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March 30, 2006

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Federal Communications Commission  
Office of Secretary

**BY HAND DELIVERY**

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

ORIGINAL

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

Dear Ms. Dortch:

Throughout this proceeding, DIRECTV, Inc. ("DIRECTV") has challenged the unsupported assertion made by Comcast Corporation ("Comcast") and Time Warner Cable Inc. ("Time Warner") that the extraordinary market concentration resulting from the transactions they propose would serve the public interest. Applicants maintain that creating and enhancing ever larger system clusters (which they euphemistically refer to as "geographic rationalization") will enable them to offer more advanced services to their customers more quickly. To date, however, they have provided absolutely no analysis to support this critical assertion.

In its initial Comments, DIRECTV pointed out this lack of evidence, and documented contrary evidence showing that cable clustering actually results in higher prices, lower customer satisfaction, and less competitive entry.<sup>1</sup> In its Surreply, DIRECTV once again noted the Applicants' failure to provide any analysis of their clustering, much less evidence sufficient to verify the likelihood and magnitude of the benefit claimed.<sup>2</sup> Yet even today – more than ten months after filing their application – neither Time Warner nor Comcast has submitted any econometric study to substantiate and quantify these claims.

Now that DIRECTV has had an opportunity to analyze the Applicants' confidential data, the reason for their failure to substantiate their assertions about "geographic rationalization" is clear. As detailed in the attached report by Lexecon,

<sup>1</sup> See Comments of DIRECTV, Inc. at 26-29 (July 21, 2005).

<sup>2</sup> See Surreply of DIRECTV, Inc. at 18-19, 24 (Oct. 12, 2005).

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***there is no meaningful relationship between the size of Applicants' clusters and the availability or penetration of advanced services.***

Comcast and Time Warner would have the Commission believe that larger clusters for cable operators lead inevitably to more advanced services for their subscribers. To test that assertion, Lexecon performed a series of regressions to determine whether the availability and penetration of digital cable, high speed data ("HSD"), and telephony services correlates in any way with the size of a cable cluster's footprint. If Comcast and Time Warner were right, one would expect their larger clustered systems to have measurably higher availability and penetration rates for these services than do their smaller clustered systems.

Lexecon's analysis of the Applicants' own data demonstrates that this is clearly not the case.<sup>3</sup> Simply plotting the data, as Lexecon has done in Figures 1 through 13, provides clear visual evidence that belies any systematic correlation. Applying regression models to this data, Lexecon confirms what the charts show. Specifically, Lexecon finds:

- There is no systematic relationship between homes passed and the *availability* of advanced services for either Comcast or Time Warner system clusters.
- There is no systematic relationship between homes passed and the *penetration* of advanced services for Comcast's system clusters. In fact, when the very smallest clusters are taken out of the analysis, the regression actually shows a *significantly negative correlation* between HSD service and system size. In other words, it appears that once a cluster of systems passes as few as 150,000 homes, any further concentration – such as the “mega-clusters” Comcast proposes to create – may actually lead to somewhat *decreased* penetration of HSD service.
- There is no systematic relationship between homes passed and the *penetration* of HSD and telephony services for Time Warner's system clusters. There is a small but statistically significant relationship for digital cable services, but cluster size explains less than 14.5% of the variation in penetration. And again, the regressions show no systematic relationship for *any* advanced service once the smallest clusters are removed from the analysis, indicating that any arguable benefits of clustering have been achieved by systems that pass as few as 250,000 homes.<sup>4</sup>

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<sup>3</sup> See Gustavo Bamberger and Lynette Neumann, “Analysis of the Effect of ‘Clustering’ on the Availability of Digital Cable, High-Speed Data, and Telephony Services” (attached hereto as Exhibit A).

<sup>4</sup> Time Warner has two divisions composed of small, isolated systems that it does not consider to be truly clustered. Nonetheless, to the extent that systems in these divisions have comparatively lower penetration rates in some respects, the *most* this can mean is that the very smallest and most isolated

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This evidence dramatically undercuts what the Applicants claim to be one of the primary public interest benefits of the proposed transactions. It is especially telling here, since most of the other claimed benefits are so clearly either not cognizable or non-existent.

