

Subject Companies: Hughes Electronics Corporation  
Commission File No. 0-26035  
General Motors Corporation  
Commission File No. 1-00143  
Date: December 4, 2001

On December 4, 2001, the documents set forth below were made available through EchoStar Communications Corporation's website [www.echostar.com](http://www.echostar.com). These documents were filed with the Federal Communications Commission on December 3, 2001.

#### SUMMARY

The merger of EchoStar and Hughes to create New EchoStar presents consumers with numerous benefits: more services; more choices; competitive pricing; and a viable alternative to entrenched cable companies. The merger implicates no Commission rule, is consistent with the Communications Act, and will serve the public interest.

THE MERGER WILL "FREE UP" SPECTRUM CURRENTLY USED BY THE TWO COMPANIES BECAUSE DUPLICATIVE PROGRAMMING WILL BE ELIMINATED. As a result:

- o New EchoStar will offer significantly more local-into-local programming, up from a total of 42 major metropolitan areas now served by one or the other company (36 served by ECC and 41 served by DIRECTV, with 35 areas overlapping) to 100 or more, accounting for at least 85 percent of American households. This will significantly increase competition with cable companies in those areas.
- o The reclaimed spectrum will enable New EchoStar to offer greatly expanded high-definition television programming, pay-per-view and video-on-demand services, educational, specialty, and foreign language programming and other new and improved product offerings, including interactive services. DBS will have the ability to go head-to-head in competition with cable companies.
- o The merger will allow New EchoStar to provide meaningful broadband competition with cable and telephone companies as a virtual third line into the home for a bundle of video/data/Internet services. Competitively priced, high-speed Internet access via satellite will particularly benefit those in rural areas without access to cable modem service or DSL.

CONSUMERS WILL HAVE A REAL, FULLY COMPETITIVE ALTERNATIVE TO CABLE.

Although DBS has historically offered a price/quality package that was superior to cable's packages, it has not been able to restrain cable's regular price increases because of its inability to offer many local broadcast stations and other desirable programming resulting from limited capacity. The current duplicative use of the DBS spectrum has become a debilitating handicap due to recent

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developments, including the advent of digital cable and satellite must-carry. By eliminating these disadvantages, the merger will force cable firms to react competitively to DBS in ways that they have not had to in the past. Competition will translate into further benefits to consumers:

- o BENEFITS FOR RURAL AMERICANS. In addition to enhanced broadband options, rural consumers will benefit from the vigorous competition between New EchoStar and cable systems in urban areas because DBS prices will be the same throughout the U.S., whether the market is urban or rural. This will transmit urban competitive dynamics into rural areas.
- o BENEFITS FOR CABLE CUSTOMERS. With the increase in competition from DBS, cable will be forced to improve its own products, pricing service and overall quality. Thus, even cable customers will benefit from the

enhanced competition among multi-channel television and Internet access providers.

THE MERGER WILL ALSO CONTRIBUTE TO THE DIVERSITY OF INDEPENDENT PROGRAMMING VOICES, as it will create a significant multi-channel distributor that has no strategy of vertical integration with programmers. With the spectrum that will be freed up by the combination, New EchoStar can serve as an attractive potential outlet for independent programmers.

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VOLUME III

Transfer of Control Applications for Licenses Controlled by EchoStar Communications Corporation

VOLUME IV

Transfer of Control Applications for Licenses Controlled by Hughes Electronics Corporation

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

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Application of )  
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ECHOSTAR COMMUNICATIONS CORPORATION, )  
GENERAL MOTORS CORPORATION, )  
HUGHES ELECTRONICS CORPORATION, )  
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Transferors, ) File Nos. \_\_\_\_\_  
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and )  
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ECHOSTAR COMMUNICATIONS CORPORATION, )  
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Transferee, )  
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For Authority to Transfer Control. )  
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CONSOLIDATED APPLICATION FOR AUTHORITY  
TO TRANSFER CONTROL

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CONSOLIDATED APPLICATION FOR AUTHORITY  
TO TRANSFER CONTROL

EchoStar Communications Corporation ("ECC"), General Motors Corporation ("GM") and Hughes Electronics Corporation ("Hughes"), a subsidiary of GM (collectively, the "Merger Parties" or "Applicants"), have agreed to a merger and series of related transactions that will create an integrated, full-service satellite company better able to compete effectively with dominant cable operators in the multichannel video programming distribution ("MVPD") market. The Merger Parties hereby request the Commission's consent, in accordance with Sections 214 and 310 of the Communications Act of 1934, as amended,<sup>1</sup> to transfer control of the satellite, earth station, and other related authorizations held by their wholly- or majority-owned

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<sup>1</sup> 47 U.S.C. SS.214, 310 (1994 & Supp. V 1999).

subsidiaries to Hughes (or a newly formed holding company above Hughes that will hold all of the capital stock of Hughes, also referred to as "Hughes").<sup>2</sup> The merged entity will have a new ownership structure and will be renamed EchoStar Communications Corporation ("New EchoStar").<sup>3</sup> The proposed license transfers will result from the split-off of Hughes from GM, the merger of ECC into Hughes, and the transfer of Hughes' indirect majority equity stake in PanAmSat Corporation ("PanAmSat"), either to New EchoStar through the merger, or to ECC through a separate purchase of Hughes' indirect stake in PanAmSat in the event the merger agreement is terminated under certain circumstances (the "PanAmSat Purchase").<sup>4</sup> The Merger Parties request that approval of these transfers be granted expeditiously.

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2 Although the Implementation Agreement and Merger Agreement (as defined below) call for ECC to merge with and into Hughes Electronics Corporation and for Hughes Electronics Corporation (renamed EchoStar Communications Corporation) to be the top level entity in the post-merger ownership structure, GM has the ability under those agreements to (and the Merger Parties currently expect that GM will) form a new subsidiary (which is expected to be a Delaware Corporation named HEC Holdings, Inc.) and contribute all of the capital stock of Hughes Electronics Corporation to HEC Holdings, Inc. prior to the split-off and the merger. The effect of this transaction would be to insert an additional corporation above Hughes Electronics Corporation in the post-split-off and post-merger ownership structure, to substitute HEC Holdings, Inc. for Hughes Electronics Corporation as the merger partner with ECC and to substitute HEC Holdings, Inc. (renamed EchoStar Communications Corporation) for Hughes Electronics Corporation as the top level entity in the post-merger ownership structure. However, this transaction would have no practical impact on the rights of the parties or the Commission's review of the transaction because HEC Holdings, Inc. would have a governance structure identical to that described herein for the merged entity and the post-merger, and because relative percentage holdings of the capital stock of HEC Holdings, Inc. by the current ECC shareholders, the GM Class H shareholders and GM would remain the same.

3 Attachment C hereto provides a consolidated list of authorizations to be transferred and the entities that currently hold them.

4 These transactions are the subject of a definitive Agreement and Plan of Merger dated October 28, 2001 between ECC and Hughes ("Merger Agreement"), a Stock Purchase Agreement between ECC, Hughes, and several Hughes entities regarding



## I. INTRODUCTION

When measured against various components of the Commission's public interest standard, the proposed merger of ECC and Hughes is consistent with all relevant Commission rules and policies, and will result in extraordinary, affirmative public interest benefits. It will advance the Commission's core policies in favor of a more competitive video marketplace, efficient use of scarce spectrum and satellite resources, and the provision of advanced broadband services to all Americans.

Unfortunately for consumers, today's MVPD market remains dominated by cable operators, which hold a share of about 80%. As described in the attached Declaration of Dr. Robert D. Willig,<sup>5</sup> New EchoStar will become an integrated, full-service satellite company that can contend with cable systems and create the kind of vigorous competition that will benefit all Americans. In the process, the merger will allow the combined company to provide many other public benefits that Congress and the Commission have been striving for years to achieve.

One of the most compelling efficiencies of the ECC-Hughes merger will be the elimination of a major restraint on the ability of Direct Broadcast Satellite ("DBS") operators to compete with cable systems in the MVPD market - duplicative use of the

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Hughes' stake in PanAmSat ("PanAmSat Stock Purchase Agreement"), and several related agreements executed on the same date. The Merger Agreement and the PanAmSat Stock Purchase Agreement are conditioned, among other things, on approval of the transfers proposed herein. See Volume II of the Application for copies of each of these merger-related agreements and the PanAmSat Stock Purchase Agreement.

<sup>5</sup> Declaration of Dr. Robert D. Willig on Behalf of EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation ("Willig Decl.") (appended hereto as Attachment A). The Willig Declaration, among other matters, sets forth an analysis of the relevant market for this transaction, see *id.* at P.P. 7-18.

radio spectrum that the Commission has allocated for DBS service. Currently, ECC and Hughes' subsidiary DIRECTV, Inc. ("DIRECTV") use different portions of the DBS spectrum, each with its own expensive satellite fleet, each to provide overlapping programming services - the same HBO channels, the same CNN channels, in most cases the same local network channels to the same local metropolitan areas and, starting in January 2002, even many of the same home shopping local channels in the same local areas.<sup>6</sup>

Today, like never before, this spectrum inefficiency has become a potentially debilitating competitive impediment for DBS providers due to a combination of factors, including the imposition of satellite mandatory carriage obligations, the advent of digital cable services and the new bandwidth that "going-digital" gives to cable operators. The merger will eliminate the inefficient duplicative use of the DBS spectrum and liberate DBS capacity that will be used to facilitate the offering of new and expanded programming choices to consumers, ultimately introducing more meaningful competition to cable systems.

One dramatic example of this effect will be the addition of more satellite-delivered local broadcast channels to more local metropolitan areas. New EchoStar will provide local broadcast programming to far more metropolitan areas - 100 or more - compared to the 36 and 41 metropolitan areas (with an overlap of 35) served respectively by ECC and DIRECTV now.<sup>7</sup> This dramatic expansion of the number of local channels

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<sup>6</sup> See Joint Engineering Statement in Support of Transfer of Control Application, at 8-9 (Attachment B hereto) ("Joint Engineering Statement").

<sup>7</sup> Id. at 9.

that can be carried on a DBS system will allow New EchoStar to compete more vigorously against the cable industry's carriage of local broadcast television channels in more U.S. metropolitan areas and also help achieve Congress's goal of broad-based local television service by satellite, as reflected in the Satellite Home Viewer Improvement Act of 1999 ("SHVIA").<sup>8</sup>

There will be other significant consumer benefits resulting from the expanded programming choices delivered by New EchoStar, as well. The merged entity will provide consumers with many more programming choices than each company is able to offer standing alone, including the bandwidth-intensive high definition programming that will encourage consumer adoption of digital television equipment. The merger also will bring significantly more programming and a better quality DBS service to Americans living in rural areas, as well as in the states of Alaska and Hawaii, than would be achievable by each company operating independently.<sup>9</sup>

Moreover, there will be no anticompetitive MVPD market effects associated with the proposed transaction. As Dr. Willig observes, the characteristics of the MVPD market in general and of DBS firms in particular "make it very unlikely that . . . [this merger] will result in higher prices and lower output through either coordinated behavior among participants in the MVPD market or unilateral behavior by the merged firm."<sup>10</sup> And in response to concerns regarding the merger's possible effects on rural consumers, Dr. Willig notes that the expansion of programming and new services that

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<sup>8</sup> Act of Nov. 29, 1999, Publ. L. No. 106-113, S. 1008, 113 Stat. 1501, Appendix I (1999)(codified in scattered sections of 47 U.S.C. and 17 U.S.C.).

<sup>9</sup> Joint Engineering Statement at 10.

<sup>10</sup> Willig Decl. at P. 6.

will be made available to these consumers, combined with New EchoStar's commitment to maintain uniform national pricing for DBS services, renders it "more likely that the merger would be of distinct benefit to rural TV households than that it would diminish competition available to them."<sup>11</sup>

The proposed merger also will have positive effects in the programming market. Unlike most large cable operators, ECC has no ownership stake in any programming producer, and the Merger Parties do not intend to pursue a strategy of vertical integration with programmers post-merger. With the spectrum that would be freed up by this transaction, New EchoStar will have both the ability and the incentive to serve as an important outlet for promoting the development of new independent programming services. Furthermore, as Dr. Willig observes, the approximately 15 million subscribers of the combined entity "should provide an attractive platform for launching new programs, providing an interested programmer with a large percentage of the subscribers it would need to create a viable network."<sup>12</sup>

The merger will also dramatically aid New EchoStar in its efforts to introduce nationwide competition to broadband products and bring true broadband services to rural and underserved areas - another respect in which the effect of this transaction is aligned with Congress's and the Commission's objectives and the public interest. The bandwidth advantage of digital cable systems has allowed cable operators to bundle their traditional video offerings with high-speed Internet access, a package that

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11 Id. at P. 40.

12 Id. at P. 42. This estimate of the combined subscriber base of New EchoStar excludes the subscribers of the National Rural Telecommunications Cooperative and its affiliate entities who receive DIRECTV programming.

consumers increasingly demand. The current transitional broadband products of ECC and Hughes are struggling to achieve a critical mass of subscribers using Ku-band satellite platforms that are not optimized for broadband services. The next-generation Ka-band broadband satellite systems will be optimized for very high speed Internet services, but are also highly capital-intensive, being the first generation of commercial spacecraft to operate in these frequencies.

The proposed combination will allow New EchoStar to proceed with prompt and robust broadband deployment in the Ka-band by spreading the high fixed costs of deployment over a critical mass of broadband subscribers and achieving an offering that combines a competitive price and a reasonably short time to market. Each company standing alone would face significantly greater challenges in accomplishing those objectives within the time frame that is necessary to effectively compete with cable's bundled broadband offering of high speed Internet access products. The creation of New EchoStar will resolve the inefficiencies and uncertainties that would arise if both companies were faced with replicating investments in satellite platforms and will eliminate the spectrum inefficiencies that would exist if each company, in its own right, conducts duplicative multicasting and broadcast-type IP services. New EchoStar, by contrast, will have the significantly greater wherewithal to construct the type of advanced, high-capacity, cost-effective space platform to offer competitive, next generation high-speed Internet access nationwide - including to areas served neither by cable nor other broadband offerings - that are essential if the satellite technology is to

have any chance of competing with the bundled video/IP services offered by cable companies.<sup>13</sup>

The potential consumer benefits of maximizing New EchoStar's prospects in the Ka-band are extremely significant for rural areas as well. In those areas, the New EchoStar Ka-band system will be an important element in bridging the "digital divide" because it can provide the same high-quality advanced Internet and IP services to rural subscribers and to subscribers in urban and suburban areas.

