

EX PARTE OR LATE FILED



1200 EIGHTEENTH STREET, NW  
WASHINGTON, DC 20036

TEL 202.730.1300 FAX 202.730.1301

WWW.HARRISWILTSHIRE.COM

ATTORNEYS AT LAW

ORIGINAL

REDACTED  
FOR PUBLIC INSPECTION

RECEIVED

March 17, 2006

MAR 17 2006

**BY HAND DELIVERY**

Federal Communications Commission  
Office of Secretary

Marlene H. Dortch, Secretary  
Federal Communications Commission  
445 12th Street, S.W.  
Washington, D.C. 20554

***Re: Ex Parte Presentation in MB Docket No 05-192***

Dear Ms. Dortch:

In October 2005, DIRECTV, Inc. ("DIRECTV") submitted a regression analysis prepared by Lexecon demonstrating that DBS operators achieve significantly less penetration in markets where they lack regional sports network ("RSN") programming.<sup>1</sup> That analysis demonstrated that DBS penetration in Philadelphia – where Comcast has for years withheld the local RSN programming from DBS operators – was about half what it should be.<sup>2</sup> In three recent *ex parte* letters covering meetings with three Commissioners' offices, the Applicants in this proceeding claim to have "thoroughly refuted the argument that DBS subscribership is lower in Philadelphia than in other markets" because of Comcast's RSN foreclosure strategy.<sup>3</sup> This simply is not so. As discussed below, neither the data cited by Applicants nor Comcast's own internal analysis support this purported refutation.

<sup>1</sup> See Lexecon, "Analysis of Effect of RSN Availability on DBS Penetration," attached as Appendix A to Exhibit A to Surreply of DIRECTV, Inc. (Oct. 12, 2005) ("First Lexecon Report").

<sup>2</sup> *Id.* at 6 ("DBS penetration in the Philadelphia DMA would be expected to equal 20.9 percent, twice as high as its actual level (10.3 percent)").

<sup>3</sup> See Letter from Michael H. Hammer to Marlene H. Dortch at 2 (Mar. 9, 2006) (Copps); Letter from Michael H. Hammer to Marlene H. Dortch at 2 (Mar. 8, 2006) (Tate); Letter from Michael H. Hammer to Marlene H. Dortch at 2 (Mar. 7, 2006) (Adelstein).

No. of Copies rec'd 042  
List ABOVE

Marlene H. Dortch

March 17, 2006

Page 2 of 4

At the outset, the Commission must recognize that Applicants' current assertion that RSN foreclosure has not adversely affected DBS market share in Philadelphia is directly at odds with Comcast's internal conclusion. Specifically, as DIRECTV discussed in an earlier *ex parte* filing, the confidential documents produced in this proceeding

**REDACTED**

4

**REDACTED**

**REDACTED**

The Commission could ask for no better evidence than this candid admission by Comcast.

The data is no more supportive of Applicants' assertion. The only evidence Applicants cite in their effort to "refute" the effects of RSN foreclosure is (1) the fact that DBS penetration continues to grow in Philadelphia, and (2) the fact that a handful of DMAs have comparable or worse DBS penetration than does Philadelphia. But this is evidence of nothing. Clearly, some consumers in this market continue to prefer DBS service in spite of the lack of RSN programming – but that says nothing about how much growth DBS would achieve on a level playing field. And even if eight DMAs have lower DBS penetration than Philadelphia,<sup>5</sup> the far more telling fact remains that 201 DMAs have higher DBS penetration.

4

**REDACTED**

<sup>5</sup> Using updated data from December 2005 (rather than the September 2005 data cited by Applicants), two of these DMAs (Las Vegas and Palm Springs) actually have higher DBS penetration rates than does Philadelphia. Moreover, in two of the remaining DMAs (Hartford and Providence), cable operators (but not DBS) offer popular significantly viewed broadcast stations, and Lexecon's analysis shows that the availability of significantly viewed stations reduces DBS penetration by a substantial and statistically significant amount. See First Lexecon Report at 6. Comcast's "ranking" analysis ignores the effect of significantly viewed stations on DBS penetration.

Marlene H. Dortch

March 17, 2006

Page 3 of 4

More fundamentally, comparisons of raw penetration figures fail to account for any market characteristics that would be expected to affect DBS penetration. In other words, Applicants' simple "ranking" approach makes no attempt whatsoever to isolate the effect of RSN foreclosure from other variables that could explain variances in DBS penetration across markets. Fortunately, Lexecon's regression analysis is designed to take into account such variables in order to allow a valid comparison of predicted penetration against results actually obtained. As set forth in the First Lexecon Report, it is clear that RSN foreclosure in Philadelphia has artificially depressed DBS penetration when other factors are filtered out, resulting in DBS market share that is about half what would otherwise be expected.<sup>6</sup>

In their *ex parte* letters, Applicants cite DBS penetration figures from Media Business Corp. ("MBC") as of September 2005. Because the First Lexecon Report – filed five months earlier – used MBC data as of March 2005, DIRECTV wondered whether using more recent data would have any effect on Lexecon's conclusions. Accordingly, attached hereto is an updated report in which Lexecon has re-run its regression analysis using MBC data as of December 2005, the most recent data set available.<sup>7</sup>