For example, the majority of these alleged benefits (*e.g.*, consolidation of advertising and promotion budgets, network assets, customer service centers, billing functions, and distribution channels) relate to reductions in fixed costs. The Commission has traditionally given little weight to fixed cost savings in its public interest analysis.<sup>5</sup>

One of the only claimed efficiencies that might relate to variable (rather than fixed) costs – an alleged reduction in programming fees – has not been adequately substantiated. In theory, MVPDs with larger subscriber bases may be able to obtain programming at lower prices. But Comcast's national subscriber base will experience virtually no increase, so no savings on national programming costs should be anticipated.<sup>6</sup> While Time Warner will grow from approximately 10.9 million to approximately 14.4 million subscribers, it is not at all clear that growing from the nation's fourth largest MVPD to the distant second or third largest MVPD will have a material effect on what it pays for programming. Thus, as in a previous case where the Commission rejected the claimed efficiency, Applicants "have not demonstrated that programming costs will necessarily fall to the extent they predict based on the merged entity's larger subscriber base."<sup>7</sup>

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systems compare unfavorably in some respects to more concentrated systems. That, of course, has little to do with the "mega-clusters" the Applicants seek to create from existing clusters. Moreover, the systems in these two divisions have not been particularly targeted for clustering through the proposed transactions.

<sup>5</sup> See *EchoStar Communications Corp., General Motors Corp., and Hughes Electronics Corp.*, Hearing Designation Order, 17 FCC Rcd. 20559, 20648 (2002) ("*EchoStar HDO*") (discounting such alleged efficiencies because they relate to fixed rather than variable costs and "therefore are unlikely to counteract any anticompetitive effects" of a transaction). See also, *e.g.*, *Nextel Communications, Inc. and Sprint Corp.*, 20 FCC Rcd. 13967, 14014 (2005) (the Commission is less likely to find reductions in fixed costs cognizable because reductions in marginal costs are more likely to result in lower prices for consumers).

<sup>6</sup> By contrast, Comcast's subscriber base in certain regions would change dramatically, giving it leverage over regional programmers. As DIRECTV has documented, however, the exercise of such market power raises serious concerns – including the specter of uniform overcharge pricing – and cannot reasonably be characterized as a public interest benefit.

<sup>7</sup> *EchoStar HDO*, 17 FCC Rcd. at 20638. Moreover, the Commission has recognized that "any savings in programming costs that result from a change in bargaining power represent a shift in surplus between programming providers and [MVPDs], but not necessarily an increase in total surplus." *Id.* at 20638-39. Thus, while lowered programming costs may improve the Applicants' business case, they

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Lastly, it is also worth noting several oddities in the cable systems to be swapped between Comcast and Time Warner that call into question whether even they believe in the benefits of clustering. Specifically, both Comcast and Time Warner propose to transfer entire clusters in several markets *where the transferee currently has no subscribers*. In other words, for Time Warner subscribers in Minneapolis (200,000), Memphis (200,000), Jackson (76,000), Shreveport (62,000), Monroe (40,000), and New Orleans (35,000), there will be a change in system ownership but no increase in clustering as a result. For its part, Comcast proposes to transfer its third largest system (Dallas, with 580,000 subscribers) to Time Warner, which has no systems in that area.<sup>8</sup>

These system swaps alone account for nearly 1.2 million subscribers – none of whom would experience increased clustering as a result of the proposed transactions. Again, there is no evidentiary basis upon which to conclude that clustering will lead to any efficiencies. But even assuming, *arguendo*, the existence of such efficiencies, they would not apply to these 1.2 million subscribers. Comcast and Time Warner have yet to explain exactly what public interest benefits these subscribers stand to gain from the transactions.

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In the Commission's public interest analysis, the Applicants must prove by a preponderance of the evidence that the probable benefits of the proposed transactions outweigh the potential harms.<sup>9</sup> In particular, "[t]o find that a [transaction] is in the public interest, . . . the Commission must 'be convinced that it will enhance competition.'"<sup>10</sup>

DIRECTV and other commenters have documented the serious anticompetitive effects of the proposed transactions. By contrast, Comcast and Time Warner have failed to produce evidence to demonstrate the likelihood and magnitude of the benefits they claim.<sup>11</sup> Accordingly, as the Commission undertakes its public interest balancing analysis, the Applicants have provided nothing with which to offset the anticompetitive

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do not necessarily result in a net increase in social surplus that can be balanced against the anticompetitive effects of the proposed transactions.

<sup>8</sup> See Letter from Arthur H. Harding to Marlene H. Dortch (June 21, 2005) (attaching tables listing cable subscribers by DMA both pre- and post-transaction for Comcast and Time Warner).

<sup>9</sup> See, e.g., *EchoStar HDO*, 17 FCC Rcd. at 20574; see also *Media One Group, Inc. and AT&T Corp.*, 15 FCC Rcd. 9816, 9820 (2000).