The acquisition of PanAmSat either by New EchoStar or ECC<sup>14</sup> is in the public interest as well. Significant benefits to consumers will result from combining the Fixed-Satellite Service ("FSS") resources of ECC and Hughes to bring broadband satellite services to market faster. The transaction will not create any significant overlap in the provision of FSS services in the same product and geographic markets that should raise any concern, as ECC does not currently provide any telecommunications services of the same type as PanAmSat in the United States or elsewhere.

The proposed merger marks the conclusion of a long and careful search on the part of GM and Hughes for the optimal merger partner for Hughes. GM and Hughes have chosen ECC as that partner, in large part due to the extraordinary spectrum efficiencies and cost and revenue synergies promised by the proposed merger. These benefits cannot be realized unless and until this proposed transaction is consummated.

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13 Joint Engineering Statement at 14-16.

14 As noted above, Hughes' interest in PanAmSat will either be transferred to New EchoStar through the merger or transferred through a separate purchase by ECC of Hughes' interest in the event the merger agreement is terminated under certain circumstances.

Accordingly, the Applicants respectfully request that this consolidated Application be granted as expeditiously as possible.

This consolidated Application consists of a narrative description of the parties and the transaction, including a discussion of the public interest benefits of the transaction, along with several attachments containing the completed FCC forms and other materials. Each FCC form and its associated exhibits and filing fee have been filed separately in accordance with the Commission's Rules. Following the closing of the transactions, the Applicants will supplement all pending applications under the Commission's Rules, 47 C.F.R. ss. 1.65 (2000), to reflect the new party in interest. To the extent that any pending applications, or any other applications for new facilities or for renewal or modification of existing facilities, are granted prior to the closing of this transaction, the Merger Parties request a determination by the Commission that the grant of this Application includes authority for New EchoStar to acquire control of any subsequently granted authorizations.

A. DESCRIPTION OF THE PARTIES

1. ECC AND ITS PRESENT AFFILIATES

ECC was started more than twenty years ago when its Chairman and CEO, Charles W. Ergen, entered the satellite television business as a distributor of C-band television satellite systems under the name Echosphere. Since its founding, ECC has earned a reputation as an innovator in the satellite television business by achieving a number of significant firsts, including: development of the first UHF remote control; the first nationwide installation network dedicated solely to satellite television systems; and

the first company to offer an Integrated Receiver Descrambler for C-band satellite television.

ECC was granted authorization to use the 119(degree) W.L. orbital location in 1992.<sup>15</sup> ECC launched its first satellite to that location in December 1995,<sup>16</sup> and has provided continuous DBS service to customers throughout the continental United States since early 1996. Also in 1995, the Commission approved ECC's acquisition of control over Directsat Corporation, which launched its first satellite to the 119(degree) W.L. orbital location in September 1996. The combination allowed ECC, upon acquiring Directsat, to integrate the two satellites into an offering of about 125 video channels.<sup>17</sup> Since that time, ECC has deployed four additional satellites, including one to the 110(degree) W.L. orbital slot after the Commission's 1999 approval of ECC's acquisition of the authorization held jointly by MCI Telecommunications Corp. and The News Corporation Limited ("News Corp.").<sup>18</sup> ECC's subsidiaries hold several DBS authorizations and own and operate six operational DBS satellites located at the 61.5(degree) W.L., 110(degree) W.L., 119(degree) W.L., and 148(degree) W.L. orbital positions.<sup>19</sup> Through its DISH Network brand, ECC is now a provider of DBS television services in the United States to more than 6 million subscribers. ECC is

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15 See EchoStar Satellite Corporation, 7 FCC Rcd. 1765 (1992).

16 See EchoStar Satellite Corporation, 11 FCC Rcd. 3015, 3015 (Int'l Bur. 1996).

17 See Directsat Corporation, 11 FCC Rcd. 10575, 10577 (1996); see also Directsat Corporation and EchoStar Communications Corp., Application for Commission Consent to Transfer of Control, 10 FCC Rcd. 88 (1995).

18 In re Application of MCI Telecommunications Corp. and EchoStar 110 Corp., For Consent to Assignment of Authorization to Construct, Launch and Operate a Direct Broadcast Satellite System Using 28 Frequency Channels at the 110(degree) W.L. Orbital Location, FCC 99-109, 15 Communications Reg. (P&F) 1038 (1999)("MCIT").

19 See Attachment C for a list of ECC authorizations.



also an international supplier of digital satellite receiver systems and a provider of other satellite services.

ECC continues to upgrade its fleet of satellites. EchoStar 7, its seventh DBS satellite, equipped with state-of-the-art spot-beam technology, is scheduled to launch soon. ECC plans to launch an additional spot beam satellite, EchoStar 8, in the year 2002. ECC also has Commission authorizations for Ku-band and Ka-band FSS systems. ECC's first FSS satellite, a hybrid Ku-band/Ka-band satellite, is expected to be launched in 2002.

In addition, ECC currently holds an approximate 32% percent interest in StarBand Communications, which began offering consumers a two-way, "always-on," high-speed Internet access service along with DISH Network programming in November 2000. ECC also holds less than 20 percent interests in Wildblue Communications, Inc. and Celsat America, Inc., both of which hope to offer a similar high-speed Internet service from Ka-band satellites in the future. The Commission recently approved the acquisition by an ECC subsidiary of a controlling interest in VisionStar, Inc., another Ka-band licensee.<sup>20</sup> This transaction is expected to close shortly.

Attachment D contains a chart summarizing the relevant ECC ownership structure prior to the proposed transaction.

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<sup>20</sup> In the Matter of Application of VisionStar, Inc. and EchoStar VisionStar Corp. for Consent to Transfer of Control Over Authorization to Construct, Launch and Operate a Ka-band Satellite System in the Fixed-Satellite Service at the 113(degree) W.L. Orbital Location, File No. SAT-T/C-20001215-00163, DA 01-2481 (Int'l Bur. rel. Oct. 30, 2001).

## 2. THE GM AND HUGHES PARTIES

Hughes, a Delaware corporation, is a wholly-owned subsidiary of GM, which is also a Delaware corporation.<sup>21</sup> Hughes is the corporate parent of several other companies that provide specialized communications services to a wide range of end users. Hughes directly owns all of the issued and outstanding stock of DIRECTV Enterprises, Inc., a Commission DBS licensee.<sup>22</sup> In addition, Hughes controls various Commission licenses and authorizations through various other subsidiaries that are directly or indirectly wholly owned, including Hughes Communications, Inc.; Hughes Communications Galaxy, Inc.; Hughes Communications Satellite Services, Inc.; Hughes Global Services, Inc.; HOT Telecommunications, Ltd.; and USSB II, Inc.<sup>23</sup> Hughes

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<sup>21</sup> As discussed herein, GM has created a publicly-traded tracking stock of GM (GM Class H common stock) designed to provide holders with financial returns based on the financial performance of GM's wholly-owned Hughes subsidiary.

<sup>22</sup> DIRECTV Enterprises, Inc. ("DTVE, Inc.") is filing contemporaneously with this Application several applications for consent, inter alia, to the pro forma assignment of certain Commission licenses held by DTVE, Inc. and certain of its subsidiaries to a new Delaware limited liability company, DIRECTV Enterprises, LLC. Those applications are intended to obtain Commission consent to the conversion of DTVE, Inc. from the corporate form or organization to the limited liability company form of organization under Delaware law. It is anticipated that this pro forma assignment to DIRECTV Enterprises LLC will occur, upon Commission consent, well in advance of, and without regard to, the transactions contemplated by this Application. Thus, the attached organizational chart and the attached Form 312s reflect the consummation of that pro forma assignment.

<sup>23</sup> Hughes Network Systems, Inc. ("New HNS"), a new Delaware corporation wholly owned by Hughes, is filing contemporaneously with this Application several applications for consent, inter alia, to the pro forma assignment of certain Commission licenses held by Hughes and certain Hughes subsidiaries to New HNS. It is anticipated in advance of, and without regard to, the transactions contemplated by this Application. Thus, the attached organizational chart and the attached Form 312s reflect the consummation of that pro forma assignment.

indirectly holds an approximately 81% economic and voting interest in PanAmSat,<sup>24</sup> a publicly-traded Delaware corporation and Commission licensee.<sup>25</sup> Attachment E includes a chart summarizing the relevant GM/Hughes ownership structure prior to the proposed transaction.

DIRECTV launched the United States' first DBS satellite in December 1993 and a second DBS satellite in August 1994.<sup>26</sup> In June 1995, DIRECTV launched a third high-power DBS satellite and in April and May 1999, the Commission authorized the transfer to DIRECTV of DBS assets and related authorizations held by United States Satellite Broadcasting Company, Inc. ("USSB")<sup>27</sup> and Tempo Satellite, Inc., respectively.<sup>28</sup> As a result of these transactions, DIRECTV currently provides service to U.S. consumers from five DBS satellites using 32 channels at 101(degree) W.L., 3 channels at 110(degree) W.L., and 11 channels at 119(degree) W.L.<sup>29</sup> DIRECTV, together with certain independent distributors, now have approximately 10.3 million subscribers in the United States.<sup>30</sup>

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24 PanAmSat has recently filed, an application for consent to the pro forma assignment of certain Commission licenses held by PanAmSat Corporation to its indirect wholly owned subsidiary, PanAmSat Licensee Corp. It is anticipated that this pro forma assignment to PanAmSat Licensee Corp. will occur, upon Commission consent, well in advance of, and without regard to, the transactions contemplated by this Application. Thus, the attached Form 312s reflect the consummation of that pro forma assignment.

25 Hughes Communications, Inc., 12 FCC Rcd. 7534 (1997).

26 United States Satellit Broadcasting Co., 7 FCC Rcd. 7247 (1992).

27 United States Satellite Broadcasting Co., 14 FCC Rcd. 4585 (Int'l Bur. 1999).

28 Tempo Satellite, Inc., 14 FCC Rcd. 7946 (Int'l Bur. 1999)

29 DIRECTV voluntarily surrendered the DBS channels previously allocated to it at the 157(degree) W.L. orbital location in May 1998. See Public Notice, Rep. No. SPB-127 (rel. June 10, 1998).

30 Hughes also has interests in direct-to-home ("DTH") satellite services in several other countries. For example, it holds a 74.7% interest in DIRECTV Latin America LLC,

Hughes Network Systems ("HNS"), a division of Hughes, provides broadband satellite network solutions for businesses and consumers around the world. HNS's high-speed, satellite-based Internet access service is marketed globally under the DirecPC(R) and DIRECWAY(R) brands. The current satellite broadband services are provided using leased Ku-band transponders. HNS supplies mobile satellite networks and user terminals and manufactures DIRECTV(TM) satellite television receivers and set-top boxes. HNS is also responsible for designing and managing the development, deployment and operation of the Hughes SPACEWAY system, a next generation, Ka-band satellite platform that will provide new and advanced services for DIRECWAY customers, consumer and business alike. SPACEWAY is currently scheduled to begin North American service in 2003. DIRECTV Broadband, Inc. (formerly known as Telocity, Inc.) offers terrestrial high-speed DSL service across the country where DSL is available.

Directly and through its subsidiaries, PanAmSat owns and operates a fleet of 21 satellites around the world that operate in the FSS bands and a comprehensive system of teleports and terrestrial resources. PanAmSat carries programming for broadcasters and programmers to millions of households worldwide, provides Internet backbone support to Internet service providers, supports private business communications networks to corporations, and provides essential pipelines worldwide for telecommunications providers. PanAmSat and its subsidiaries hold various FCC satellite

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which provides DTH pay television services throughout Latin America. The licenses for the services provided in foreign countries are not part of this Application.

earth station licenses as well as Section 214 authorizations for the provision of international services.

### 3. NEW ECHOSTAR

As described in more detail in Section B below, the transferee, New EchoStar, is Hughes Electronics Corporation (or a newly formed holding company above Hughes Electronics Corporation)<sup>31</sup> with a new ownership structure that will result from the merger of ECC with and into Hughes after Hughes is split off from GM. New EchoStar will control indirectly the interests in all of the FCC licenses that are the subject of this Application, including Hughes' indirect interest in PanAmSat that is proposed to be transferred pursuant to the Merger Agreement. The new company will be renamed EchoStar Communications Corporation (for clarity, referred to herein as "New EchoStar"). After closing, New EchoStar will use the DIRECTV(TM) brand for all of its Direct-to-Home ("DTH") consumer offerings. New EchoStar will have three classes of common stock. As of the closing of this transaction, Mr. Charles W. Ergen, ECC's controlling shareholder and a U.S. citizen, will be the Chairman and Chief Executive Officer of New EchoStar, and through a family trust, will be New EchoStar's largest individual shareholder, holding all of the outstanding shares of Class B common stock of New EchoStar, which would represent approximately 16.7% of the total shares of outstanding common stock (and an approximate 39% voting interest) in New EchoStar.<sup>32</sup> The other ECC public shareholders at the time of the closing will receive shares of Class

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<sup>31</sup> See n. 2 above.

<sup>32</sup> Certain matters will also require a separate class vote of the holders of the shares of Class B common stock of New EchoStar.

A common stock representing approximately 24.3% of the economic interest (and approximately 5.7% of the voting interest) in New EchoStar (including newly issued shares and convertibles). GM potentially would retain (after giving effect to the Debt/Equity Exchange, (as defined below)) shares of Class C common stock representing an approximate 4.9% economic interest (and an approximate 4.6% voting interest) in New EchoStar while the GM Class H shareholders would own shares of Class C common stock representing an approximate 54.1% economic interest (and an approximate 50.7 % voting interest) in New EchoStar.<sup>33</sup> Attachment F summarizes the relevant New EchoStar ownership structure post-merger.