As discussed in that report, the use of this new data has no material effect on the regression, and the results confirm that DBS penetration is much less than expected in markets where RSN programming is available from cable operators but not DBS rivals. With respect to Philadelphia, for example, Lexecon finds once again that:

- DBS penetration is substantially below the level that would be expected given DMA characteristics; and
- the difference between actual and expected penetration is statistically significant.<sup>8</sup>

Specifically, there is a DBS shortfall of just over ten percentage points (*i.e.*, predicted penetration of 22.4% vs actual penetration of 12.2%), which is virtually the same as the shortfall found in Lexecon's previous analysis based on the earlier data (*i.e.*, predicted penetration of 20.9% vs. actual penetration of 10.3%). Given the recognized "must have" nature of RSN programming, these results simply confirm what common sense would indicate.

---

<sup>6</sup> See First Lexecon Report at 6-7.

<sup>7</sup> See Gustavo Bamberger and Lynette Neumann, "Updated Analysis of Effect of RSN Availability on DBS Penetration" (attached hereto as Exhibit 1).

<sup>8</sup> See *id.* at 1.

Marlene H. Dortch

March 17, 2006

Page 4 of 4

The Lexecon analysis should come as no surprise – least of all to Comcast,  
**REDACTED**  
compared to the 10.2% disparity indicated by Lexecon's model. What is  
surprising is the Applicants' continuing willingness to tell the Commission exactly the  
opposite.

Respectfully submitted,



William M. Wiltshire

Michael D. Nilsson

S. Roberts Carter III

*Counsel for DIRECTV, Inc.*

Enclosure

cc: Rudy Brioché  
Aaron Goldberger  
Jordan Goldstein  
Sarah Whitesell (Media Bureau)  
Wayne D. Johnsen, Wiley Rein & Fielding LLP (counsel for Comcast)

# *Exhibit 1*

## UPDATED ANALYSIS OF EFFECT OF RSN AVAILABILITY ON DBS PENETRATION

**Gustavo Bamberger and Lynette Neumann**

We have been asked by counsel for DIRECTV, Inc. ("DIRECTV") to evaluate a recent claim by Comcast Corporation ("Comcast") regarding the effect of the unavailability of Comcast SportsNet Philadelphia ("CSN-Philadelphia") programming on Direct Broadcast Satellite ("DBS") penetration in Philadelphia. Specifically, Comcast asserts that "Applicants . . . thoroughly refuted the argument that DBS subscribership is lower in Philadelphia than in other markets as a result of SportsNet Philadelphia's limited exclusivity."<sup>1</sup> As we explain in this memo, we find that Comcast provides no basis for its claim.

We also present an update – based on more current DBS subscribership information – of our prior analysis of the effect of regional sports network ("RSN") availability on DBS penetration.<sup>2</sup> The results of our updated analysis are substantially the same as our prior findings. In particular, we find that: (1) DBS penetration is substantially lower in the Philadelphia Designated Market Area ("DMA") than in other DMAs throughout the country; and (2) DBS penetration in Philadelphia is substantially below the level that would be expected given DMA characteristics, and the difference between actual and expected penetration is statistically significant. That is, DMA characteristics explain a portion of the DBS underperformance in Philadelphia, but much of the disparity cannot be accounted for by factors unrelated to RSN availability.<sup>3</sup>

- 
1. Letter from Michael H. Hammer to Marlene H. Dortch, March 9, 2006, at 2 (*ex parte* submission).
  2. See Lexecon, "Analysis of Effect of RSN Availability on DBS Penetration," attached as Appendix A to Exhibit A to Surreply of DIRECTV, Inc. (Oct. 12, 2005) ("DBS Penetration Analysis").
  3. We also repeat our analysis for San Diego and New Orleans, two other DMAs in which RSN professional sports programming is available from cable firms but not from DBS operators. Our updated findings for these DMAs also are substantially the same as our prior findings.

Comcast's claim that the unavailability of CSN-Philadelphia did not reduce DBS subscribership apparently is based only on Comcast's observation that DBS subscribership in Philadelphia is not the lowest in the country:

the following cities have *lower* DBS penetration [than Philadelphia]: Boston (10.73%), Las Vegas (10.96%), Hartford (8.6%), Providence (9.39%), Springfield-Holyoke (8.65%), Laredo (7.92%), El Paso (11.01%), and Palm Springs (11.80%). And the following cities have DBS penetration comparable to Philadelphia: New York (15.24%), Tampa (14.03%), Baltimore (14.15%), Milwaukee (15.08%), Norfolk (14.22%), and Harrisburg (13.29%).<sup>4</sup>

Philadelphia is one of 210 DMAs in the United States. Thus, even Comcast's analysis shows that Philadelphia's DBS subscribership is higher than in only eight DMAs, but lower than in 201 DMAs – that is, Philadelphia's DBS subscribership penetration rate ranks 202 out of 210 DMAs.<sup>5</sup> We see no reason why a rank of 202 out of 210 “thoroughly refute[s]” the argument that withholding CSN-Philadelphia programming has reduced DBS subscribership.