<sup>10</sup> *Time Warner Inc. and America Online, Inc.*, 16 FCC Rcd. 6547, 6555 (2001) (quoting *NYNEX Corp. and Bell Atlantic Corp.*, 12 FCC Rcd. 19985, 19987 (1997)).

<sup>11</sup> See *Western Wireless Corp. and ALLTEL Corp.*, 20 FCC Rcd. 13053, 13101 (2005) (applicants "are required to provide sufficient evidence supporting each benefit claim so that the Commission can verify the likelihood and magnitude of the claimed benefit").

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implications of the regional market concentration they propose. Without prophylactic conditions to safeguard competition, the clear weight of the evidence tips decidedly against the applicants.

Pursuant to the First and Second Protective Orders, one non-redacted copy and two redacted copies of the attached Lexecon report are being filed with the Office of the Secretary, and two non-redacted copies are also being provided to the Media Bureau. A non-redacted copy will also be served upon Outside Counsel of Record for Comcast and Time Warner, and a non-redacted copy will be made available at our offices during regular business hours for review by those who have signed the appropriate Acknowledgements of Confidentiality.

Respectfully submitted



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Enclosure

cc: Julie Salovaara (Media Bureau)  
Wayne D. Johnsen, Wiley Rein & Fielding LLP (counsel for Comcast)  
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**ANALYSIS OF THE EFFECT OF "CLUSTERING" ON THE AVAILABILITY AND  
PENETRATION OF DIGITAL CABLE, HIGH-SPEED DATA AND TELEPHONY SERVICES**

**Gustavo Bamberger and Lynette Neumann**

**I. INTRODUCTION.**

1. In a prior submission, we analyzed the anticompetitive effects of the proposed transactions (the "Transactions") in which the cable assets of Adelphia Communications Corporation ("Adelphia") would be acquired (directly and indirectly) by Comcast Corporation ("Comcast") and Time Warner Cable Inc. ("Time Warner"), and Comcast and Time Warner would exchange other cable assets.<sup>1</sup> In this submission, we analyze what the applicants claim is one of the primary procompetitive benefits of the Transactions. Specifically, we analyze the claim that all of Comcast's and Time Warner's customers (current and potential) will benefit from the accelerated roll-out of advanced services made possible by the "enhanced geographic rationalization" that will result from the Transactions.<sup>2</sup>

2. As we explain in this report, we find that the confidential data provided by Comcast and Time Warner are inconsistent with this claim. Specifically, we find no systematic statistically significant relationship between the size of Comcast or Time Warner "clusters" of cable systems and the availability or penetration of advanced services.

3. We evaluate the Comcast/Time Warner claim that "enhanced geographic

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1. See Further Statement of Gustavo Bamberger and Lynette Neumann, attached as exhibit to Letter from William M. Wiltshire to Marlene H. Dortch, March 1, 2006. Our qualifications are a matter of record in this proceeding.
  2. See, e.g., Adelphia Communications Corporation, Time Warner Cable Inc. and Comcast Corporation (subsidiaries), MB Docket No. 05-192, Applications and Public Interest Statement ("Public Interest Statement"), at ii-iii.

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rationalization” – often referred to as “clustering” – benefits cable subscribers by analyzing the extent to which the availability and penetration of advanced services varies across Comcast and Time Warner systems. For Comcast, we analyze the availability and penetration of digital cable and high-speed data (“HSD”) services; for Time Warner, we analyze the availability and penetration of digital cable, HSD and telephony services.<sup>3</sup>

4. If, as Comcast and Time Warner claim, clustering benefits consumers, we would expect to find that the availability and penetration of such “advanced services” is lower in relatively smaller groups of systems than in larger groups of “clustered” systems. We note that neither Comcast nor Time Warner has provided any economic study in this proceeding that purports to show such a correlation between clustering and the availability or penetration of advanced services.<sup>4</sup>

5. We base our analysis on non-public information submitted by Comcast and Time Warner in response to the Commission’s information request. In that request, the Commission

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3. Comcast acquired approximately 1.5 million cable telephony subscribers in 2002 when it acquired the AT&T cable business. See, for example, Comcast Corporation and AT&T Corp., 17 FCC Rcd. 23246 ¶16 (2002). Comcast began its rollout of “Comcast Digital Voice” in selected areas during 2005 (adding 202,000 customers during 2005). Comcast reports that it had 1.3 million telephone subscribers in 2005 (Comcast Annual Report, 2005, at 16); Comcast also reports that “substantially all” its “circuit-switched” telephone subscribers were obtained in the AT&T acquisition. Comcast’s response to the Commission’s Information and Document Request of December 5, 2005 (“Request”) reports about telephony subscribers as of the second quarter of 2005; thus, all or substantially all of these subscribers appear to be customers of “legacy” AT&T circuit-switched service, and so do not reflect deployment decisions made by Comcast. For this reason, we do not analyze whether Comcast’s continued provision of legacy AT&T telephony services is associated with the extent of Comcast’s “clustering.”