#### B. DESCRIPTION OF THE TRANSACTIONS

ECC and Hughes plan to merge their businesses in accordance with the Merger Agreement. This agreement, as well as an Implementation Agreement and a Separation Agreement (and various ancillary agreements contemplated thereby), set forth the transactions contemplated by the parties to effect the business combination. The PanAmSat Stock Purchase Agreement sets forth the terms under which ECC would purchase Hughes' approximately 81% indirect interest in PanAmSat in the event the Merger Agreement is terminated under certain circumstances. The transactions will be accomplished in a series of interrelated steps, as follows.

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<sup>33</sup> All of the economic and voting interest percentages above are estimated, as of the consummation of the merger, based on the recent trading prices of ECC common stock, and certain assumptions regarding the pre-merger issuance of new ECC equity securities, conversion of currently outstanding preference shares and other convertible securities, as well as the treatment of certain shares for federal income tax purposes.

The Recapitalization and Split-off of Hughes. At present a "tracking stock" GM security related to Hughes' operations is available to the public and is traded on the New York Stock Exchange and on other exchanges as GM Class H common stock. While this tracking stock is designed to provide holders with financial returns based on the financial performance of Hughes, actual ownership of all Hughes' capital stock remains with GM. Accordingly, to accomplish the proposed business combination with ECC, prior to the merger, Hughes must be recapitalized and its stock distributed to GM's stockholders in order to separate Hughes from GM.

To accomplish the recapitalization and split-off, the Separation Agreement calls for Hughes to pay a dividend of up to \$4.2 billion to GM (or to a wholly-owned limited liability subsidiary company of GM)<sup>34</sup> and for GM's deemed retained economic interest in Hughes to be reduced by an amount commensurate with the dividend. In addition to the dividend to GM, Hughes will issue to GM shares of new Hughes Class C common stock pursuant to the Separation Agreement. Next, GM will split off Hughes by distributing to GM Class H common stockholders one share of new Hughes Class C common stock in redemption of and in exchange for each share of GM Class H common stock that they hold. GM will either retain or distribute to holders of its \$1-2/3 common stock all or a portion of the remaining shares of Hughes Class C common stock representing its deemed retained economic interest in Hughes. In connection with the

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<sup>34</sup> GM has the ability under the Merger and Implementation Agreements to create a new wholly-owned limited liability company and insert that company into the ownership structure between GM and Hughes (or HEC Holdings, Inc., as the case may be) prior to the split-off and merger.

split-off, the GM Class H common stock will be cancelled. Upon completion of these transactions, Hughes will be an independent, publicly-owned company.

The Merger. Immediately following the re-capitalization and split-off, ECC will merge with and into Hughes or a newly-formed holding company above Hughes. Hughes will be the surviving corporation, and the merged entity will be renamed EchoStar Communications Corporation ("New EchoStar"). As a result of the merger: (i) the holders of ECC Class A common stock before the merger will receive shares of the Class A Common Stock of New EchoStar, (ii) the holders of ECC Class B common stock before the merger will receive shares of the Class B Common Stock of New EchoStar, and (iii) the holders of Class C Common Stock of Hughes before the merger (the former GM Class H shareholders and GM and/or the holders of GM's  $\$1\text{-}2/3$  common stock who obtained their Class C shares in connection with the split-off) will retain their Class C Common Stock, now in New EchoStar. The Class A, Class B and Class C classes of stock will exercise the voting percentages described above with respect to New EchoStar immediately after the merger.

Debt for Equity Exchange. GM has the option, at any time up until the date that is six months after the closing of the merger, to satisfy certain of its outstanding debt obligations by issuing or distributing GM Class H common stock or New EchoStar Class C common stock, respectively, to creditors in exchange for such debt obligations pursuant to one or more transactions (each a "Debt/Equity Exchange"). Prior to the merger, GM would effect the Debt/Equity Exchanges using newly issued shares of GM Class H common stock. After the merger, the Debt/Equity Exchanges would be effected using shares of New EchoStar Class C common stock retained by GM after the split-off.



The transaction documents allow GM to distribute up to 100 million shares of GM Class H common stock or New EchoStar Class C common stock pursuant to Debt/Equity Exchanges.

The PanAmSat Purchase. GM and Hughes currently own indirectly through various Hughes subsidiaries an approximate 81% controlling interest in PanAmSat. These subsidiaries would become subsidiaries of New EchoStar pursuant to the merger. However, in the event the merger transaction is not consummated under certain circumstances, the GM and Hughes interest in PanAmSat (currently held through subsidiaries of Hughes) will be transferred, upon Commission consent and upon satisfaction of other conditions, in its entirety to ECC pursuant to the PanAmSat Stock Purchase Agreement.

## II. PUBLIC INTEREST STATEMENT

To approve the transfer of the Hughes and ECC licenses to New EchoStar, the Commission must find that the proposed transfer serves the public interest, convenience, and necessity.<sup>35</sup> To make this finding, the Commission has traditionally weighed the public interest benefits of the proposed transaction against any potential public interest harms to determine whether, on balance, the benefits outweigh any harms.

The Commission's public interest analysis generally has included an examination of the following fundamental questions: (i) whether the transaction would result in a violation of the Communications Act or the Commission's rules; (ii) whether the transaction would substantially frustrate or impair the Commission's implementation or enforcement of the Communications Act or other related statutes or interfere with the

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<sup>35</sup> 47 U.S.C. ss.ss. 214(a), 310(d).

Act's objectives; and (iii) whether the transaction promises to yield affirmative public interest benefits.<sup>36</sup>

The analysis also includes an evaluation of the likely competitive effects of the transaction and whether the proposed transfer creates a significant likelihood of competitive harm.<sup>37</sup> On this issue, more than mere speculation is required.<sup>38</sup> At the same time, Chairman Powell has stated his intention that the Commission subject proposed mergers to careful "rules-based" scrutiny and otherwise focus its inquiry in a manner that limits duplication of effort between its own review and the work of the agencies charged with evaluating such transactions under the antitrust laws.<sup>39</sup>

Each of the fundamental questions considered by the Commission as part of its analysis is addressed below. The unavoidable conclusion is that the proposed merger of ECC and Hughes is manifestly in the public interest. The synergies created by the combination will create substantial public interest benefits with respect to MVPD competition,<sup>40</sup> new programming and other content, and improved broadband services for millions of Americans. The transaction will create an integrated, spectrally efficient, full-service satellite competitor that is truly equipped to combat the dominance of incumbent

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<sup>36</sup> See, e.g., Time Warner Inc. and America Online, Inc., 16 FCC Rcd. 6547 P. 1 (2001)("AOL/Time Warner"); MCIT, 15 Comm. Reg. (P&F) 1038, P. 7.

<sup>37</sup> Id.

<sup>38</sup> See, e.g., United States v. Citizens & S. Nat'l Bank, 422 U.S. 86, 122 (1975)("The Clayton Act is concerned with 'probable' effects on competition, not with 'ephemeral possibilities.'")(quoting Brown Shoe Co. v. United States, 370 U.S. 294, 323 (1962)); see also United States v. Baker Hughes, Inc., 908 F.2d 981, 984 (D.C. Cir. 1990).

<sup>39</sup> See "Powell Offers Views on CLEC Woes, Spectrum Policy," Communications Daily, May 23, 2001, at 5. "Powell Urges Restraint in FCC Merger Reviews," Communications Daily, Dec. 11, 1998, at 1; cf. AOL/Time Warner, 16 FCC Rcd. at 6555 (concurring statements).

<sup>40</sup> See Willig Decl. at P.P. 21-25.

cable Multiple System Operators ("MSOs"), and to provide new and expanded services, including state-of-the-art broadband services, to consumers in both urban areas as well as underserved and rural areas. At the same time, the structure of the market in which the combined entity will compete, as well as the combined entity's commitment to non-discriminatory pricing and service, prevent the merger from posing any risk of harm to the public interest. Accordingly, the Commission should not only grant this application - it should do so expeditiously.

A. The Transaction Will Comply With the Requirements of the Communications Act, All Other Applicable Statutes, and With the Commission's Rules.

The proposed transaction does not implicate any foreign ownership, aggregation, cross-ownership, or any other restrictions imposed by the Communications Act, Commission regulation or applicable statute. Both ECC and Hughes are currently shareholders of a number of companies that are Commission licensees, and New EchoStar's Chief Executive Officer will be Mr. Charles W. Ergen, now Chief Executive Officer of ECC. The qualifications of all relevant parties are therefore a matter of record before the Commission. The combined entity will not have alien ownership that even approaches the benchmark of any applicable foreign ownership rule.<sup>41</sup> Nor does the proposed merger implicate any Commission rule or policy governing cross-ownership or MVPD programming relationships.<sup>42</sup>

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<sup>41</sup> While ECC has received from the Commission a waiver of certain foreign ownership rules (to the extent applicable) to allow an investment from an Australian corporation, New Corp., that investment is now well below 5% and nowhere near the 25% limit of these rules to the extent they apply. See In re Application of MCI Telecommunications Corp., File No. 73-SAT-P/L-96, FCC 99-110 (rel. May 19, 1999).

<sup>42</sup> AOL Time Warner Inc. has an indirect ownership interest in DIRECTV, which would represent less than five percent interest in the combined company.

B. The Transaction Will Not Impair Any Statutory Objectives and Will Yield Substantial Affirmative Public Interest Benefits

Far from impairing any statutory policies or objectives, the proposed transaction will in fact further the important Commission policies in favor of vigorous competition, the efficient use of spectrum and satellite resources, and the provision of advanced broadband communication services to all Americans. In doing so, the merger will yield a number of significant affirmative benefits to the public interest. The Commission is well-suited to recognize and weigh these benefits in light of its statutory responsibilities.

1. THE TRANSACTION WILL PROMOTE COMPETITION WITH CABLE BY ALLOWING INCREASED SPECTRUM AND SATELLITE RESOURCE EFFICIENCY

For almost a decade now, both Congress and the Commission have made concerted efforts to open up the MVPD market to effective competition - Congress with the enactment of the Cable Television Consumer Protection and Competition Act of 1992 and the Satellite Home Viewer Improvement Act of 1999, and the Commission with its rules implementing these laws. Notwithstanding these efforts, however, the MVPD market is still dominated by cable operators.<sup>43</sup> Both Congress and the Commission have noted this competitive problem on a myriad of occasions.<sup>44</sup> Moreover, policy makers and

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<sup>43</sup> See Willig Decl. at P.P. 7-18, and below at 37-41, for an analysis of the relevant market.

<sup>44</sup> See, e.g., S. Rep. No. 102-92, at 1 (1992)(explaining that Congress enacted the Cable Television Consumer Protection and Competition Act of 1992 ("1992 Cable Act") "to promote competition in the multichannel video marketplace and to provide protection for consumers against monopoly rates and poor service."); In the Matter of Implementation of Section 19 of the Cable Television Consumer Protection and Competition Act of 1992: Annual Assessment of the Status of Competition in the Market for Delivery of Video Programming, First Report, 9 FCC Rcd. 7442 (1994)("First Competition Report"), at P. 5 (observing that "Congress...found that without

regulators alike have envisioned DBS as the most promising alternative MVPD technology that could help alleviate this problem and ultimately cure it.<sup>45</sup>

DBS, however, remains fundamentally constrained by its dependence upon the radio spectrum for operations. DBS providers must use limited bandwidth from orbital locations that were not originally optimized for digital transmissions. The problem of finite bandwidth is seriously exacerbated by the currently duplicative use of the DBS spectrum. To help accomplish the Commission's vision of promoting DBS as a complete substitute for cable, DBS providers have had to offer subscribers programming services similar to those provided by cable systems, resulting in the use of each provider's spectrum for largely overlapping programming services.<sup>46</sup> For example,

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competition, there was 'undue market power for the cable operator as compared to that of consumers and video programmers,' and that 'the cable television industry has become a dominant nationwide video medium.'" (citing 1992 Cable Act, ss.ss. 2(a)(2-3), 106 Stat. 1460)); In the Matter of Implementation of the Satellite Home Viewer Improvement Act of 1999; Retransmission Consent Issues: Good Faith Negotiation and Exclusivity, CS Docket No. 99-363 (rel. Mar. 16, 2000)(promulgating rules under SHVIA designed "to place satellite carriers on an equal footing with local cable operators when it comes to the availability of broadcast programming, and thus give consumers more and better choices in selecting a multichannel video program distributor.").

45 Congress noted in 1999 that "with the development of high-powered satellite service, or DSS, which delivers programming to a satellite dish as small as 18 inches in diameter, the satellite industry now serves homes nationwide with a wide range of high quality programming...it offers an attractive alternative to other providers of multichannel video programming; in particular, cable television." H.R. Conf. Rep. No. 106-464, at 91 (1999); see also First Competition Report, 9 FCC Rcd. 7442, at P. 62 (noting the Commission's expectation in 1990 that DBS "had the potential to 'readily compete with cable.'")(citing Rate Deregulation & the Commission's Policies Relating to the Provision of Cable Television Service, Report on Competition, 5 FCC Rcd. 4962 (1990)).

46 In fact, the current duplicative use of this spectrum was not always the model for DTH satellite services. In the 1980s, when the Commission first authorized the DBS service, DTH satellite services were analog, meaning that each provider could not deliver much more than a handful of channels. Indeed, DBS itself was first contemplated as an analog service. The DTH satellite providers therefore planned to use their limited

currently, ECC and DIRECTV use portions of the same DBS spectrum, each with its own expensive satellite fleet, each to provide the same HBO channels, the same CNN channels, and in most cases the same local network channels to the same metropolitan areas.<sup>47</sup> DBS operators have attempted to mitigate this inefficient duplicative use of DBS spectrum by relying on upgrades in digital compression and other technologies to "squeeze" as many digital programming channels as possible in their licensed bandwidth, and indeed, to offer more channels and superior picture and sound quality relative to analog cable systems. In addition, DBS providers historically had no need to allocate channel capacity for the provision of local network signals because they were legally hampered from retransmitting them in most instances.