Furthermore, as we discussed in a prior submission to the Commission, several factors other than the availability of RSN programming likely affect DBS penetration in a DMA. Comcast's “ranking” analysis does not account for any of these factors. For example, the availability to cable (but not DBS) subscribers of programming from “significantly viewed” broadcast stations from nearby large DMAs may make cable service relatively more attractive than DBS. While such signals are made available by cable operators in many counties across the country, we understand from DIRECTV business personnel that such programming is likely to be competitively significant in the following DMAs: Baltimore (in which cable subscribers receive programming from Washington broadcast stations); Hartford-New Haven (New York); Providence-New Bedford (Boston); and Palm Springs (Los Angeles). Thus – all else equal –

---

4. *Ex parte* submission, at 2 (emphasis in original).

5. We note that most of the population in the Harrisburg-Lancaster-Lebanon-York DMA – with “DBS penetration comparable to Philadelphia” – is in the CSN-Philadelphia footprint.

DBS penetration is likely to be relatively low in these four DMAs.<sup>6</sup> Comcast's "ranking" analysis ignores the effect of all non-RSN factors on DBS penetration.

We note that in Comcast's analysis, Hartford-New Haven ranks 209<sup>th</sup> out of 210 DMAs; Providence-New Bedford ranks 207<sup>th</sup> out of 210 DMAs; and Palm Springs ranks 203<sup>rd</sup> out of 210 DMAs. That is, three of the eight DMAs that rank below Philadelphia are those in which "significantly viewed" broadcast stations are available on cable but not DBS. Furthermore, the fourth such DMA – Baltimore – is one of the DMAs with "DBS penetration comparable to Philadelphia."

In our prior analysis, we investigated the determinants of DBS penetration by constructing a regression model of DBS penetration by DMA. In addition to controlling for whether a DMA is one in which programming from "significantly viewed" broadcast stations from a nearby large DMA is available to cable (but not DBS) subscribers, we also included in our analysis the following variables: (1) the amount of time that "local-into-local" service has been available in the DMA; (2) the percentage of households in the DMA that are contained in multi-dwelling units ("MDUs"); (3) the percentage of households in the DMA that are located in urban counties; (4) the percentage of households in the DMA with cable modem service; (5) the percentage of households in the DMA with DSL service; and (6) median income in the DMA.<sup>7</sup>

We found that our model explained a substantial proportion of the variation across DMAs in DBS penetration rate, and that many factors affected DBS penetration in a DMA. With respect to the Philadelphia DMA, we found that DBS penetration would be expected to equal 20.9 percent, about twice as high as its actual level (10.3 percent). Compared to most DMAs in the country, Philadelphia: (1) received local-into-local service earlier; (2) has a higher percentage of its population living in MDUs (26.8 percent vs. 21.8 percent); (3) is substantially more urban (98.2 percent vs. 36.9 in A or B counties); (4) has substantially higher cable modem

---

6. See DBS Penetration Analysis, at 4.

7. See DBS Penetration Analysis, at 3-5.

penetration (24.5 percent vs. 19.7 percent); (5) has lower DSL penetration (11.5 percent vs. 13.0 percent); (6) is not a DMA where "significantly viewed" broadcast programming from a nearby DMA is likely to be important to subscribers; and (7) has a higher median income (\$52,100 vs. \$41,800).

The first, sixth and seventh factors increase expected DBS penetration, while the others reduce expected DBS penetration. However, the net effect of all seven factors only reduces expected DBS penetration in Philadelphia from the national average of 25.1 percent to 20.9 percent. The remaining difference – *i.e.*, between 20.9 and 10.3 percent – is not explained by the factors in our model.<sup>8</sup>

Since we conducted our original study, more recent DBS penetration information has become available.<sup>9</sup> For this reason, we have updated our prior analysis. In particular, we repeat our analysis with DBS penetration figures as of December 2005.<sup>10</sup> Our results are substantially the same as in our prior submission.<sup>11</sup> For example, in our prior analysis based on all 210 DMAs, predicted DBS penetration in Philadelphia was 20.9 percent while actual DBS penetration was 10.3 percent (in March 2005). That is, DBS penetration in Philadelphia was 10.6 percentage points lower than expected. In our updated analysis, predicted DBS

---

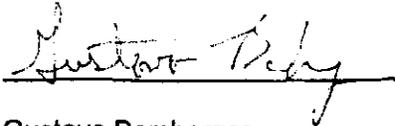
8. We also evaluated the sensitivity of our results by repeating our analysis for only the top 50 DMAs and concluded that our findings were not substantially different from our results based on all DMAs.

9. In its recent *ex parte* submission to the Commission, Comcast relied on DBS penetration information from September 2005; since that submission, December 2005 information has become available. We note that the reported number of Philadelphia DBS subscribers fell from 385,478 in September 2005 to 358,113 in December 2005 (based on information provided by MBC, Comcast's source of DBS subscriber information; we also use MBC information for DBS subscribers by DMA).