4. Comcast and Time Warner report that “HSD Penetration (Percent of Homes Passed),” “VOD Availability (Percent of Subscribers)” and “HD Subscribers Percent of Basic” are higher, on average, in Comcast and Time Warner systems than in Adelphia systems. See Public Interest Statement, at 47. However, Comcast and Time Warner report these statistics only at the corporate level and thus provide no information on the extent to which such measures are higher in “clustered” than in “fragmented” systems.

asked Comcast and Time Warner to “[i]dentify each Cable System owned, operated, managed or attributed to the Company as of June 30, 2005.”<sup>5</sup> For each such system, the Commission asked Comcast and Time Warner to report a variety of statistics (e.g., basic cable subscribers, basic cable homes passed, HSD subscribers, HSD homes passed) “at the most granular reporting level retained in the ordinary course of business.”<sup>6</sup> The Commission also asked Comcast and Time Warner to identify the “Cluster containing the system.”<sup>7</sup>

6. As we have discussed, Comcast and Time Warner claim that clustering accelerates the roll-out of advanced services. Thus, we begin our analysis by evaluating the extent to which clustering is associated with the availability of advanced services. For Comcast, we measure availability of digital cable and HSD services as:

- (1) HSD homes passed as a percentage of basic homes passed.<sup>8</sup>

For Time Warner, we use this measure and also measure the availability of telephony as:

- (2) Telephony homes passed as a percentage of basic homes passed.

That is, metric (1) indicates the extent to which HSD services have been “rolled out” by Comcast and Time Warner within each service footprint. Similarly, metric (2) indicates the extent to which telephony services have been rolled out by Time Warner.

7. Next, we evaluate the extent to which clustering is associated with the penetration of advanced services. Even if increases in clustering lead to increases in availability of advanced services, the penetration rate for such services may be low because the price of

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5. Request, Item II.A.

6. Comcast Corporation Response to Information and Document Request, MB Docket No. 05-192 (“Comcast Response”), at 7, attached to Letter from Martha E. Heller to Marlene H. Dortch, Dec. 22, 2005.

7. Request, Item II.A.4.

8. Comcast did not report digital cable homes passed. We note that Time Warner did provide such data (by Time Warner “division”), and digital cable homes passed are identical to HSD homes passed for 24 of 31 Time Warner divisions (and close to the same for the remaining seven divisions). For purposes of this analysis, we use HSD homes passed as a proxy for digital cable homes passed.

*the service is relatively high or service quality is relatively low (or both).* For Comcast, we measure the penetration of digital cable and HSD services as:

- (3) Digital subscribers as a percentage of basic homes passed;
- (4) Digital subscribers as a percentage of HSD homes passed;
- (5) HSD subscribers as a percentage of basic homes passed; and
- (6) HSD subscribers as a percentage of HSD homes passed.

For Time Warner, we repeat these measures and also evaluate two additional penetration metrics:

- (7) Telephony subscribers as a percentage of basic homes passed, and
- (8) Telephony subscribers as a percentage of telephony homes passed.

Metrics (3) and (4) measure the extent to which consumers purchase digital cable service, either within the entire cable service footprint or the portion in which digital service is available. Similarly, metrics (5) and (6) measure the extent to which consumers purchase HSD service. Finally, metrics (7) and (8) measure the extent to which consumers purchase cable telephony service.

8. We measure the extent of "clustering" in a system or region by the number of basic homes passed. That is, we assume that "clustering" becomes more pronounced as the number of basic homes passed increases. We thus analyze whether increases in the number of basic homes passed are associated with increased availability and penetration of advanced services.

## **II. DESCRIPTION OF CONFIDENTIAL INFORMATION PROVIDED BY COMCAST AND TIME WARNER.**

9. In its response to the Commission's Request, Comcast provided information at three levels of aggregation: (1) approximately 1,500 "CLUs"; (2) 93 "systems"; and (3) 29 "regions." Each system contains a number of "CLUs;" each "region" consists of one or more

"systems."<sup>9</sup> For each of the "communities," Comcast provides information on basic cable subscribers (because each community is assigned to one system, this information can be used to derive the number of basic cable subscribers per system). For each system, Comcast provides information on: basic homes passed; digital cable subscribers; HSD subscribers and homes passed; and telephony subscribers and homes passed. Because each region contains one or more systems, this information can be aggregated to the region level. Because Comcast provided information on subscribers and homes passed at the system and region levels, we analyze the effect of clustering at both levels of geographic aggregation.