Today, however, DBS spectrum inefficiency has become progressively a more debilitating problem owing to a number of factors, including satellite mandatory carriage obligations and the increased competitive threat posed by the enhanced capabilities of digital cable. While the enactment of the SHVIA alleviated some of the disparity between DBS and cable program offerings by giving DBS providers a limited legal ability to retransmit local broadcast signals starting in November 1999, it did so at a significant cost - the unprecedented spectrum requirements associated with satellite mandatory carriage obligations. Without the merger, must-carry obligations will

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capacity to provide programming services that generally complemented, rather than duplicated, one another. It was in that environment that the Commission decided to fragment the DBS spectrum into a patchwork of small channel assignments - issuing separate permits for 11, 3 or even 1 DBS channel at each orbital location. The emergence of digital DBS in the early 1990s and the desire to introduce price competition to cable systems made that paradigm completely obsolete, and led to the current problem of duplicative use of the DBS spectrum.

47 See Joint Engineering Statement at 8-10.

effectively preclude the potential of effective competition with cable in all but the largest metropolitan areas now served by each DBS provider - DIRECTV now serves 41 local areas and ECC serves 36 local areas, for a total of 42 areas and with an overlap of 35 areas. All in all, each of ECC and DIRECTV expects to have to carry upwards of 300-400 local must-carry stations starting in January 2002, and most of these stations will be the same from one DBS provider to the other.<sup>48</sup> Must-carry is expected to bring the total of overlapping programs (both national and local) transmitted by the two companies to over 500.

Moreover, cable operators have aggressively upgraded the capacity of their systems to allow for the digital retransmission of video programming.<sup>49</sup> Although DBS's digital quality and former capacity superiority have allowed it initially to make inroads into cable's dominant market position, the roll-out of upgraded, digital cable

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<sup>48</sup> For example, as of January 1, 2002, ECC expects that it will be required to transmit numerous local home shopping channels because of the satellite must-carry obligations imposed under the SHVIA. See 47 U.S.C. ss. 338 (Supp. V 1999)(as a condition of using the compulsory license made available by SHVIA for retransmission of local broadcast stations into their "home" market, DBS providers must carry, on request, the signals of all television broadcast stations located within the same local market, subject only to certain limited exceptions).

<sup>49</sup> Comments of National Cable & Telecommunications Association responding to Notice of Inquiry, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, CS Docket No. 01-129 (dated Aug. 2, 2001), at 25-29 (describing cable companies' \$50 billion investment in upgraded infrastructure over the past five years to facilitate "a broad range of video, voice and high-speed data possibilities, as well as improved signal reliability, improved pictures and two-way transmission capability."); see also Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Seventh Annual Report, 16 FCC Rcd. 6005, 6009 (2001)("Seventh MVPD Competition Report")(Commission observation that "[v]irtually all the major MSOs offer Internet access via cable modems in portions of their nationwide service areas...Many cable operators also are planning to integrate telephony and high-speed data access.").

facilities has compounded cable's incumbency advantages. A fully upgraded digital cable system now utilizes up to 750 MHz or 850 MHz of equivalent bandwidth, with no theoretical limitation on the ability to increase its bandwidth utilization by upgrading its physical plant.<sup>50</sup>

Digital cable also allows MSOs to offer a bundle of video and high-speed Internet access offerings, which has significantly and negatively affected the willingness of cable subscribers to switch to DBS, as well as other interactive broadband services. For example, many of the MSOs are now running trials of their Video on Demand ("VOD") products in test markets, and some have already commercially launched this service. One observer has noted that "VOD has emerged as the silver-bullet to DBS, and the MSOs are stockpiling for a 2002 showdown."<sup>51</sup> Even before that showdown, the impact of the video/Internet access/broadband bundle offered by cable has been acutely felt by the DBS providers. As a result of these developments, cable dominance persists and may yet be augmented.<sup>52</sup> Indeed, in its most recent annual cable competition report, the Commission notes that the cable industry continues to maintain a dominant position in the MVPD market, providing service to about 80% of the national MVPD

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<sup>50</sup> The information capacity per MHz of a digital cable system is not limited by the signal propagation constraints inherent in DBS systems.

<sup>51</sup> Morgan Stanley, Notes from NCTA 2001 (June 15, 2001); see also Deutsche Banc Alex. Brown, Cable Industry Outlook, Apr. 16, 2001, at 19, 38 (VOD is cable's "killer app" that will highlight cable's technological advances over DBS).

<sup>52</sup> Brigitte Greenberg, "VOD, High-Speed Data, Voice Keys to Cable Future, Operators Say," Communications Daily (Nov. 29, 2001) at 7 (noting cable operators' "optimism that services satellite couldn't deliver - video-on-demand ("VOD"), subscription VOD, interactivity, high-speed data and telephony - would solidify cable's relationship with current customers and bring many defectors to satellite back into fold.").



Combining the satellite and spectrum resources of ECC and Hughes will eliminate the duplicative use of the limited amount of available DBS spectrum to deliver the same programming,<sup>54</sup> and allow DBS to compete more effectively against cable's recent offerings. Elimination of this duplication is an enormous efficiency resulting from the merger. The Commission is uniquely equipped to evaluate this benefit because the increased spectrum efficiency resulting from the merger would promote directly its long-standing policy in favor of efficient and non-duplicative use of the spectrum.<sup>55</sup>

The proposed transaction will do much more, however, than serve the Commission's spectrum policies in the abstract. Increased spectrum efficiency will translate into concrete benefits for customers, each recognized specifically by Congress or the Commission as important in its own right: more local channels to more markets; more high definition television ("HDTV") channels; better service to rural areas, Alaska and Hawaii; more diverse and educational programming; and broader availability of

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53 See Seventh MVPD Competition Report, 16 FCC Rcd. at 6008. Cable claimed more than a 77% share of the MVPD market in August 2001. See Comments of National Cable & Telecommunications Association responding to Notice of Inquiry, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, CS Docket No. 01-129, at 7.

54 See Joint Engineering Statement at 8-9.

55 See, e.g., In the Matter of Implementation of the Cable Television Consumer Protection and Competition Act of 1992, 10 FCC Rcd. 3105, 3120 (1994), at 3120 P. 39 (1994)(recognizing the public interest in avoiding "duplication of programming" in the DBS service, which leads to "more diversity in programming for the consumer"); cf. Hughes Communications Galaxy, Inc., 3 FCC Rcd. 7015 P. 2 (1988)(noting that use of INTELSAT system "to duplicate programming already available on domestic satellites would be an inefficient use of the available radio spectrum"); In re Revision of Radio Rules & Policies, 7 FCC Rcd. 2755, 2783 (1992)(explaining that the Commission restricts duplicative use of spectrum utilized by commercial AM and FM radio stations with overlapping service areas because "[t]he limited amount of available spectrum could be used more efficiently by other parties to serve competition and diversity goals.").

satellite-based Internet access services. These benefits will in turn spur the incumbent cable operators to greater efforts for the benefit of cable as well as cable consumers.<sup>56</sup> In short, DBS spectrum efficiency will serve as a means to the all-important end: more vigorous competition in the MVPD market.

(a) MORE LOCAL CHANNELS TO MORE AREAS

New EchoStar will provide local broadcast programming to far more communities - 100 or more, including at least one city in each state, compared to the 36 and 41 metropolitan areas that ECC and DIRECTV each respectively serve now.<sup>57</sup> The inability to provide local programming has been recognized by Congress and the Commission as a significant impediment to DBS becoming fully competitive with cable.<sup>58</sup> The legal constraints that contributed to the competitive imbalance were

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56 See, e.g., Merger Impact on Cable: A Wall Street View, skyreport.com (Nov. 26, 2001) available at <http://www.skyreport.com/skyreport/nov2001/112601.htm#one> (noting financial analysts' prediction that the advantages resulting from "a combination of DBS assets" would prompt cable to "convert their systems to 100 percent digital, . . . become more aggressive in developing and distributing both broadband content and communications in order to drive the penetration of broadband connectivity," and to "bundle aggressively," with the end result being that "[c]osts to the consumer will come down through bundled pricing."); Valerie Milano, "Cable Sees PVRs as Serious Threat, SvoD the Answer," Communications Daily (Nov. 29, 2001) at 8 (pending merger will spur cable toward more innovation).

57 See Joint Engineering Statement at 9. The total number of metropolitan areas now served by either DIRECTV or ECC is 42, with 35 of these areas served by both companies.

58 In the Conference Report accompanying SHVIA, Congress declared that enabling DBS operators to offer local channels would "allow satellite carriers for the first time to provide their subscribers with the television signals they want most: their local stations," and "create parity and enhanced competition between the satellite and cable industries in the provision of local television broadcast stations." H.R. Conf. Rep. No. 106-464, at 93; see also Seventh MVPD Competition Report, 16 FCC Rcd. at 6010P. 13 (observing that "[c]onsumers historically reported that their inability to receive local signals from DBS operators negatively affected their decision as to whether to subscribe to DBS . . . Under SHVIA, DBS operators can offer a programming package more comparable to and competitive with the services offered by cable operators.")

alleviated somewhat by the passage of SHVIA. The limited channel capacity of DBS providers, however, as well as the burdens to be soon imposed upon that capacity in the form of satellite must carry, continue to limit DBS's ability - even with the implementation of spot-beam satellites and other new technologies - to offer local programming to many consumers. As a result, local-into-local service has for now been confined only to the relatively larger metropolitan areas.<sup>59</sup> The merger will dramatically expand the number of areas that can receive local broadcast station signals and will result in more vigorous competition to cable in these areas.

(b) MORE PROGRAMMING CHOICES, INCLUDING HDTV CHANNELS AND MORE PAY-PER-VIEW

New EchoStar also will have the ability to provide consumers with many more national programming choices than each company is able to provide standing alone. Just as the merger will eliminate the need to duplicate carriage of local channels, it will also eliminate the duplication of national channels, thereby freeing spectrum for more diverse programming choices. This includes more high definition programming that will encourage consumer adoption of digital equipment - another explicit Commission objective.<sup>60</sup> Currently, ECC and DIRECTV each offer a limited number of HDTV channels - 2 for DIRECTV and 3 full-time HDTV channels for ECC. The combined entity will be able to devote several times that number of channels to HDTV content,<sup>61</sup>

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59 See Joint Engineering Statement at Exhibit 2.

60 See, e.g., In the Matter of Review of the Commission's Rules and Policies Affecting the Conversion to Digital Television, Report and Order and Further Notice of Proposed Rulemaking, 16 FCC Rcd. 5946 (2001) (stressing the Commission's desire for a "rapid" conversion to digital television ("DTV")); id. at 5950 P. 11 (Commission expressing its "agree[ment] that the wide availability of digital programming . . . will help speed the transition to DTV.").

61 See Joint Engineering Statement at 10.

driving demand for both HDTV content and equipment, and breaking the vicious circle of too little HDTV content to drive consumers to purchase HDTV equipment and too little equipment to justify investment in more content.

The savings in spectrum that will result from the merger will also enable New EchoStar to offer greatly expanded pay-per-view ("PPV") and VOD-like<sup>62</sup> services - services that are very important to the economics and competitiveness of MVPD providers. For example, capacity can be devoted to caching (i.e., saving for future viewing) on Personal Video Recorders, allowing users to play PPV movies or have access to specialty programming virtually on demand.<sup>63</sup>

(c) EXPANDED PRODUCT OFFERINGS TO MEET COMPETITION FROM DIGITAL CABLE

The merger will enhance competition by enabling New EchoStar to compete better with new MSO product offerings made possible by the advent of digital cable. As mentioned above, the digital cable roll-out has allowed cable MSOs to offer consumers a broadband bundle, packaging the conventional video services with high-speed Internet access, VOD and other interactive services, and Internet telephony. These packages are increasingly popular with MVPD subscribers.<sup>64</sup> DBS, on the other hand, is competitively disadvantaged in this regard. The DBS spectrum to a consumer's home is

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62 See discussion in B(1)(c) below.

63 See Joint Engineering Statement at 11.

64 As early in the digital cable roll-out as 1998, the Commission recognized that "[m]ulti-service offerings and bundling services for sale seem to enhance subscription to alternative services offered by cable companies. . . . Indications are that customers value receiving these services through 'one-stop-shopping.' . . . For example, many large MSO's have found that bundling increases penetration of video and of new services." In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Fifth Annual Report, 13 FCC Rcd. 24284, 24322 P. 60 (1998) (footnotes omitted).

now only one-way via satellite and needs to be supplemented by the use of different frequencies and satellites or by using terrestrial technologies to allow a broadband two-way offering. Both ECC and Hughes have attempted to create such broadband packages, ECC with its StarBand investment, and Hughes with its HNS DirecPC and DIRECWAY offerings. However, during the first year of service, subscription rates have been low, with only one percent of total DBS subscribers, less than 200,000, subscribing to these data services nationwide.<sup>65</sup> As will be seen below, next-generation satellite broadband services require significant investment and will be dramatically improved by combining the resources of both companies.

As mentioned above, the deployment of digital cable has also provided cable operators with the ability to offer new interactive services. These services include video-on-demand, information-on-demand (e.g., sports scores, financial market information, electronic yellow pages, etc.) and electronic shopping services. These services are typically enabled through two-way interaction between the digital cable set-top and server equipment located at the cable operator's headend.

Even though the "one-way via satellite" architecture of a DBS operator does not allow for the same type of headend to set-top connectivity as exists in a digital cable system, a DBS service can provide many of the same types of interactive offerings as the digital cable operator provided sufficient bandwidth for content distribution is available to the satellite operator.<sup>66</sup> The latency of this type of service (i.e., how quickly

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<sup>65</sup> See Joint Engineering Statement at 14.

<sup>66</sup> In contrast to cable operators, a DBS provider enables its interactive services by the continuous broadcast of content "carousels" to its set-top boxes. Under the direction of either the operator or the consumer, each set-top box selects and presents or stores

the information is presented to the viewer) and depth of the service (i.e., how much information is available to the viewer) is directly proportional to the amount of satellite bandwidth allocated to the content carousel associated with the service. Simply put, the more bandwidth that is applied to a service, the more interactive and robust (and consequently the more competitive) the consumer experience.

Thus the DBS spectrum efficiencies created through the merger will allow New EchoStar to offer satellite-based interactive services that can compete favorably against increasingly sophisticated digital cable offerings and at the same time provide rural consumers with access to interactive services they might otherwise not be able to obtain.