10. We calculate DBS penetration in a DMA as number of DBS subscribers in December 2005 divided by number of TV households for the 2005/06 season. (In our prior analysis, we calculated DBS penetration in a DMA as number of DBS subscribers in March 2005 divided by number of TV households for the 2004/05 season.) Comcast's "ranking" analysis is based on DBS penetration calculated as DBS subscribers in September 2005 divided by United States Postal Service ("USPS") households. The number of USPS households in a DMA typically exceeds the number of TV households in a DMA (because, for example, USPS households include P.O. Boxes).

11. We use the same information for all other variables in our analysis (e.g., DSL penetration).

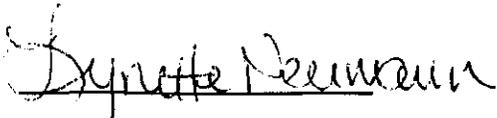
penetration in Philadelphia is 22.4 percent while actual DBS penetration is 12.2 percent (in December 2005), so DBS penetration in Philadelphia is 10.2 percentage points lower than expected. For our sensitivity analysis (i.e., based only on the top 50 DMAs), DBS penetration in Philadelphia in our prior study was 8.4 percentage points lower than expected (in March 2005). In our updated sensitivity analysis, DBS penetration is 8.0 percentage points lower than expected (in December 2005). We attach revised versions of each of the tables in our prior analysis.



Gustavo Bamberger

3/17/06

Date



Lynette Neumann

3/17/06

Date

**Table 1**  
**DBS Penetration for 50 Largest DMAs**

<b>DMA Rank</b>	<b>DMA Name</b>	<b>DBS Penetration</b>
1	New York	17.0
2	Los Angeles	28.6
3	Chicago	21.8
4	Philadelphia	12.2
5	Boston (Manchester, NH)	12.1
6	San Francisco-Oakland-San Jose	24.3
7	Dallas-Fort Worth	36.1
8	Washington, DC (Hagerstown)	25.9
9	Atlanta	37.0
10	Detroit	19.6
11	Houston	23.2
12	Seattle-Tacoma	20.5
13	Tampa-Saint Petersburg (Sarasota)	17.4
14	Minneapolis-Saint Paul	28.1
15	Phoenix (Prescott)	25.9
16	Cleveland-Akron (Canton)	19.5
17	Miami-Fort Lauderdale	26.1
18	Denver	32.8
19	Sacramento-Stockton-Modesto	39.1
20	Orlando-Daytona Beach-Melbourne	22.0
21	Saint Louis	35.8
22	Pittsburgh	17.8
23	Baltimore	15.3
24	Portland, OR	26.0
25	Indianapolis	26.8
26	San Diego	13.6
27	Hartford-New Haven	9.9
28	Charlotte	26.8
29	Raleigh-Durham (Fayetteville)	27.0
30	Nashville	34.3
31	Kansas City	25.4
32	Milwaukee	17.4
33	Cincinnati	22.2
34	Columbus, OH	18.8
35	Greenville-Spartanburg-Asheville-Anderson	36.2
36	Salt Lake City	41.7
37	San Antonio	24.1
38	Grand Rapids-Kalamazoo-Battle Creek	26.1

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Table 1**  
**DBS Penetration for 50 Largest DMAs**

<b>DMA Rank</b>	<b>DMA Name</b>	<b>DBS Penetration</b>
39	West Palm Beach-Fort Pierce	25.0
40	Birmingham (Anniston and Tuscaloosa)	33.1
41	Norfolk-Portsmouth-Newport News	16.7
42	Harrisburg-Lancaster-Lebanon-York	15.2
43	New Orleans	12.3
44	Memphis	28.3
45	Oklahoma City	27.5
46	Buffalo	23.6
47	Albuquerque-Santa Fe	32.2
48	Greensboro-High Point-Winston-Salem	24.0
49	Providence-New Bedford	10.4
50	Louisville	25.7

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Table 2**  
**DBS Penetration Model**  
**Based on 210 DMAs**

The REG Procedure  
 Model: MODEL1  
 Dependent Variable: DBS\_PEN2

---

**Number of Observations Read** 210  
**Number of Observations Used** 210

---

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
<b>Model</b>	14	24.36341	1.74024	19.09	<.0001
<b>Error</b>	195	17.77553	0.09116		
<b>Corrected Total</b>	209	42.13894			

---

<b>Root MSE</b>	0.30192	<b>R-Square</b>	0.5782
<b>Dependent Mean</b>	-1.05435	<b>Adj R-Sq</b>	0.5479
<b>Coeff Var</b>	-28.63568		