10. Comcast's 93 systems differ substantially in size, ranging from **REDACTED** basic homes passed (Atlanta) to **REDACTED** basic homes passed (Manitowoc). Seven systems have over **REDACTED** basic homes passed, while 18 have fewer than **REDACTED**. See Table 1. Similarly, Comcast's 29 regions differ substantially in size, ranging from **REDACTED** basic homes passed (**REDACTED**) to fewer than **REDACTED** basic homes passed (**REDACTED**). Four regions have over **REDACTED** basic homes passed, while six have fewer than **REDACTED**. See Table 2.

11. Time Warner provided information at two levels of aggregation: (1) 109 "systems"; and (2) 31 "divisions." Each division consists of one or more "systems."<sup>10</sup> For each of its systems, Time Warner provides information on basic cable subscribers (because each system is assigned to one division, this information can be aggregated to derive the number of basic cable subscribers per division). For each division, Time Warner provides information on: basic homes passed; digital cable subscribers and homes passed; HSD subscribers and homes passed; and telephony subscribers and homes passed. Because Time Warner provided

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9. For example, the "Chicago Region" consists of four systems: West Chicago, South Chicago, City of Chicago and North Chicago. The Atlanta region, however, consists of only one system. See Comcast Response, Item II.B.1.

10. For example, the "Albany Division" consists of three systems: Albany, NY; Athol, MA; and Pittsfield, MA. The "Austin Division", however, consists of only one system. See Time Warner Response, Item II.B.1.

information on subscribers and homes passed only at the division level, we analyze the effect of clustering only at the division level.

12. According to Time Warner, its

operations are conducted through thirty-one divisions ("Divisions"), generally organized geographically. . . . Each of the thirty-one [Time Warner] Divisions are operated, at least to some extent, on an integrated basis in that each division has certain personnel with responsibilities limited to that particular Division, may employ Division-specific marketing from time to time, and systems within a Division may share technical facilities. However, [Time Warner] believes that its National and Southwest Divisions are not properly considered to be "clusters" within the definition set forth in the information request due to lack of "close proximity" of certain systems and communities served in those divisions.<sup>11</sup>

For this reason, we exclude the National and Southwest Divisions from our analysis.<sup>12</sup>

13. Time Warner's 29 divisions (*i.e.*, excluding Southwest and National) range in size from **REDACTED** basic homes passed (Lincoln Division) to **REDACTED** basic homes passed (NYC Division).<sup>13</sup> Four regions have over **REDACTED** basic homes passed, while six have fewer than **REDACTED** basic homes passed. See Table 3.

### III. ANALYSIS OF THE EFFECT OF CLUSTERING ON AVAILABILITY OF ADVANCED SERVICES.

#### A. Comcast.

14. In general, the Comcast/Time Warner claim that increases in clustering

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11. See Letter from Arthur H. Harding to Marlene H. Dortch, Re: Responses to Information and Document Request of December 5, 2005 and Submission of Confidential Documents Under Seal Pursuant to Protective Order (DA 05-1673) Issued in MB Docket No. 05-192, December 19, 2005, at 5.

12. The National Division consists of 14 systems: Dothan, AL; Cape Coral, FL; Live Oak/Lake City, FL; St. Augustine, FL; Ft. Benning, GA; Terre Haute, IN; Houma, LA; LaPlace, LA; Shreveport, LA; Kennett, MO; Chillicothe, MO; Marshall, MO; Pryor, OK; and Clarksburg/Fairmont, WV. The Southwest Division consists of nine divisions: Corpus Christi, TX; Cuero, TX; Eagle Pass, TX; El Paso, TX; Harlingen, TX; Kerrville, TX; Laredo, TX; Port Arthur/Beaumont, TX; and Wichita Falls, TX. See Time Warner Response, Item II.B.1.

13. The Southwest division has **REDACTED** basic cable homes passed; the National division has **REDACTED** basic cable homes passed.

(“enhanced geographic rationalization”) “will further accelerate the roll-out of advanced services” implies that our availability metrics should tend to be positively correlated with cluster size.<sup>14</sup>

That is, all else equal, the Comcast/Time Warner claim suggests that regions with a relatively high number of basic cable homes passed should have relatively high availability rates for advanced services.