The merger also will enable New EchoStar to compete more effectively against cable companies (and the telephone companies) as a possible third line for a bundle of video/data/Internet services into the home. Cable companies with digital infrastructure can now offer consumers the attractive bundles of video, high-speed Internet access and other interactive services, and Internet telephony. As will be seen below, the merger will allow New EchoStar to provide a truly competitive broadband service, as the new entity will be able to combine the spectrum available to each company for broadband services and use the combined potential subscriber base to achieve more

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information from the content carousel transmitted by the satellite. For example, in the case of an interactive financial information service, the consumer would identify the particular stock symbols of interest and the set-top box would wait for the relevant information to be transmitted over the carousel, "grab" it and display it to the consumer. If the content is transmitted frequently enough, this interaction appears to be instantaneous to the viewer. This content carousel approach applies not only to information-on-demand services but to almost any satellite-delivered interactive service, including video-on-demand services and electronic shopping services.

competitive price points and sustain the extraordinary high up-front capital investment that is required to launch quickly an advanced satellite broadband network.

New EchoStar will thus be able to establish a viable satellite-based Internet/data service that would compete with cable modem access and telephone lines as a third line into the home. This efficiency will confer significant consumer benefits by creating an effective competitive alternative in a line of business that is increasingly important to consumers - and in which consumer options currently are limited.<sup>67</sup>

(d) BETTER SERVICE TO RURAL AREAS, ALASKA AND HAWAII

Another major benefit of the newly-freed spectrum will be New EchoStar's ability to provide Americans living in rural areas, Alaska and Hawaii with more national programming networks and a better signal.<sup>68</sup> As explained above, by not duplicating each other's programming over the same spectrum, the combined entity will be able to offer a much greater variety of national networks than rural and remote areas can receive today.

This means that New EchoStar will be better able to provide subscribers in Alaska and Hawaii with a programming package more akin to what is available to their fellow citizens on the mainland today. Moreover, the combination of assets, including uplink facilities, will make more feasible the redeployment of finite satellite assets to non-CONUS western orbital slots, portending further improvements to service in Alaska and Hawaii.

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<sup>67</sup> The necessity and importance of spreading the huge costs of pure broadband satellite services across the required critical mass of broadband subscribers is discussed in greater detail below.

<sup>68</sup> See Joint Engineering Statement at 10.

The same spectrum and satellite efficiency that will facilitate a greater variety of programming also will provide for a more reliable signal in all rural and remote areas. This could translate into any number of benefits, including potentially smaller dish sizes for some subscribers in remote areas such as Alaska and Hawaii.<sup>69</sup>

In addition, as discussed further below, citizens in rural America will also benefit from the extent to which the combination of ECC and Hughes will improve competition with cable incumbents in numerous metropolitan areas. National pricing is the most practicable and efficient method of DBS pricing, and New EchoStar will commit to continued uniform and non-discriminatory pricing and service throughout the country. As a result of national pricing, rural DBS customers will reap many of the benefits that enhanced competition with cable will provide to customers in non-rural areas. In effect, the national price will act as a conduit that allows the competitive dynamic in such important, highly competitive regions to have a beneficial impact on consumers throughout the nation, including in rural areas where cable does not exist.<sup>70</sup>

Finally, perhaps one of the largest benefits promised by the transaction for rural areas is that the merger will help make seamless satellite broadband a reality for all Americans - deploying faster to all regions, with greater applications and service offerings. Broadband deployment is discussed in more detail below.

(e) MORE ETHNIC, FOREIGN LANGUAGE AND NICHE PROGRAMMING

The same principle of spectrum efficiency will apply to niche programming such as ethnic, foreign language, or other programs that appeal to

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<sup>69</sup> See Joint Engineering Statement at 11.

<sup>70</sup> See Willig Decl. at P.P. 38-39.



specialized audiences. These audiences would have greatly expanded viewing opportunities with the additional programming available as a result of the merger. For example, the merged entity could provide several more channels of Spanish-language programming than the companies' combined current offerings, as well as increased exposure for foreign language programming with smaller followings - a very important benefit for audiences that desire this programming.

(f) MORE EDUCATIONAL PROGRAMMING

The spectrum efficiencies resulting from the merger will allow the provision of additional educational programming, another area in which the benefits from the transaction serve explicit statutory goals. Congress has required DBS providers to set aside a percentage of their capacity for such programming,<sup>71</sup> but the qualified programmers using ECC's and DIRECTV's set-aside channels overlap. For example, DIRECTV and ECC now use different portions of the spectrum to provide the same C-SPAN and C-SPAN II feeds. Eliminating this overlap would free spectrum for additional public interest programming.

(g) OTHER EFFICIENCIES THAT WILL RESULT FROM THE MERGER

The combination will also allow the rationalization of the two companies' satellite fleets. These satellites are now inefficiently deployed due to the fragmentation of DBS spectrum assignments, which was in turn based on the now-discarded model of analog DBS. The deployment of satellites at 110(degree) W.L. is a good example of this inefficiency. DIRECTV has a satellite at that location for the purpose of using its

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<sup>71</sup> See 47 U.S.C.ss.335(b) (1994) (DBS providers are required to set aside four to seven percent of channel capacity "exclusively for noncommercial programming of an educational or informational nature.").

assignment of only 3 DBS channels, even as EchoStar's EchoStar 5 satellite now located at that slot and the EchoStar 8 satellite to be launched to that slot are each equipped with 32 transponders and stand ready to use all of the spectrum at that location. The result is that the two DBS companies are constrained in their ability to compete by outdated requirements that are the equivalent of an airline being required to fly its planes only half-full. The merger will allow the companies to align their combined satellite fleet to the dictates of market efficiency.<sup>72</sup>

In addition, New EchoStar will achieve greater economies of scale and substantial cost synergies as a result of the integration of the ECC and DIRECTV satellite platforms. For example, the proposed merger will allow New EchoStar to offer a common service platform to new customers; to combine and improve each company's distribution networks; and to use the satellite uplink centers for new, rather than redundant, services. The resulting cost synergies resulting from such steps will include: reduced subscriber acquisition costs; reduced customer turnover, or "churn"; improved signal security as a result of moving to a standardized DBS service platform; reduced programming costs as a result of having a larger subscriber base; and the elimination of duplicative overhead.<sup>73</sup> All of these synergies will contribute to the creation of a dramatically stronger competitor to cable's dominance of the MVPD marketplace and will be manifested to the DBS consumer.

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<sup>72</sup> See Joint Engineering Statement at 4-7.

<sup>73</sup> See Joint Engineering Statement at 2-3, 7-8, 12.

2. THE MERGER WILL HAVE OTHER SIGNIFICANT PRO-COMPETITIVE EFFECTS AND WILL NOT HAVE AN ANTI-COMPETITIVE IMPACT IN ANY OF THE RELEVANT MARKETS

MVPD Market. The merger will have significant pro-competitive effects - increased competition to cable operators - and will not have an anticompetitive impact in the relevant product market - the MVPD market. Recent technological and regulatory developments have left no doubt that the relevant market for purposes of analyzing this transaction, as previously defined by the Department of Justice ("DOJ"), is now "the delivery of multiple channels of video programming to the home . . . via . . . cable, satellite, or wireless technologies."<sup>74</sup> As Dr. Willig testifies, definition of a "relevant market" for the purpose of competition analysis of mergers depends crucially on demand substitution considerations - the degree to which consumers view the products as substitutable.<sup>75</sup> This ability to raise prices profitably is a function of the degree to which

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<sup>74</sup> See Willig Decl. at P.P. 12-13 (discussing the relevant market determination made by the Department of Justice in the Primestar case.) In 1998, Primestar, a joint venture of large cable companies, sought to acquire rights to an orbital slot for nationwide DBS service that were held jointly by News Corp. and MCI Telecommunications Corp. DOJ sued to enjoin that acquisition, alleging that allowing cable operators through Primestar to control those DBS assets would eliminate the possibility that those assets could be used to compete against cable. In its complaint, DOJ alleged that the MVPD market was the relevant product market for the purpose of evaluating Primestar's proposed purchase of the DBS assets. See *United States v. Primestar, Inc.*, Civ. No. 1:98CV01193 (JLG) (D.D.C. May 12, 1998).

<sup>75</sup> See Willig Decl. at P. 8. In particular, the U.S. Department of Justice and Federal Trade Commission define a market "as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a 'small but significant and nontransitory' increase in price, assuming the terms of sale of all other products are held constant." *Id.* (citing Department of Justice and Federal Trade Commission, *Horizontal Merger Guidelines*, available at [http://www.usdoj.gov.atr.public/guidelines/horiz\\_book/toc.html](http://www.usdoj.gov.atr.public/guidelines/horiz_book/toc.html)).

consumers view two products as providing similar services or benefits. If one firm came to become the only provider of one of the products, but not the other, and if consumers found the products to be good substitutes, then the presence of the second product would prevent the firm from realizing an increase in profits by significantly raising its price. Therefore, the second product would directly constrain the price of the first product, and the relevant market would include the second product.

Dr. Willig has concluded, based on the business behavior of the DBS industry, federal government cases and studies, the views of the cable industry, and the views of independent analysts, that DBS prices are directly constrained by cable prices. Therefore, the relevant market for evaluating the merger of ECC and DIRECTV includes cable providers.<sup>76</sup>

For example, Dr. Willig observes, DBS pricing decisions appear to be driven by competition with cable companies, as the stated primary objective of both companies is to gain market share by luring consumers away from the leading cable providers, and the firms accordingly price their DBS programming services at levels based primarily on the prices charged by cable providers. Additionally, Dr. Willig observes that each company has laid claim to success in luring subscribers away from cable, which is corroborated by public statements of cable companies attributing DBS subscriber growth to aggressive efforts by DBS to target cable customers, the fact that the

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<sup>76</sup> Indeed, Dr. Willig explains that the market is dynamic and the boundary of the market in which DBS providers compete may well expand. As bundled packages with digital television, high-speed Internet access, and video-on-demand become relatively more important in the MVPD market, the participants in the relevant market may grow beyond the historical MVPD participants to include DSL providers, incumbent phone companies, and cellular phone providers. See id. at P. 17.

cable industry itself views DBS as a significant competitor, and the acknowledgement by cable companies that their pricing and advertising strategies are influenced by competition from DBS.

Dr. Willig also notes that a number of cases and studies by the federal government confirm that cable firms are part of the relevant market. The DOJ, for example, found that the MVPD market was the relevant market in the Primestar case, discussed above. And in its annual analysis of competition in video programming, the FCC groups the cable industry and the DBS industry in the MVPD market.<sup>77</sup> The FCC has also concluded that DBS and cable services are substitutes.<sup>78</sup> In sum, Dr. Willig concludes, the relevant market for analyzing a merger between ECC and DIRECTV is the MVPD market.<sup>79</sup>

As previously noted by the Commission, over 96 percent of all television households in the United States are passed by cable television systems and these cable

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<sup>77</sup> See Seventh MVPD Competition Report, 16 FCC Rcd. 6037, atP. 61.

<sup>78</sup> In its 2000 Report on Cable Industry Prices, the FCC concluded that DBS puts statistically significant downward pressure on demand for cable services. The report continues to state that "DBS is a substitute for cable services. This result is different from our earlier finding reported in the 1999 Price Survey Report, which showed DBS exerting only a modest influence on the demand for cable service. One explanation for the increased importance of DBS as a competitor of cable is the passage of . . . [SHVIA] in November 1999, which eliminated the prohibition on DBS delivery of local network signals into their local television markets. The two DBS operators have begun offering local signals in many major television markets thus more closely matching services provided by cable operators." See In the Matter of Implementation of Section 3 of the Cable Television Consumer Protection and Competition Act of 1992; Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment, Report on Cable Industry Prices, 16 FCC Rcd. 4346, 4364 (2001), P. 53.

<sup>79</sup> Dr. Willig also explains that, for the purposes of evaluating the competitive impact of the proposed merger, the national pricing for monthly subscription and programming fees by both EchoStar and DIRECTV suggest that a national-level analysis is the most appropriate. See Willig Decl. atP. 18.

operators continue to be the dominant distributors in the national MVPD market.<sup>80</sup> Indeed, cable television operators maintain nearly an 80 percent share of the total MVPD market.<sup>81</sup> DBS also competes with a number of other MVPD distributors using different transmission media, such as wireless cable, SMATV, open video systems, direct-to-home analog and digital satellite offerings, cable overbuilds and electric utilities.<sup>82</sup> In addition, there may soon be a number of new providers using technologies and frequency bands that will compete in this market, including terrestrial point-to-multipoint services in several fixed service bands and potential new satellite entrants.<sup>83</sup>

Evaluated in this market, the proposed merger will have decidedly pro-competitive effects. The effect on competition is not adequately measured by the number of competitors, but rather by their effectiveness. As the DOJ and the Commission have recognized, increasing the effectiveness of DBS competition (and thus ensuring adequate MVPD competition) may only be achievable by foregoing additional DBS competitors.<sup>84</sup>

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<sup>80</sup> See Seventh MVPD Competition Report, 16 FCC Rcd. 6005, at App. B, Table B-1 (noting that approximately 96.6 percent of U.S. households with at least one television were passed by cable at the end of 1999); MCIT, 15 Comm. Reg. (P&F) 1038, atP. 16.

<sup>81</sup> Seventh MVPD Competition Report, 16 FCC Rcd. 6005 atP. 15.

<sup>82</sup> Id.

<sup>83</sup> See, e.g., OpTel, Inc.'s Request for Action, In the Matter of Petition for Rulemaking To Amend 47 C.F.R. ss. 101.603 and Related Rules - To Allow the use of 12 GHz OFS Frequencies for the Delivery of Video Programming Material, CS Docket No. 99-250, RM-9257 (dated Nov. 6, 2001).