---

Parameter Estimates							
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t	
<b>Intercept</b>	Intercept	1	-0.50084	0.16549	-3.03	0.0028	
<b>LL9900</b>	LL Intro 1999-2000	1	0.28175	0.09817	2.87	0.0046	
<b>LL0102</b>	LL Intro 2001-2002	1	0.22302	0.09429	2.37	0.0190	
<b>LL0305</b>	LL Intro 2003-2005	1	0.01029	0.05880	0.17	0.8613	
<b>PCT_MDU</b>	Pct. MDU	1	-0.01598	0.00406	-3.93	0.0001	
<b>PCTHHS_A</b>	Pct. Households Cnty A	1	-0.00652	0.00161	-4.05	<.0001	
<b>PCTHHS_B</b>	Pct. Households Cnty B	1	-0.00740	0.00113	-6.58	<.0001	
<b>PCTHHS_C</b>	Pct. Households Cnty C	1	-0.00375	0.00110	-3.40	0.0008	
<b>PCT_CHSD</b>	Cable Modem Penetration	1	-0.02430	0.00376	-6.46	<.0001	
<b>PCT_DSL</b>	DSL Penetration	1	0.01694	0.00505	3.36	0.0009	
<b>SIG_VIEW</b>	Sign. View (DMAs 23,27,49,159)	1	-0.46520	0.16902	-2.75	0.0065	
<b>MEDINC</b>	Median Income (000)	1	0.00895	0.00450	1.99	0.0479	
<b>PHILLY</b>	Philadelphia DMA Dummy	1	-0.72885	0.31208	-2.34	0.0205	
<b>SANDIEGO</b>	San Diego DMA Dummy	1	-0.24092	0.31331	-0.77	0.4429	
<b>NEWORLEANS</b>	New Orleans DMA Dummy	1	-0.64205	0.31164	-2.06	0.0407	

Note: DBS Subs as of December 2005  
 Nielsen TV households for 2005-2006 television season.

**Table 3**  
**DBS Penetration Model**  
**Based on 50 DMAs**

The REG Procedure  
Model: MODEL1  
Dependent Variable: DBS\_PEN2

---

**Number of Observations Read** 50  
**Number of Observations Used** 50

---

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Value	Pr > F
Model	12	7.94809	0.66234	11.68	<.0001
Error	37	2.09776	0.05670		
<b>Corrected Total</b>	<b>49</b>	<b>10.04585</b>			

---

<b>Root MSE</b>	0.23811	<b>R-Square</b>	0.7912
<b>Dependent Mean</b>	-1.19454	<b>Adj R-Sq</b>	0.7235
<b>Coeff Var</b>	-19.93316		

---

Parameter Estimates						
Variable	Label	DF	Parameter Estimate	Standard Error	t Value	Pr >  t
Intercept	Intercept	1	0.32786	0.43678	0.75	0.4576
LL9900	LL Intro 1999-2000	1	0.14258	0.11183	1.27	0.2103
PCT_MDU	Pct. MDU	1	-0.00994	0.00547	-1.82	0.0772
PCTHHS_A	Pct. Households Cnty A	1	-0.01433	0.00488	-2.94	0.0057
PCTHHS_B	Pct. Households Cnty B	1	-0.01517	0.00506	-3.00	0.0048
PCTHHS_C	Pct. Households Cnty C	1	-0.01038	0.00632	-1.64	0.1088
PCT_CHSD	Cable Modem Penetration	1	-0.02356	0.00794	-2.97	0.0052
PCT_DSL	DSL Penetration	1	0.02476	0.00875	2.83	0.0075
SIG_VIEW	Sign. View (DMAs 23,27,49,159)	1	-0.54995	0.16255	-3.38	0.0017
MEDINC	Median Income (000)	1	0.00297	0.00680	0.44	0.6652
PHILLY	Philadelphia DMA Dummy	1	-0.59783	0.25245	-2.37	0.0232
SANDIEGO	San Diego DMA Dummy	1	-0.21395	0.26893	-0.80	0.4314
NEWORLEANS	New Orleans DMA Dummy	1	-0.56530	0.26627	-2.12	0.0405

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
1	New York	17.02	13.42	3.60
2	Los Angeles	28.58	26.19	2.40
3	Chicago	21.82	24.13	-2.31
4	Philadelphia	12.24	22.43	-10.19
5	Boston (Manchester, NH)	12.06	17.13	-5.07
6	San Francisco-Oakland-San Jose	24.26	30.51	-6.25
7	Dallas-Fort Worth	36.13	30.10	6.03
8	Washington, DC (Hagerstown)	25.93	24.83	1.11
9	Atlanta	37.00	32.72	4.29
10	Detroit	19.60	25.13	-5.54
11	Houston	23.20	25.08	-1.88
12	Seattle-Tacoma	20.50	23.71	-3.22
13	Tampa-Saint Petersburg (Sarasota)	17.45	21.72	-4.27
14	Minneapolis-Saint Paul	28.11	27.94	0.16
15	Phoenix (Prescott)	25.87	20.81	5.06
16	Cleveland-Akron (Canton)	19.50	24.98	-5.48
17	Miami-Fort Lauderdale	26.06	22.03	4.03
18	Denver	32.80	26.08	6.72
19	Sacramento-Stockton-Modesto	39.05	31.46	7.60
20	Orlando-Daytona Beach-Melbourne	21.96	20.80	1.16
21	Saint Louis	35.81	31.86	3.94
22	Pittsburgh	17.83	23.52	-5.69
23	Baltimore	15.33	16.77	-1.44
24	Portland, OR	26.04	23.66	2.38
25	Indianapolis	26.76	27.27	-0.51
26	San Diego	13.56	16.64	-3.08
27	Hartford-New Haven	9.93	14.36	-4.43
28	Charlotte	26.83	27.03	-0.20
29	Raleigh-Durham (Fayetteville)	27.00	27.27	-0.27
30	Nashville	34.32	28.94	5.38
31	Kansas City	25.36	25.93	-0.57
32	Milwaukee	17.44	20.19	-2.75
33	Cincinnati	22.20	24.17	-1.97
34	Columbus, OH	18.75	24.61	-5.86
35	Greenville-Spartanburg-Asheville-Anderson	36.17	32.78	3.39
36	Salt Lake City	41.71	31.38	10.34