15. In general, HSD service is widely available in almost all of Comcast’s systems and regions. For example, Comcast reports that HSD homes passed are **REDACTED** percent of basic homes passed in **REDACTED** of its 93 systems and **REDACTED** of its 29 regions, including some of its smallest systems and regions (HSD availability averages about **REDACTED** percent across Comcast’s systems and regions; see Tables 1 and 2). Figures 1 and 2 show that the availability of HSD service in small systems and regions often is the same as the availability rate for large systems and regions (*i.e.*, **REDACTED** percent or close to **REDACTED** percent). If availability of HSD service were closely associated with system or region size, we would not expect to see a substantial number of small systems and regions with availability rates equal to, or close to, **REDACTED** percent.

16. Figures 1 and 2 suggest that there is no systematic relationship between HSD availability and Comcast system or region size. To further evaluate whether any systematic relationship exists, we conduct a statistical analysis of Comcast’s availability rates. In particular, we estimate three regression models for this metric using both system- and region-level information. First, we investigate whether there is a linear relationship between availability and region size (*i.e.*, we investigate whether availability increases at a constant rate as system or region size increases). Second, we investigate whether there is a non-linear relationship between availability and system or region size. We estimate two regression models that allow

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14. Public Interest Statement, at ii-iii.

for non-linear effects: (a) we regress availability on the natural logarithm of basic homes passed; and (b) we regress the “logit” of availability on the natural logarithm of basic homes passed.<sup>15</sup>

17. Table 4 summarizes six regression results (*i.e.*, three regressions for each of two levels of aggregation). For each of the six regressions, we find no statistically significant relationship between availability and region size.<sup>16</sup> Each model explains only a small percentage of the variation across systems (*i.e.*, the adjusted R squared of the regressions – the amount of variation explained by the regression analysis – is one to four percent).<sup>17</sup>

**B. Time Warner.**

18. HSD service also is widely available in almost all of Time Warner’s divisions. For example, Time Warner reports that HSD homes passed are **REDACTED** percent of basic homes passed **REDACTED** in **REDACTED** of its 29 divisions (and averages **REDACTED** percent across its 29 divisions). The availability of **REDACTED** telephony service, however, varies widely across divisions (from **REDACTED** percent to **REDACTED** percent; see Table 3). See Figures 3 and 4, which suggest that there is no systematic relationship the availability of HSD and telephony services and Time Warner division size.

19. As with our analysis of Comcast information, we evaluate whether a systematic relationship exists between availability and cluster size with a series of three regression models. Table 5 summarizes our six regression results (*i.e.*, three regressions for each of two metrics). For all six regressions, we find no statistically significant relationship between penetration and division size (and the adjusted R squared of the regressions is one percent or less).

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15. The logit of availability is defined as the natural logarithm of (availability divided by (100 minus availability)).

16. None of the estimated coefficients is statistically significant at the five percent level.

17. We report adjusted R squared only for the non-logit regressions; the logit regressions are based on a statistical technique that does not generate an R squared statistic.

**IV. ANALYSIS OF THE EFFECT OF CLUSTERING ON PENETRATION OF ADVANCED SERVICES.**

**A. Comcast.**

20. The penetration of digital and HSD services varies widely across Comcast's systems and regions. Figures 5 through 12 show that the penetration of digital and HSD service in small systems and regions often is higher than in large systems and regions. As with our analysis of availability, we evaluate whether a systematic relationship exists between penetration and cluster size with a series of three regression models. Tables 6A and 6B summarize our 24 regression results (*i.e.*, three regressions for each of four metrics at the system and region level). For all 24 regressions, we find no statistically significant relationship between penetration and division size.

21. Although we find no statistically significant relationship between penetration rates and cluster size, 22 out of 24 of the estimated relationships are positive (but small in size). A review of Figures 5 through 12 suggests that the small positive relationships we estimate may largely reflect differences in penetration rates between the smallest clusters and all other clusters. To investigate this possibility, we re-run each system-level regression after dropping 18 systems (*i.e.*, the smallest 20 percent of systems); this analysis excludes systems with fewer than 150,000 homes passed. We also re-run each region-level regression after dropping the **REDACTED REDACTED** smallest region ( ), which has basic homes passed (the next smallest region has **REDACTED** basic homes passed).<sup>18</sup>

22. When we drop the smallest 20 percent of systems, we find that each of the 12 estimated coefficients becomes negative; six of the coefficients (those for HSD penetration) are

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18. We also have re-run the region-level regressions after dropping the six smallest systems (*i.e.*, the smallest 20 percent). Our results are substantially the same as when we drop only the region.

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negative and statistically significant at the five or 10 percent level. See Table 7A. These results indicate that increases in clustering (measured at the system level) are associated with reduced levels of HSD penetration for clusters larger than 150,000 basic homes passed.