<sup>84</sup> For example, when the Commission considered the application of an ECC subsidiary to acquire additional DBS licenses, the Department of Justice commented that "MVPD competition is best served by the emergence of a strong high-power DBS competitor with enough capacity to compete effectively with cable." Comments of the United States Department of Justice, In the Matter of the Application of MCI Telecommunications Corp. and EchoStar 110 Corp., File No. SAT-ASG-19981202-00093, at 8 (Jan. 14, 1999). The Commission agreed: "[W]e view the potential competitive benefits of allowing EchoStar to become a stronger competitor in MVPD

As described above and by Dr. Willig, the transaction will result in improved and expanded programming choices for consumers, as well as the provision of innovative new services, which will make New EchoStar a better competitor to cable.<sup>85</sup> Indeed, as all cable firms roll out their digital upgrades, DBS has a narrow window of opportunity to ignite full-scale competition as cable customers transition to digital service, before consumer inertia and the high switching costs from cable to DBS leave consumers locked in, and cable further entrenched. Moreover, as Dr. Willig discusses, the characteristics of the MVPD market in general and of DBS firms in particular "make it very unlikely that a merger of EchoStar and DirectTV would result in higher prices and lower output through either coordinated behavior among participants in the MVPD market or unilateral behavior by the merged firm."<sup>86</sup>

As outlined above, this transaction will produce enormous benefits for all Americans, including the small percentage of U.S. households that are not currently passed by cable operators. These sparsely populated areas already are being served by a number of C-band providers that are beginning to roll out new digital offerings (e.g., 4DTV products) and offer over 500 programming channels.<sup>87</sup> These products remain very attractive, particularly in areas where dish size is not a significant deterrent.

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markets as outweighing the potential competitive costs of reduced entry into the DBS industry." MCIT, 15 Comm. Reg. (P&F) 1038, atP. 21.

<sup>85</sup> Willig Decl. at P. P. 23-24 (discussing merger specific efficiencies that will lead to benefits such as greater geographic coverage of local channels, more specialty, ethnic and foreign language programming, interactive television services, and video-on-demand).

<sup>86</sup> Id. atP. 6.

<sup>87</sup> Satellite Today, C-Band Subscribers on Motorola's Front Burner, April 13, 2001. See also, [www.4DTV.com](http://www.4DTV.com).

In addition, recognizing the concerns of consumers in the 3.4% of U.S. television households not passed by cable,<sup>88</sup> New EchoStar is committed to pricing its DBS services on a uniform, nationwide basis. This means that, after the merger, the few consumers in areas not served by cable will in fact benefit from the intensified MVPD competition that will exist in all other areas where New EchoStar will compete with cable. In this way, these rural customers will obtain the benefits of competition between and among DBS, different cable MSOs, as well as the newer cable overbuilders and other emerging competitors offering other solutions throughout the country that increasingly are promoting and comparing their digital offerings to DBS. In other words, those consumers located in sparsely populated areas not currently served by cable will obtain DBS service at prices developed as a result of the more vigorous competition among New EchoStar and the 8 or 9 largest cable operators and other new entrants providing overbuild and other solutions in the rest of the country. In short, not only will the merger not have an anti-competitive impact in rural areas, it will produce tangible competitive benefits for consumers in those areas, too.

Programming. The programming market also will benefit from the proposed merger as a result of the more efficient use of spectrum and the creation of a much stronger alternative distribution outlet for programmers not affiliated with cable MSOs. In this regard, the proposed merger will not create the types of vertical relationships that raised concern in other transactions. The DOJ and the Federal Trade

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<sup>88</sup> See note 81, supra. The Commission noted that there were approximately 100.8 million television households during the 1999-2000 television season. See Seventh MVPD Competition Report, 16 FCC Rcd. 6005, at P. 18. Based on this total, it may be estimated that roughly 3.4 million are not passed by cable.



Commission have brought a number of cases addressing the vertical relationships between cable MSOs and competition in programming that were settled by consent decree.<sup>89</sup> In contrast, the Merger Parties do not intend to pursue a strategy of vertical integration with programmers post merger. Combined with the amount of available spectrum that will be freed up, this absence of vertical integration will help create a significant outlet for existing and new non-affiliated cable programmers, which now find it difficult to obtain carriage on the platforms of vertically integrated cable operators.<sup>90</sup>

### 3. THE MERGER WILL PROMOTE DEPLOYMENT OF ADVANCED BROADBAND SERVICES TO ALL AMERICANS

The merger of ECC and Hughes will have a profoundly positive effect on the deployment of facilities-based, advanced, two-way, broadband services via satellite to all Americans, especially in rural areas outside the reach of other broadband alternatives such as DSL and cable modem services. The combined resources of ECC and Hughes will enable the merged company to accelerate and better promote the deployment of such services to both rural and urban markets.<sup>91</sup> This will support the Congressional and Commission policy objectives of providing affordable, high-speed Internet access to all Americans, particularly those living in rural areas.

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<sup>89</sup> See, e.g., Time Warner Inc., et al.; Prohibited Trade Practices, and Affirmative Corrective Actions, 62 Fed. Reg. 11202 (Federal Trade Comm'n Mar. 11, 1997) (consent order).

<sup>90</sup> Gary Thorne, President of Moviewatch, a programming service expected to premiere next year, underscored this potential benefit, observing that with the proposed merger "the additional spectrum at least gives us opportunities to place networks. Because if there was - if there is - one place where spectrum eventually does get used up, it's on the satellite side of the world." Linda Moss, New Nets Squeeze Into Consolidated Market, Multichannel News, Nov. 26, 2001.

<sup>91</sup> See Joint Engineering Statement at 14-16.

The Telecommunications Act of 1996 specifically directs the Commission to "encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all Americans . . ."92 In its most recent annual report on advanced broadband services, the Commission emphatically stated its commitment "to ensuring that advanced services become available to all Americans."93 The Commission went on to note, however, that certain consumers (e.g., those in rural areas) are "particularly vulnerable" to not receiving such services.94

Satellite systems are especially well-suited for the provision of broadband services in rural and other underserved areas and for providing a critical competitive alternative in suburban and urban environments. Satellite systems have nationwide coverage areas and are able to offer high-quality, ubiquitous service as soon as the satellite system is launched and operational. As such, satellite systems offer instantaneous deployment to low-population density and low-income areas that may not have enough demand to justify a terrestrial build-out.95

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92 See Telecommunications Act of 1996, Tit. VII, ss. 706(a), Pub. L. No. 104-104, 110 Stat. 153 (1996), reproduced in the notes following 47 U.S.C. ss. 157 (Supp. 2001).

93 See In the Matter of Inquiry Concerning the Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable and Timely Fashion, and Possible Steps to Accelerate Such Deployment Pursuant to Section 706 of the Telecommunications Act of 1996, Second Report, 15 FCC Rcd. 20913, 20917 P. 8 (2000) ("Second Report").

94 Id. at 20918.

95 In addition, satellites offer ubiquitous service at prices that are distance insensitive, in contrast to the distance-based prices that are characteristic of many terrestrial networks. These advantages allow satellite operators to provide first- and last-mile connectivity more cost-effectively than terrestrial systems, which have historically focused their deployment on high-density urban areas. See Extending Wireless Telecommunications Services to Tribal Lands, Notice of Proposed Rulemaking, FCC 99-205, WT Docket No. 99-266, P. 24 (rel. Aug. 18, 1999).

In spite of this potential, however true, satellite broadband deployment to date has been minimal. According to the Second Report, high speed services over satellite as of 1999 accounted for less than 50,000 lines, with none of these lines satisfying the Commission's definition of advanced services due to the limited upstream capabilities of these facilities.<sup>96</sup> ECC and Hughes have made reasonable progress compared to that baseline with early-entry interactive Ku-band broadband products. However, to date, only one percent of DBS subscribers has purchased high-speed satellite data services. The current consumer costs for these products, including equipment and monthly fees, given the low market penetration and lack of economies of scale, place them out of reach for many consumers, and make them less competitive with terrestrial offerings that offer bundled video and IP services in one package.<sup>97</sup>

As the Commission has recognized, the future of truly seamless satellite broadband communications lies with the deployment of next-generation systems in the Ka-band. The Commission has licensed these systems in the hope that they would usher in "a new age in satellite communications" by providing "a wide variety of broadband interactive digital services in the United States and around the world."<sup>98</sup> The reality, however, is that deployment of these new satellite systems is taking longer and requiring more capital than many companies/licensees have been able to sustain. In the more than

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<sup>96</sup> Id.P. 111.

<sup>97</sup> See Joint Engineering Statement at 14-16.

<sup>98</sup> See In the Matter of Rulemaking to Amend Parts 1, 2, 21 and 25 of the Commission's Rules to Redesignate the 27.5-29.5 GHz Frequency Band, to Reallocate the 29.5-30.0 GHz Frequency Band, and to Establish Rules and Policies for Local Multipoint Distribution Service and for Fixed Satellite Services, 12 FCC Rcd. 22310, 22310 (1997).

four years that have elapsed since the Commission's May 1997 authorization of the construction, launch and operation of Ka-band satellites in the first round of Ka-band licensing, certain licensees have encountered serious obstacles in their attempts to marshal the enormous capital and infrastructure required to construct, launch and operate satellite systems.<sup>99</sup> Even well-established satellite companies such as Lockheed Martin Corporation have backed away from the challenge of developing a Ka-band system, with its recent announcement that it will not invest further in its Ka-band venture, Astrolink.<sup>100</sup>

Each of ECC and Hughes has already made significant broadband investments and plans future deployment of additional high-speed Internet access services, but there are tremendous economic and technological hurdles that must be overcome to do so using satellites.<sup>101</sup> For example, in view partly of the financing community's reluctance to finance such projects, ECC's first Ka-band satellite, EchoStar 9 (to be launched in 2002), is a cautiously modest project, equipped with only a limited number of spot beams designed to serve only a few geographical areas in the United States. And while Hughes will invest approximately \$1.5 billion and has already spent nearly \$1 billion to begin deploying SPACEWAY system spacecraft in early 2003,<sup>102</sup> Hughes is not immune to downturns in the capital markets that could affect the timing of its deployment or its ability to offer competitively priced offerings. Current investments,

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<sup>99</sup> Global Wireless, *Pie in the Sky*, September 1, 2001.

<sup>100</sup> Decision Near on Astrolink as Lockheed Ends Funding, *Communications Daily*, November 1, 2001.

<sup>101</sup> See Joint Engineering Statement at 14-16.

<sup>102</sup> The first phase of the SPACEWAY system will consist of two satellites and one spare to serve North America.

divided between the firms, may lack the economies of scale to compete with terrestrial services, thus implying higher prices to rural communities and less competition in non-rural areas.<sup>103</sup>

The merger will promote exponentially the efforts of both companies to implement truly competitive next-generation broadband systems in a fashion that, absent the merger, would likely be significantly less beneficial to the public. The parties expect that the proposed transaction will allow the two companies to develop a combined critical mass of broadband subscribers to spread the tremendous fixed costs that, as noted above, have deterred other satellite companies from proceeding with broadband satellite systems. The merger will speed broadband service availability, significantly improve subscriber growth, and therefore substantially enhance the competitive position of broadband satellite services vis-a-vis cable operators that can and do offer fully bundled Internet Protocol/video packages.<sup>104</sup> Cross-technology competition always benefits the public. The lower prices resulting from "intermodal" competition in urban areas will also benefit rural and underserved users with lower prices.

Second, a greater breadth of service will be implemented by the combined company more rapidly than would be possible absent the combination, and thereby will reach the consuming public more quickly. Time to market is of the essence. If next-generation satellite broadband services reach the market only after cable and DSL have commanded 60% of potential broadband customers, it is not clear whether any late-coming service would be able to attract enough of the remaining customers to become

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<sup>103</sup> See Joint Engineering Statement at 14-16.

<sup>104</sup> Id.

viable. This consideration highlights the more general point, noted above, that only a narrow window of opportunity is presented for imposing heightened competitive pressure on cable before cable is able to lock in its dominant position. The fact that effective competition occurs on the basis of bundles of offerings, and that broadband is a critical element of the bundle, reinforces the point further.

The merger will also boost broadband deployment by combining the Ka-band spectrum resources available to each entity. To be competitive with cable high-speed access, a satellite broadband platform needs to be capable of supporting several million U.S. subscribers. Each of ECC and Hughes (including PanAmSat) now has access to Ka-band spectrum at 3 orbital locations (in ECC's case, only two of these slots can support a one-dish solution), but Ka-band spectrum is limited in its ability to provide ubiquitous broadband services as a result of the Commission's satellite-terrestrial sharing decisions in the 18 GHz band. Even with the most advanced technology, each orbital location can only serve a finite number of customers. The number of customers that can be served is directly proportional to the amount of spectrum that is available. By combining resources in a merged entity, ECC and Hughes will be better positioned to create a Ka-band system capable of serving the nation's broadband service requirements while effectively and competitively challenging cable modem and DSL services.<sup>105</sup>

In short, commercialization of the Ka-band has been a cornerstone in the Commission's laudable effort to promote rapid deployment and competition in the provision of advanced broadband services and to promote the efficient use of spectrum

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105 Id.

by using the Ka-band to provide a new class of service that is simply not possible in the crowded Ku- and C-bands used for traditional Fixed-Satellite Service.<sup>106</sup> Approval of the proposed transaction will pave the way for the rapid deployment of a Ka-band satellite system capable of providing competitive broadband and other advanced services to all Americans, including those in rural areas, consistent with the Commission's goals and the public interest.

#### 4. THE PANAMSAT PURCHASE IS IN THE PUBLIC INTEREST

The ECC-Hughes combination will result in a transfer of control of Hughes' controlling interest in PanAmSat, either to New EchoStar as a consequence of the merger, or through a separate purchase by ECC of Hughes' indirect interest in PanAmSat in the event the merger agreement is terminated under certain circumstances. In either event, the transfer of control of Hughes' interest in PanAmSat is in the public interest and should be approved.

As outlined above, significant benefits to consumers will result from combining the FSS resources of ECC and Hughes to bring broadband satellite services to market faster. The merger will not create any significant overlap in the provision of FSS services in the same product and geographic markets that should be of any concern to the Commission.<sup>107</sup> ECC does not currently provide any telecommunications services of the type provided by PanAmSat in the United States or elsewhere. While Hughes and

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<sup>106</sup> See Rulemaking to Amend Parts 1, 2, 21, and 25 of the Commission's Rules, 12 FCC Rcd. at 22312.

<sup>107</sup> While ECC is a potential competitor in the FSS market, there are a number of other existing domestic and international FSS service providers (e.g. Loral/Orion, GE/SES, New Skies, etc.) as well as new entrants.