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
37	San Antonio	24.06	25.55	-1.49
38	Grand Rapids-Kalamazoo-Battle Creek	26.14	25.53	0.61
39	West Palm Beach-Fort Pierce	24.96	22.72	2.24
40	Birmingham (Anniston and Tuscaloosa)	33.08	30.18	2.90
41	Norfolk-Portsmouth-Newport News	16.71	15.99	0.72
42	Harrisburg-Lancaster-Lebanon-York	15.20	24.13	-8.92
43	New Orleans	12.28	21.01	-8.73
44	Memphis	28.33	29.20	-0.87
45	Oklahoma City	27.55	25.83	1.71
46	Buffalo	23.61	18.96	4.65
47	Albuquerque-Santa Fe	32.18	35.11	-2.93
48	Greensboro-High Point-Winston-Salem	24.03	24.27	-0.25
49	Providence-New Bedford	10.37	10.01	0.36
50	Louisville	25.67	28.62	-2.95
51	Las Vegas	12.93	14.42	-1.49
52	Jacksonville	27.93	27.20	0.73
53	Wilkes Barre-Scranton	20.41	25.01	-4.60
54	Austin	22.29	23.58	-1.29
55	Albany-Schenectady-Troy	15.59	15.09	0.50
56	Dayton	17.24	20.42	-3.18
57	Little Rock-Pine Bluff	33.99	30.22	3.77
58	Fresno-Visalia	32.49	30.87	1.62
59	Knoxville	26.69	27.73	-1.04
60	Tulsa	30.08	28.67	1.40
61	Richmond-Petersburg	26.30	20.90	5.41
62	Charleston-Huntington	25.20	30.94	-5.73
63	Mobile-Pensacola (Fort Walton Beach)	22.07	19.96	2.11
64	Lexington	29.00	28.68	0.33
65	Flint-Saginaw-Bay City	22.66	21.84	0.81
66	Wichita-Hutchinson Plus	21.45	22.48	-1.04
67	Roanoke-Lynchburg	36.11	27.66	8.45
68	Fort Myers-Naples	21.68	18.30	3.38
69	Green Bay-Appleton	26.56	23.80	2.76
70	Toledo	20.94	24.50	-3.57
71	Honolulu	4.68	12.38	-7.70
72	Tucson (Sierra Vista)	26.05	15.76	10.29

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
73	Des Moines-Ames	31.30	31.19	0.10
74	Portland-Auburn	17.73	23.64	-5.90
75	Rochester, NY	14.44	14.86	-0.42
76	Omaha	19.59	16.91	2.68
77	Syracuse	14.77	14.82	-0.04
78	Springfield, MO	42.04	37.69	4.35
79	Paducah-Cape Girardeau-Harrisburg	38.31	37.39	0.92
80	Spokane	35.85	30.05	5.80
81	Shreveport	37.37	29.62	7.76
82	Champaign & Springfield-Decatur	25.10	30.38	-5.28
83	Columbia, SC	27.43	24.47	2.96
84	Huntsville-Decatur (Florence)	26.10	25.85	0.25
85	Madison	26.24	22.49	3.75
86	Chattanooga	25.42	24.87	0.54
87	South Bend-Elkhart	30.43	31.79	-1.36
88	Cedar Rapids-Waterloo-Iowa City & Dubuque	24.55	28.89	-4.33
89	Tri-Cities, TN-VA	20.72	24.23	-3.51
90	Burlington-Plattsburgh	42.07	32.62	9.45
91	Jackson, MS	36.88	29.60	7.29
92	Colorado Springs-Pueblo	29.97	28.87	1.10
93	Harlingen-Weslaco-Brownsville-McAllen	13.66	23.95	-10.29
94	Davenport-Rock Island-Moline	26.99	28.99	-1.99
95	Waco-Temple-Bryan	27.05	28.42	-1.37
96	Baton Rouge	14.43	21.03	-6.60
97	Johnstown-Altoona	19.90	28.15	-8.25
98	Savannah	28.17	32.42	-4.25
99	Evansville	28.91	34.43	-5.52
100	El Paso (Las Cruces)	13.45	19.05	-5.60
101	Charleston, SC	19.17	20.46	-1.29
102	Youngstown	16.13	19.73	-3.59
103	Lincoln & Hastings-Kearney	26.95	27.13	-0.18
104	Fort Wayne	29.69	25.87	3.82
105	Greenville-New Bern-Washington	27.43	25.71	1.72
106	Springfield-Holyoke	9.92	12.36	-2.44
107	Fort Smith-Fayetteville-Springdale-Rogers	31.35	27.26	4.09
108	Myrtle Beach-Florence	18.86	22.32	-3.46