23. As a result of dropping the **REDACTED** region from the analysis, the estimated coefficient becomes smaller for each of the 12 region-level penetration models (and negative for six of 12 coefficients). See Table 7B. These results indicate that to the extent that the small positive (and statistically insignificant) coefficients we estimate using information for all 29 regions suggest a positive relationship between cluster size and penetration, that effect is limited to changes in cluster size below 500,000 basic homes passed.

**B. Time Warner.**

24. The penetration of digital, HSD and telephony services varies widely across Time Warner's divisions. Figures 13 through 18 show that the penetration of these services in small divisions often is higher than in large divisions. Again, we use regression analysis to evaluate whether a systematic relationship exists between penetration and cluster size. Table 8 summarizes our 18 penetration regression results (*i.e.*, three regressions for each of six metrics). For 12 of the 18 regressions, we find a negative and statistically insignificant relationship between penetration and division size. For the remaining six metrics (related to digital penetration), we find relatively small, but positive and statistically significant effects of cluster size.

25. As with our analysis of Comcast's system-level information, we re-run each Time Warner penetration regression after dropping the six smallest divisions from our analyses (*i.e.*, 20 percent of the divisions). This subsequent analysis thus excludes divisions with fewer than 250,000 basic homes passed. Table 9 summarizes our results. As a result of dropping divisions with fewer than 250,000 basic homes passed, the estimated coefficient becomes smaller for 17 of the 18 models, and statistically insignificant for all 18 models (the estimated

coefficient remains negative for 12 of the 18 models). These results indicate that to the extent that the positive coefficients we estimate using information for all 29 divisions suggest a positive relationship between cluster size and penetration, that effect is limited to changes in cluster size below 250,000 basic homes passed.

**V. ANALYSIS OF TIME WARNER SOUTHWEST AND NATIONAL DIVISIONS.**

26. As we have discussed, we did not include two of Time Warner's divisions – Southwest and National – in our regression analyses. As Time Warner points out in its Response, these divisions “are not properly considered to be ‘clusters.’” Instead, they are groupings of small systems that are not “clustered” with any other Time Warner holdings. The Southwest Division is made up of nine systems spread over seven DMAs in Texas. The National Division is made up of 14 systems spread over 11 DMAs in eight states.

27. The average system in the Southwest Division has only **REDACTED** basic homes passed (*i.e.*, **REDACTED** homes passed divided by nine systems); the average system in the National Division has only **REDACTED** basic homes passed (*i.e.*, **REDACTED** homes passed divided by 14 systems). Thus, the average number of basic homes passed in each system in the Southwest and National Divisions is substantially smaller than the smallest division (Lincoln, **REDACTED** with **REDACTED** homes passed).

28. Table 10 shows that HSD availability for the National Division (**REDACTED** percent) is above the average for the other 29 divisions (*i.e.*, those included in our prior analyses). Although the other three availability metrics for these two divisions are below average, telephony availability for the Southwest Division (**REDACTED** percent) is higher than the rate in Time Warner's two largest divisions (**REDACTED**, at **REDACTED** percent; and **REDACTED**, at **REDACTED** percent). For each of the penetration metrics, rates for the Southwest and National divisions are substantially lower than for the other 29 divisions. If each system in the Southwest and National Divisions were treated as a cluster, our findings for average penetration in these divisions suggest that there

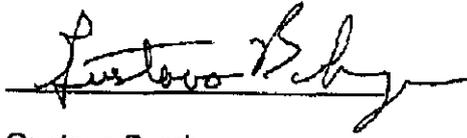
may be a positive relationship between penetration rate and cluster size (*i.e.*, because the 23 *systems in the Southwest and National Divisions are small and typically have low penetration rates for advanced services*). This correlation, however, is limited to these two Divisions, which contain the smallest and most geographically isolated of Time Warner's cable systems. Our results for the remaining divisions indicate that any such correlation would be absent for clusters above a modest size (*e.g.*, 250,000 homes passed).

29. Moreover, even assuming that Time Warner's smallest and most isolated systems could benefit from aggregating with other nearby systems, the Transactions will not accomplish this goal for all of Time Warner's small systems. Time Warner does not propose to transfer to Comcast any of the systems in the Southwest Division, or to receive from Comcast any systems that would complement the systems in that division. Thus, for example, even though Comcast has about 42,000 subscribers in the El Paso Designated Market Area ("DMA") and Time Warner has 109,000 subscribers, the applicants do not propose to combine these systems to create a larger cluster. Similarly, in Time Warner's National Division, the proposed transactions would not affect systems serving the Kansas City DMA (where Time Warner has 303,000 subscribers and Comcast has 98,000).<sup>19</sup> We note, however, that Time Warner will transfer to Comcast three systems from the National Division that serve areas where Comcast currently has no systems, resulting in no greater clustering than Time Warner has already achieved.<sup>20</sup>

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19. See Response to Request for Information, filed by Time Warner, Inc., June 21, 2005.