PanAmSat own and operate a fleet of FSS satellites and associated earth stations that are utilized primarily to provide domestic and international satellite services, respectively, the Commission has already determined that the consolidation of their businesses and operations under the control of Hughes serves the public interest.<sup>108</sup> Moreover, the combined FSS authorizations held by all three companies do not create market power in any one company in light of the large number of FSS satellite licenses held by other non-affiliated companies.<sup>109</sup>

### III. WAIVER REQUESTS: APPLICATION CUT-OFF RULES AND ADDITIONAL APPLICATIONS

In connection with the approval of this transaction, the parties respectfully request that the Commission waive the application of its "cut-off" rules with respect to all pending applications filed by Hughes or its subsidiaries (including PanAmSat) and by ECC for additional space station authorizations, to the extent that those applications have been the subject of an FCC cut-off notice prior to the closing date.<sup>110</sup>

Section 25.116 of the Commission's rules provides that any pending application will be considered "newly filed" and therefore may lose its place in a processing round if it is modified by a "major amendment" - including an amendment that specifies a substantial change in beneficial ownership or control of the applicant.<sup>111</sup> An amendment will not be deemed a major amendment, however, if it reflects a change

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<sup>108</sup> See Hughes Comm., Inc., and Anselmo Group Voting Trust/PanAmSat Licensee Corp., 12 FCC Rcd. 7534 (1997).

<sup>109</sup> See, e.g., TRW, Inc., 16 FCC Rcd. 14407 (Int'l Bur. rel. Aug. 3, 1999); CAI Data Systems, Inc., 16 FCC Rcd. 14269 (Int'l Bur. rel. Aug. 3, 1999);

<sup>110</sup> Attachment G appended hereto provides a consolidated list of pending applications filed by Hughes and its subsidiaries and by ECC.



in ownership or control that the Commission determines is in the public interest and the Commission grants an exemption from the cut-off date.<sup>112</sup> The Commission has traditionally granted such exemptions where the proposed transaction will serve a legitimate business purpose and will serve the public interest.<sup>113</sup>

As described throughout this application, the proposed transaction serves a legitimate business purpose. By combining their satellite assets and operational resources, the transaction will enhance the combined enterprise's U.S. and global service capabilities, allowing it to compete more effectively and efficiently with dominant cable and other MVPD service providers. The transaction involves - indeed, it is primarily focused upon - operational satellites. Moreover, the applications currently pending are an integral part of Hughes' and ECC's expansion plans that were announced well before this proposed transaction and are essential to the continued competitiveness of their respective businesses. Under these circumstances, there can be no question that the transaction serves an independent business purpose and was not entered into for the purpose of acquiring the pending applications.<sup>114</sup> For these reasons, the Commission should exempt all currently pending applications filed by Hughes and its subsidiaries and by ECC from any applicable cut-off rules.

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<sup>111</sup> See 47 C.F.R. ss.25.116(b) (2000).

<sup>112</sup> See 47 C.F.R. at ss.25.116(c)(2) (2000).

<sup>113</sup> See, e.g., DirectCom Networks, Inc., DA 01-1683P. 16 (Int'l Bur. rel. Aug. 3, 2001); Loral Space & Comm. & Orion Network Syst., 13 FCC Rcd. 4592, 4599, P. 17 (1998); Hughes Comm., Inc. & Anselmo Group Voting Trust/PanAmSat Licensee Corp., 12 FCC Rcd. 7534 (1997); AT&T Corp. & Loral SpaceCom Corp., 12 FCC Rcd. 925 (1997).

<sup>114</sup> GE/SES, DA 01-2100 at P. 56; Loral/Orion, 13 FCC Rcd. at 4599.

#### IV. SECTION 304 WAIVER

In accordance with Section 304 of the Communications Act of 1934, 47 U.S.C. ss. 304, the Applicants hereby waive any claim to the use of any particular frequency or of the electromagnetic spectrum because of previous use of the same, whether by license or otherwise.

#### V. CONCLUSION

For the foregoing reasons, the Applicants respectfully request that the Commission grant this application promptly and provide for any other authority that the Commission finds necessary or appropriate to enable the Applicants to consummate the proposed transactions.

Respectfully submitted,  
GENERAL MOTORS CORPORATION

By: \_\_\_\_\_  
[name]  
[title]

HUGHES ELECTRONICS CORPORATION

By: \_\_\_\_\_  
[name]  
[title]

ECHOSTAR COMMUNICATIONS  
CORPORATION

By: \_\_\_\_\_  
David K. Moskowitz  
Senior Vice President and General  
Counsel

ECHOSTAR COMMUNICATIONS  
CORPORATION

By: \_\_\_\_\_  
David K. Moskowitz  
Senior Vice President and General  
Counsel

Dated: November \_\_\_\_, 2001

BEFORE THE  
FEDERAL COMMUNICATIONS COMMISSION  
WASHINGTON, D.C. 20554

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Application of

EHOSTAR COMMUNICATIONS CORPORATION,  
GENERAL MOTORS CORPORATION,  
HUGHES ELECTRONICS CORPORATION

Transferors,

and

EHOSTAR COMMUNICATIONS CORPORATION

Transferee,

For Authority to Transfer Control  
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DECLARATION OF DR. ROBERT D. WILLIG  
ON BEHALF OF  
EHOSTAR COMMUNICATIONS CORPORATION, GENERAL MOTORS  
CORPORATION, AND HUGHES ELECTRONICS CORPORATION

I. QUALIFICATIONS

1. My name is Robert D. Willig. I am Professor of Economics and Public Affairs at the Woodrow Wilson School and the Economics Department of Princeton University, a position I have held since 1978. Before that, I was Supervisor in the Economics Research Department of

Bell Laboratories. My teaching and research have specialized in the fields of industrial organization, government-business relations, and welfare theory.

2. I served as Deputy Assistant Attorney General for Economics in the Antitrust Division of the Department of Justice (DOJ) from 1989 to 1991. I also served on the Defense Science Board task force on the antitrust aspects of defense industry consolidation and on the Governor of New Jersey's task force on the market pricing of electricity.

3. I am the author of Welfare Analysis of Policies Affecting Prices and Products, Contestable Markets and the Theory of Industry Structure (with William Baumol and John Panzar), and numerous articles, including "Merger Analysis, IO Theory, and Merger Guidelines." I am also a co-editor of The Handbook of Industrial Organization, and have served on the editorial boards of the American Economic Review, the Journal of Industrial Economics and the MIT Press Series on regulation. I am an elected Fellow of the Econometric Society and an associate of The Center for International Studies.

4. I have been active in both theoretical and applied analysis of telecommunications issues. Since leaving Bell Laboratories, I have been a consultant to AT&T, Bell Atlantic, Telstra, and New Zealand Telecom, and have testified before the U.S. Congress, the FCC, and the public utility commissions of about a dozen states. I have been on government and privately supported missions involving telecommunications throughout South America, Canada, Europe, and Asia. I have written and testified on a wide range of telecommunications issues, including



the scope of competition, end-user service pricing and costing, unbundled access arrangements and pricing, the design of regulation and methodologies for assessing what activities should be subject to regulation, directory services, bypass arrangements, and network externalities and universal service. On other matters, I have worked as a consultant with the Federal Trade Commission, the Organization for Economic Cooperation and Development, the Inter-American Development Bank, the World Bank, and various private clients. A full list of my articles and other professional publications and activities is presented in my curriculum vitae, which is attached as Exhibit A.

## II. PURPOSE OF STATEMENT

5. I have been asked by EchoStar Communications Corporation, General Motors Corporation, and Hughes Electronics Corporation to address certain issues related to the proposed merger between EchoStar and DIRECTV (a subsidiary of Hughes), including the impact of the proposed merger on competition and consumers, and the degree to which there are merger-specific efficiencies that cannot be achieved in the absence of the transaction.

6. To summarize my analysis, which is based on information obtained from interviews of senior executives at both EchoStar and DIRECTV as well as from publicly available information, I conclude that (a) the relevant market for analyzing a merger between EchoStar and DIRECTV is no narrower than the Multi-Channel Video Programming Distributor (MVPD) market, and may be broader than that; (b) the proposed merger offers the possibility of

substantial efficiency improvements, especially in radio spectrum use, which would directly benefit DBS consumers by providing an expanded array of services (e.g., the provision of local broadcast programming to more metropolitan areas, more High-Definition Television channels, and more specialized programming), and also benefit an even broader group of consumers by creating a more effective competitor to cable providers than either company could be on its own; (c) the nature of competition in the MVPD market makes it very unlikely that a merger of EchoStar and DIRECTV would result in higher prices and lower output through either coordinated behavior among the participants in the MVPD market or unilateral behavior by the merged firm; (d) the proposed merger is more likely to be of distinct benefit to rural TV households than to diminish competitive benefits available to them; and (e) a merger between EchoStar and DIRECTV would not create or exacerbate any valid concerns the Federal Communications Commission (FCC) has about vertical integration because EchoStar and DIRECTV do not have any significant vertical relationships with programmers, and if anything, the merger could increase competition among program providers.

### III. DELINEATION OF RELEVANT MARKET

7. A key step in the competitive analysis of any merger or acquisition is the delineation of the relevant market(s). In the case of a merger between EchoStar and DIRECTV, the relevant market is no narrower than the MVPD market, and may be broader than that.<sup>1</sup> The

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<sup>1</sup> The MVPD market includes the cable industry and Direct Broadcasting Satellite (DBS) services. Other available MVPD services include home satellite dishes (HSD), multi-channel multi-point distribution service (MMDS), and private cable or satellite master antenna television (SMATV) systems. See Annual Assessment of the Status of

cable industry has been preeminent in the MVPD market.<sup>2</sup> Although Direct Broadcasting Satellite (DBS) providers have made significant inroads, cable firms still provided service for more than 77 percent of all MVPD subscribers in July 2001.<sup>3</sup>

8. The definition of a "relevant market" for the purpose of competition analysis of mergers depends crucially on demand substitution considerations - the degree to which consumers view the products as substitutable. In particular, the U.S. Department of Justice and Federal Trade Commission define a market "as a product or group of products and a geographic area in which it is produced or sold such that a hypothetical profit-maximizing firm, not subject to price regulation, that was the only present and future producer or seller of those products in that area likely would impose at least a 'small but significant and nontransitory' increase in price, assuming the terms of sale of all other products are held constant."<sup>4</sup> This ability to raise prices profitably is a function of the degree to which consumers view two products as providing similar services or benefits. If one firm came to become the sole provider of one of the products, but not the other, and if consumers found the products to be good substitutes, then the presence of the second product would prevent the firm from realizing an increase in profits by significantly raising its price. The second product would directly constrain the price of the first product, and the relevant market would therefore include the second product.

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Competition in the Market for the Delivery of Video Programming, Seventh Annual Report, 16 FCC Rcd. 6005, 6008 (2001) ("Seventh Cable Competition Report"), at P. 3.

<sup>2</sup> Seventh Cable Competition Report at P. 5. The FCC stated: "Cable television still is the dominant technology for the delivery of video programming to consumers in the MVPD marketplace."

<sup>3</sup> See Comments of National Cable & Telecommunications Association, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated August 2, 2001), at P. 7.

<sup>4</sup> See Department of Justice and Federal Trade Commission, Horizontal Merger Guidelines, available at [http://www.usdoj.gov/atr/public/guidelines/horiz\\_book/toc.html](http://www.usdoj.gov/atr/public/guidelines/horiz_book/toc.html)

9. The business behavior of the DBS industry indicates, and Federal government cases and studies, the views of the cable industry, and the views of independent analysts appear to confirm, that DBS prices are directly constrained by cable prices. Therefore, the relevant market for evaluating the merger of EchoStar and DIRECTV includes cable providers.

10. DBS pricing decisions appear to be driven by competition with cable companies. Executives at both EchoStar and DIRECTV confirm that the objective of each firm is to gain market share by luring consumers away from the leading cable providers, and the firms accordingly price their DBS programming services at levels based primarily on the prices charged by cable providers. In determining their prices, the companies collect detailed data on cable pricing of many systems and, as necessary, adjust their pricing to remain competitive on a national basis.<sup>5</sup> Moreover, the focus on cable providers, rather than the other DBS firm, is highlighted by DIRECTV's lack of response to EchoStar's recent "I Like 9" pricing strategy.<sup>6</sup> According to a DIRECTV executive, EchoStar's "I Like 9" package did not affect DIRECTV's pricing decisions because DIRECTV's focus is on obtaining new customers from cable providers, not the other DBS provider.

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5 When queried regarding their pricing decisions relative to the other DBS provider, executives at both EchoStar and DIRECTV indicated that they monitor the pricing of the other firm, but that such pricing plays little (if any) role in their own pricing decisions. The executives repeatedly emphasized that the primary determinant of their pricing was the price required to lure cable subscribers to DBS.

6 In August 2001, EchoStar began its "I Like 9" pricing strategy. Under the plan, new customers who purchased an EchoStar satellite TV system for \$199 or more received EchoStar's "America's Top 100" programming package for \$9 per month for one year. (EchoStar usually charges \$30.99 per month for the America's Top 100 programming package.) See EchoStar Communications Corporation, "DISH Network Announces New 'I Like 9' Promotion: Over 100 Channels of Satellite Television for Only \$9 a Month," Press Release, July 31, 2001.

11. Consistent with the stated focus of DBS providers on attracting cable subscribers, it appears based on statements by executives of both EchoStar and DIRECTV that a majority of new DBS consumers had previously been cable subscribers. In addition, executives responsible for marketing and advertising at both EchoStar and DIRECTV emphasize that their campaigns are focused on convincing extant cable consumers that DBS offers a superior product. This emphasis on cable customers is corroborated by public statements by the cable firms themselves. For example, Cablevision observed in a recent FCC filing that:

"The growth in DBS subscribers is due in part to the aggressive efforts of DIRECTV and DISH network to target Cablevision subscribers in their market efforts. For example, DISH network's recent ad campaign featured print ads entitled 'Save Money vs. Cablevision,' and direct mail, door hangers, and radio live-reads advising consumers that 'Cablevision is raising your rates again.' DIRECTV's 'Cable Bites' print ads feature side-by-side comparisons of tier pricing and number of channels."<sup>7</sup>

12. DBS pricing strategies thus appear to be directly constrained by the prices of cable providers, and therefore cable companies are part of the relevant market for analyzing this proposed merger. Such a position has been affirmed in a number of different cases and studies by the Federal government. In its 1998 complaint against Primestar, for example, the Department of Justice alleged that the MVPD market was the relevant product market and stated that:

"Cable and DBS are both MVPD products. While the programming services are delivered via different technologies, consumers view the services as similar and to a large degree substitutable. Indeed, most new DBS subscribers in recent years are former cable subscribers who either stopped buying cable or downgraded their cable service once they purchased a DBS system. Cable and DBS compete by

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<sup>7</sup> See Reply Comments of Cablevision Systems Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 3.

offering similar packages of basic and premium channels for a monthly subscription fee."<sup>8</sup>

13. The Justice Department noted that the cable industry had a distinct advantage because it could provide consumers with local broadcast services in local markets (the so-called local-into-local issue). Since the Justice Department's Primestar complaint, the Congress has allowed DBS providers to provide local-into-local services, which makes cable and DBS even closer substitutes than that suggested by the quotation above.