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
109	Tallahassee-Thomasville	22.51	31.84	-9.33
110	Lansing	23.77	20.92	2.85
111	Tyler-Longview (Lufkin & Nacogdoches)	40.07	32.66	7.42
112	Traverse City-Cadillac	40.28	31.66	8.62
113	Montgomery (Selma)	23.99	30.76	-6.77
114	Reno	31.94	23.57	8.37
115	Augusta	21.47	26.38	-4.91
116	Sioux Falls (Mitchell)	25.06	33.38	-8.32
117	Peoria-Bloomington	22.65	26.73	-4.07
118	Fargo-Valley City	28.18	31.02	-2.83
119	Macon	28.66	34.89	-6.22
120	Eugene	24.89	22.75	2.14
121	Santa Barbara-Santa Maria-San Luis Obispo	24.14	21.00	3.14
122	Boise	36.96	26.74	10.21
123	Lafayette, LA	24.37	21.78	2.59
124	Monterey-Salinas	32.47	28.96	3.51
125	Columbus, GA	16.90	29.33	-12.43
126	Yakima-Pasco-Richland-Kennewick	33.85	28.41	5.44
127	La Crosse-Eau Claire	27.15	28.87	-1.71
128	Bakersfield	24.43	19.13	5.29
129	Corpus Christi	17.67	20.47	-2.80
130	Amarillo	29.55	31.92	-2.38
131	Chico-Redding	45.00	33.82	11.18
132	Columbus-Tupelo-West Point	38.10	39.14	-1.05
133	Wausau-Rhineland	37.58	31.81	5.77
134	Rockford	27.07	23.47	3.60
135	Monroe-El Dorado	31.96	32.99	-1.03
136	Duluth-Superior	39.10	29.92	9.18
137	Topeka	26.51	25.53	0.98
138	Beaumont-Port Arthur	20.73	21.52	-0.79
139	Columbia-Jefferson City	41.20	36.40	4.80
140	Wilmington	20.75	22.44	-1.69
141	Medford-Klamath Falls	35.04	27.31	7.73
142	Erie	23.89	25.22	-1.33
143	Sioux City	29.69	34.48	-4.79
144	Wichita Falls & Lawton	33.60	33.11	0.50

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
145	Lubbock	23.28	27.72	-4.43
146	Joplin-Pittsburg	36.27	37.02	-0.75
147	Albany, GA	23.50	37.18	-13.68
148	Bluefield-Beckley-Oak Hill	25.96	29.89	-3.93
149	Terre Haute	36.02	34.55	1.47
150	Salisbury	25.81	16.30	9.51
151	Bangor	40.34	29.86	10.47
152	Wheeling-Steubenville	26.63	26.41	0.22
153	Rochester-Mason City-Austin	23.05	27.37	-4.32
154	Binghamton	25.27	20.49	4.78
155	Anchorage	17.18	18.74	-1.56
156	Biloxi-Gulfport	26.95	23.14	3.81
157	Minot-Bismarck-Dickinson (Williston)	28.45	34.67	-6.22
158	Odessa-Midland	19.20	29.39	-10.18
159	Palm Springs	16.81	11.04	5.77
160	Panama City	29.77	27.72	2.05
161	Sherman-Ada	43.28	36.73	6.56
162	Gainesville	30.84	23.73	7.11
163	Abilene-Sweetwater	33.08	32.73	0.35
164	Idaho Falls-Pocatello	34.38	30.60	3.78
165	Clarksburg-Weston	35.17	31.59	3.58
166	Utica	22.69	18.28	4.41
167	Quincy-Hannibal-Keokuk	41.48	36.49	4.99
168	Hattiesburg-Laurel	38.33	34.20	4.13
169	Missoula	40.45	31.34	9.10
170	Billings	35.31	30.60	4.71
171	Yuma-El Centro	22.31	25.66	-3.34
172	Dothan	24.39	31.62	-7.23
173	Elmira (Corning)	29.22	23.48	5.74
174	Jackson, TN	32.53	31.97	0.56
175	Watertown	29.66	18.97	10.69
176	Alexandria, LA	32.26	30.19	2.06
177	Lake Charles	28.82	29.78	-0.95
178	Rapid City	27.49	34.13	-6.64
179	Jonesboro	36.91	34.47	2.44
180	Marquette	29.07	31.46	-2.39

