Keokuk IL
157 Raleigh-Durham NC
158 Rapid City SD
159 Reno NV
160 Richmond-Petersburg VA

161 Roanoke-Lynchburg VA
162 Rochester NY
163 Rochester-Mason City-Austin IA
164 Rockford IL
165 Sacramento-Stockton-Modesto CA
166 Salisbury MD
167 Salt Lake City UT
168 San Angelo TX
169 San Antonio TX
170 San Diego CA
171 San Francisco-Oakland-San Jose CA
172 Santa Barbara-Santa Maria-San Luis Obispo CA
173 Savannah GA
174 Seattle Tacoma WA
175 Sherman-Ada OK
176 Shreveport LA
177 Sioux City IA
178 Sioux Falls SD
179 South Bend IN
180 Spokane WA
181 Springfield MO
182 Springfield-Holyoke MA
183 St. Joseph MO
184 St. Louis MO
185 Syracuse NY
186 Tallahassee-Thomasville FL
187 Tampa-St. Petersburg FL
188 Terre Haute IN
189 Toledo OH
190 Topeka KS
191 Traverse City-Cadillac MI
192 Tri-Cities TN-VA
193 Tucson AZ
194 Tulsa OK
195 Twin Falls ID
196 Tyler-Longview TX
197 U.S. Virgin Islands NY
198 Utica NY
199 Victoria TX
200 Waco-Temple-Bryan TX
201 Washington DC
202 Watertown NY
203 Wausau-Rhinelander WI

204 West Palm Beach-Ft. Pierce FL
205 Wheeling-Steubenville WV
206 Wichita Falls-Lawton TX
207 Wichita-Hutchinson Plus KS
208 Wilkes Barre-Scranton PA
209 Wilmington NC
210 Yakima-Pasco-Richland-Kennewick WA
211 Youngstown OH
212 Yuma-El Centro AZ
213 Zanesville OH