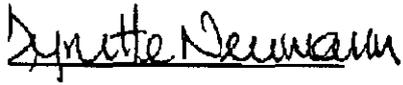
20. These three systems, located in two DMAs, are Houma, LA; LaPlace, LA; and Shreveport, LA.



Gustavo Bamberger

3/30/06

Date



Lynette Neumann

3/30/06

Date

**Table 1**  
**Comcast Basic Homes Passed, Availability and Penetration Metrics**  
**For Comcast's 93 Systems**

System Name	HP - Basic	HSD HP/Basic HP	Digital Subs/Basic HP	Digital Subs/HSD HP	HSD Subs/Basic HP	HSD Subs/HSD HP
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**REDACTED**

Source: Comcast.

**REDACTED**  
**FOR PUBLIC INSPECTION**

**Table 1**

**Comcast Basic Homes Passed, Availability and Penetration Metrics  
For Comcast's 93 Systems**

<b>System Name</b>	<b>HP - Basic</b>	<b>HSD HP/Basic HP</b>	<b>Digital Subs/Basic HP</b>	<b>Digital Subs/HSD HP</b>	<b>HSD Subs/Basic HP</b>	<b>HSD Subs/HSD HP</b>
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**REDACTED**

Source: Comcast.

**REDACTED  
FOR PUBLIC INSPECTION**

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**Comcast Basic Homes Passed, Availability and Penetration Metrics**  
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**REDACTED**

**REDACTED**

MINIMUM  
MAXIMUM  
AVERAGE

Source: Comcast.

**REDACTED**  
**FOR PUBLIC INSPECTION**

**Table 2**  
**Comcast Basic Homes Passed, Availability and Penetration Metrics**  
**For Comcast's 29 Regions**

System Name	HP - Basic	HSD HP/Basic HP	Digital Subs/Basic HP	Digital Subs/HSD HP	HSD Subs/Basic HP	HSD Subs/HSD HP
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**REDACTED**

**REDACTED**

MINIMUM  
MAXIMUM  
AVERAGE

Source: Comcast.

**REDACTED**  
**FOR PUBLIC INSPECTION**

Table 3

Time Warner Basic Homes Passed, Availability and Penetration Metrics  
For Time Warner's 29 Divisions  
(Southwest and National Divisions Excluded)

Division Name	HP - Basic	HSD HP/Basic HP	Digital Subs/Basic HP	Digital Subs/HSD HP	HSD Subs/Basic HP	HSD Subs/HSD HP	Telephony HP/Basic HP	Telephony Subs/Telephony HP	Telephony Subs/Basic HP
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REDACTED

MINIMUM  
MAXIMUM  
AVERAGE

REDACTED

Source: Time Warner.

REDACTED  
FOR PUBLIC INSPECTION

**Table 4**  
**Comcast Availability Regression Results**

Aggregation Level	Dependent Variable	Intercept	Basic HP	Log Basic HP	R-Squared	N
Systems	HSD HP/Basic HP				0.0110	93
	HSD HP/Basic HP				0.0161	93
	Logit(HSD HP/Basic HP)				*	93
<b>REDACTED</b>						
Regions	HSD HP/Basic HP				0.0210	29
	HSD HP/Basic HP				0.0347	29
	Logit(HSD HP/Basic HP)				*	29

\* R-Squared is not calculated for logit models.  
Source: Comcast.

**REDACTED**  
**FOR PUBLIC INSPECTION**

**Table 5**  
**Time Warner Availability Regression Results**  
**(Southwest and National Divisions Excluded)**

<b>Dependent Variable</b>	<b>Intercept</b>	<b>Basic HP</b>	<b>Log Basic HP</b>	<b>R-Squared</b>	<b>N</b>
HSD HP/Basic HP				0.0082	29
HSD HP/Basic HP				0.0025	29
Logit(HSD HP/Basic HP)				*	29
<b>REDACTED</b>					
Telephony HP/Basic HP				0.0108	29
Telephony HP/Basic HP				0.0004	29
Logit(Telephony HP/Basic HP)				*	29

\* R-Squared is not calculated for logit models.  
Source: Time Warner.

**REDACTED**  
**FOR PUBLIC INSPECTION**