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 1**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 210 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
181	Harrisonburg	31.94	25.81	6.13
182	Bowling Green	31.80	32.96	-1.16
183	Greenwood-Greenville	27.19	35.42	-8.24
184	Meridian	40.28	34.98	5.30
185	Charlottesville	31.22	27.76	3.45
186	Lafayette, IN	16.44	24.12	-7.68
187	Parkersburg	22.77	25.71	-2.95
188	Great Falls	39.62	29.35	10.27
189	Grand Junction-Montrose	29.27	30.50	-1.23
190	Laredo	9.37	20.75	-11.38
191	Twin Falls	37.57	32.05	5.52
192	Eureka	24.41	25.25	-0.84
193	Butte-Bozeman	44.08	30.81	13.27
194	Lima	9.79	23.41	-13.62
195	Cheyenne-Scottsbluff	21.64	33.98	-12.33
196	San Angelo	23.99	22.30	1.69
197	Bend, OR	24.87	25.72	-0.84
198	Casper-Riverton	31.14	34.32	-3.18
199	Mankato	17.07	25.03	-7.96
200	Ottumwa-Kirksville	38.65	38.68	-0.03
201	Saint Joseph	31.18	28.98	2.21
202	Zanesville	22.95	22.20	0.75
203	Presque Isle	37.52	22.34	15.19
204	Fairbanks	22.70	15.72	6.98
205	Victoria	21.00	21.56	-0.56
206	Helena	32.24	33.10	-0.86
207	Juneau	26.40	23.64	2.77
208	Alpena	33.04	27.90	5.14
209	North Platte	31.31	32.79	-1.48
210	Glendive	29.84	30.26	-0.42

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 2**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 50 DMAs**

Rank	DMA Name	Actual DBS Penetration	Predicted DBS Penetration	Residual
1	New York	17.02	14.07	2.95
2	Los Angeles	28.58	26.87	1.72
3	Chicago	21.82	23.55	-1.73
4	Philadelphia	12.24	20.23	-7.99
5	Boston (Manchester, NH)	12.06	16.99	-4.92
6	San Francisco-Oakland-San Jose	24.26	30.24	-5.97
7	Dallas-Fort Worth	36.13	30.18	5.95
8	Washington, DC (Hagerstown)	25.93	22.52	3.41
9	Atlanta	37.00	32.56	4.45
10	Detroit	19.60	21.59	-1.99
11	Houston	23.20	24.96	-1.76
12	Seattle-Tacoma	20.50	22.61	-2.11
13	Tampa-Saint Petersburg (Sarasota)	17.45	21.45	-4.01
14	Minneapolis-Saint Paul	28.11	28.17	-0.06
15	Phoenix (Prescott)	25.87	19.07	6.81
16	Cleveland-Akron (Canton)	19.50	23.95	-4.46
17	Miami-Fort Lauderdale	26.06	25.67	0.39
18	Denver	32.80	26.60	6.20
19	Sacramento-Stockton-Modesto	39.05	31.76	7.30
20	Orlando-Daytona Beach-Melbourne	21.96	19.68	2.27
21	Saint Louis	35.81	32.07	3.73
22	Pittsburgh	17.83	23.20	-5.37
23	Baltimore	15.33	14.35	0.98
24	Portland, OR	26.04	23.77	2.27
25	Indianapolis	26.76	27.72	-0.96
26	San Diego	13.56	16.27	-2.71
27	Hartford-New Haven	9.93	12.54	-2.61
28	Charlotte	26.83	26.30	0.53
29	Raleigh-Durham (Fayetteville)	27.00	27.74	-0.74
30	Nashville	34.32	31.36	2.96
31	Kansas City	25.36	25.82	-0.46
32	Milwaukee	17.44	19.30	-1.87
33	Cincinnati	22.20	23.55	-1.35
34	Columbus, OH	18.75	25.41	-6.66
35	Greenville-Spartanburg-Asheville-Anderson	36.17	33.81	2.36
36	Salt Lake City	41.71	33.09	8.63

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.

**Appendix Table 2**  
**Actual and Predicted Values from DBS Penetration Regression**  
**Based on 50 DMAs**

<b>Rank</b>	<b>DMA Name</b>	<b>Actual DBS Penetration</b>	<b>Predicted DBS Penetration</b>	<b>Residual</b>
37	San Antonio	24.06	27.36	-3.30
38	Grand Rapids-Kalamazoo-Battle Creek	26.14	23.52	2.62
39	West Palm Beach-Fort Pierce	24.96	23.79	1.17
40	Birmingham (Anniston and Tuscaloosa)	33.08	30.25	2.83
41	Norfolk-Portsmouth-Newport News	16.71	15.01	1.70
42	Harrisburg-Lancaster-Lebanon-York	15.20	20.66	-5.46
43	New Orleans	12.28	19.77	-7.49
44	Memphis	28.33	32.30	-3.97
45	Oklahoma City	27.55	26.85	0.69
46	Buffalo	23.61	18.65	4.96
47	Albuquerque-Santa Fe	32.18	39.77	-7.58
48	Greensboro-High Point-Winston-Salem	24.03	22.91	1.12
49	Providence-New Bedford	10.37	8.77	1.60
50	Louisville	25.67	28.64	-2.97

Note: DBS Subs as of December 2005  
Nielsen TV households for 2005-2006 television season.