14. In its annual analysis of competition in video programming, the Federal Communications Commission (FCC) groups the cable industry and the DBS industry in the MVPD market.<sup>9</sup> In addition, the FCC concluded that "DBS distributors compete with a number of other MVPDs using different transmission media" and that "competitors in the MVPD market include cable operators, DBS operators," and other technologies, such as wireless cable operators.<sup>10</sup>

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<sup>8</sup> See *United States v. Primestar, Inc.*, Civil No. 1:98CV01193 (JLG) (D.D.C.) (May 12, 1998), at P. 63.

<sup>9</sup> See Seventh Cable Competition Report at P. 61. The FCC has also concluded that DBS and cable services are substitutes. In its 2000 Report on Cable Industry Prices, the FCC concluded that DBS puts statistically significant downward pressure on demand for cable services. The report continues to state that "DBS is a substitute for cable services. This result is different from our earlier finding reported in the 1999 Price Survey Report, which showed DBS exerting only a modest influence on the demand for cable service. One explanation for the increased importance of DBS as a competitor of cable is the passage of the Satellite Home Viewer Improvement Act (SHVIA) in November 1999, which eliminated the prohibition on DBS delivery of local network signals into their local television markets. The two DBS operators have begun offering local signals in many major television markets thus more closely matching services provided by cable operators." See Statistical Report on Average Rates for Basic Service, Cable Programming Services, and Equipment, Report on Cable Industry Prices, FCC (2001), at P. 53.

<sup>10</sup> See *In re Application of MCI Telecommunications Corp. and EchoStar 110 Corp.*, File No. SAT-ASG-19981202-00093, FCC 99-109 (released May 19, 1999), at P. 15 and footnote 40. The U.S. Department of Justice (DOJ) agreed with the FCC's finding in the case. Specifically, the DOJ stated that "the transaction will greatly increase EchoStar's capacity to transmit video programming and will enhance its ability to compete aggressively and effectively against other distributors of multichannel video programming, including the cable companies that dominate these distribution markets." See Department of Justice, "Justice Department Urges FCC To Approve Direct Broadcasting Satellite Deal," News Release, January 14, 1999. Similarly, in response to a General Accounting Office study on the competition between DBS and cable, the FCC filed a comment that it was concerned

15. Although not itself a proof that cable prices constrain DBS prices, further evidence is provided by the fact that the cable industry itself views DBS as a significant competitor.<sup>11</sup> The CEO of Cox Communications, Inc., one of the largest cable providers in the nation, argued, "The satellite companies are very real, very serious competitors for our core business, and we take them extremely seriously."<sup>12</sup> Similarly, in testimony to the Senate Judiciary Committee, National Cable and Telecommunications Association President and CEO Robert Sachs stated that:

"Before 1996, cable operators faced video competition primarily from over-the-air television, C-band satellite receivers, video rentals, and movie theaters. Direct broadcast satellite (DBS) competition has changed that forever. Being digital from the start, and having the advantage of substantially greater channel capacity, DBS spurred cable operators to replace hundreds of thousands of miles of coaxial cable with fiber optics so that they too could offer consumers hundreds of channels of digital video and audio services. In responding to vigorous competition from DBS, cable operators have made enormous investments in not just plant but computers, billing systems, personnel, and training - resulting in significant improvements in the quality of service we provide to our customers."<sup>13</sup>

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about the study's results because the FCC believed "that DBS penetration not only influences cable rates but also is influenced by them." See Comments from the Federal Communications Commission in General Accounting Office, "The Effect of Competition From Satellite Providers on Cable Rates," July 2000, page 40.

11 Further confirmation that cable and DBS compete within a single market comes from Wall Street analysts. A number of analyst reports explain changes in DBS subscriber growth by actions taken by cable companies, and vice versa. For example, Merrill Lynch recently cited "aggressive digital cable rollouts" as a reason for the decline in projected DBS subscriber growth. See Merrill Lynch: "Eye in the Sky: 3Q01 Preview," October 8, 2001, page 2. Similarly, Goldman Sachs argued that "Increased competition from cable operators not only has the potential of increasing churn of DIRECTV ("winning back" cable subscribers), but also affecting the amount of gross subscribers the company adds." See Goldman Sachs, "Hughes Electronics Corp.," September 18, 2001, page 2.

12 See Christopher Stern, "Cable's Satellite Wars: Communications Giants Are Waging A Multibillion-Dollar House-to-House Battle for Subscribers," The Washington Post, August 13, 2000, page H01. 13 Robert Sachs, Testimony Before Subcommittee on Antitrust, Business Rights, and Competition, Committee on the Judiciary, United States Senate, April 4, 2001, pages 2-3. The National Cable and Telecommunications Association (NCTA) further argued, "Today consumers nationwide may turn to direct broadcasting satellite ("DBS") as a fully substitutable alternative to cable for MVPD service." See Reply Comments of National Cable & Telecommunications Association, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 1-2. In addition, Daniel Brenner of NCTA wrote to the General Accounting Office that "Cable operators have responded to competition from DBS in a variety of ways that increase the value of their services to customers." These include: (1) DBS's far greater channel capacity has spurred cable operations to increase the number of

16. Cable companies have also stated that their pricing decisions and advertising strategies are influenced by competition from DBS providers. AT&T has argued that, "Cable operators' behavior reflects the significant marketplace constraints imposed by DBS."<sup>14</sup> In addition, AT&T Broadband has focused entire advertising campaigns on luring DBS customers back to digital cable - underscoring AT&T's apparent belief that digital cable is a substitute to DBS.<sup>15</sup> Furthermore, in explaining a recent pricing decision, a general manager of a New England cable company said that "We have sought to strike a balance between the need to offset some of our increased programming costs, and the need to price our products competitively against DIRECTV and other satellite providers."<sup>16</sup>

17. Based on the evidence presented above, I conclude that the cable industry should be included in the relevant market for analyzing a merger between EchoStar and DIRECTV. Moreover, markets are dynamic and the boundary of the market in which DBS providers compete with cable operators may be expanding. For example, as bundled packages with digital

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channels they provide; (2) cable operators have improved reliability and added new services; and (3) operators have introduced new program packaging options. See Comments from the National Cable and Telecommunications Association in General Accounting Office, "The Effect of Competition From Satellite Providers on Cable Rates," July 2000, page 44.

14 See Comments of AT&T Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated August 3, 2001), at 12.

15 In a November 2001 AT&T Broadband television commercial, a woman states that "so, with this basic satellite plan, we have to share a receiver? The service man replies, "well, look on the bright side, ma'am. While your husband's watchin' sports in the den, you'll have sports in your room, you'll have sports in the kids' room, and you have sports right here in the kitchen. Be like a sports bar." The announcer then says, "with satellite, additional TVs are a problem. Different channels on different TVs at the same time. No extra equipment to buy. Problem solved. Digital cable from AT&T Broadband." Campaign Media Analysis Group, "AT&T Broadband Sports," November 2001.

16 Lisa Marie Pane, "Cox To Increase Cable Rates Statewide," Associated Press State and Local Wire, July 10, 2001.



television, high-speed Internet access, and video-on-demand become relatively more important in the MVPD market, the participants in the relevant market may well grow beyond the historical MVPD participants - which include cable firms, DBS providers, "overbuilders," C-Band providers, private cable or satellite master antenna television (SMATV) systems, and multi-channel multi-point distribution service (MMDS) providers - to include DSL providers, incumbent phone companies, and cellular phone providers. As technologies evolve, the distinction between "video" and "data" services may become increasingly blurred (e.g., video could increasingly be delivered over the Internet, and broadband data services could increasingly be delivered via satellite). To be sure, predicting the future course of the industry is extremely difficult and the market structure may develop in ways that are unanticipated today. Nevertheless, cable and DBS operate in a dynamic market and the relevant market may extend beyond the current MVPD industry.

18. Finally, for the purposes of evaluating the competitive impact of the proposed merger, the national pricing for monthly subscription and programming fees by both EchoStar and DIRECTV suggest that a national-level analysis is the most appropriate (see below for further discussion of the competitive effects of the proposed merger).

#### IV. MERGER-SPECIFIC EFFICIENCIES

19. The evidence that I have examined shows that the merger offers substantial efficiency benefits, especially in radio spectrum use.

20. Spectrum has become an increasingly scarce resource as the number of commercially viable uses of the spectrum has expanded over the past several decades. Both DBS firms indicate that each is making full use of its current spectrum to provide its existing services, and the prospects for the DBS industry to receive additional spectrum in the next few years are small. Therefore, improving the efficiency with which the DBS sector uses its spectrum is the only viable way for additional spectrum-intensive services to be provided to DBS customers. Such efficiency improvements would directly benefit DBS consumers by providing an expanded array of services, and also benefit a broader number of consumers by increasing competition with the cable industry. Both EchoStar and DIRECTV emphasize that the potential for additional improvements in spectrum efficiency by each firm individually is minimal. Future spectrum efficiency improvements must therefore reflect the elimination of redundant DBS spectrum use or some technological advance that is not currently anticipated by the DBS industry.

21. In the DBS industry, most of the communication is one-way and the marginal consumer requires virtually no additional spectrum.<sup>17</sup> In other words, unlike some other uses of spectrum, doubling the number of DBS consumers receiving one-way services requires essentially no increase in spectrum. Currently, EchoStar and DIRECTV each broadcast many identical cable channels and broadcast station feeds - that is, they both use spectrum for identical programming (e.g., CNN, HBO, local network affiliates, etc.). Such programming could be

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<sup>17</sup> The trivial increase in spectrum requirements reflects the need to transmit instructions to the set-top box regarding the relevant service package. The amount of spectrum required for such purposes is extremely small.

eventually provided with roughly half the current spectrum if EchoStar and DIRECTV were combined. And the spectrum ultimately "freed up" by a merger of EchoStar and DIRECTV would thus allow "New EchoStar" to provide new services and other content - especially local channels in many local communities that would not otherwise receive them - that DBS executives emphasize would not be possible in the absence of the merger.

22. Increased spectrum efficiency obtained through a merger of EchoStar and DIRECTV would benefit consumers in a variety of ways.<sup>18</sup> Several broad categories of benefits are apparent. The most important benefit may be that additional DBS spectrum efficiency would facilitate new and improved services (such as greater geographic coverage of local channels, more specialty, ethnic, and foreign language programming, interactive television services, and video-on-demand) that would help DBS more vigorously compete against the cable industry's ability to upgrade unilaterally its bandwidth to provide these services on a digital-cable tier.

23. Examples of the potential consumer benefits that would result from spectrum made available through the merger include improved and expanded programming choices:

- 0 More local channels to more metropolitan areas. New EchoStar believes it can provide local broadcast programming for 100 or more communities (while fulfilling

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<sup>18</sup> As the Joint Engineering Statement attached to this application notes, many merger-specific benefits will occur almost immediately, while others will take some period of time to be fully achieved. For example, New EchoStar will need to transition to a common set-top box platform to capture the full benefits of eliminating the current duplicative use of spectrum. The transition to a common set-top box platform, however, will take some time and cost to implement. As a result, the full merger-specific efficiencies will not be achieved until the transition to a common set-top box platform is complete. See the Joint Engineering Statement for further discussion of this issue.

the "must-carry" rules), compared to roughly 40 overlapping communities that the companies serve now.<sup>19</sup> Providing local programming is spectrum intensive, which limits the ability of current DBS providers to deliver such service outside the largest metropolitan areas. Both EchoStar and DIRECTV are launching new "spot beam" satellites to satisfy the must-carry rules for the roughly 40 local metropolitan areas that are already served. To use the spot beam technology, each company has to set aside a certain amount of spectrum (and a corresponding amount of transponder capacity) for regional use. Further upgrades using spot beams to serve even more local areas would require the sacrifice of yet more spectrum, as well as the substantial costs of launching more satellites with spot beam transponders for less potential return as they attempt to serve less populated communities. With only a fixed amount of spectrum (and transponder capacity), each company faces the opportunity cost of giving up frequencies that would otherwise carry satellite networks that are necessary to compete with cable. EchoStar and DIRECTV executives indicated that providing local programming is crucial to encouraging subscribers to switch to DBS from cable; EchoStar and DIRECTV executives added that their internal data show that subscriber growth in areas where local programming is now available has been higher than that in areas without such local programming. The lack of such services in all

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<sup>19</sup> EchoStar currently provides local broadcasting services in 36 metropolitan areas, while DIRECTV provides local services in 41 communities. The communities with local broadcasting service overlap significantly: both firms currently provide "local-into-local" service in 35 of the same metropolitan areas.

but the largest metropolitan areas attenuates the competitive pressures imposed on cable providers by the DBS industry.<sup>20</sup>

- 0 More HDTV channels. New EchoStar has committed to use a portion of the spectrum freed up by the merger to provide consumers with additional high-definition programming. Each company currently offers only two to four channels of HDTV programming, largely because HDTV is extremely spectrum intensive.<sup>21</sup> By freeing up additional spectrum, the combined entity will be able to offer an expanded number of HDTV channels. This commitment of spectrum to HDTV programming will provide additional incentives for consumers to invest in HDTV hardware, and for producers to invest in HDTV content. It may thus help to jump-start the sluggish HDTV adoption process.
- 0 More diverse programming. Spectrum efficiencies will also permit expanded specialized programming. Such programming could include ethnic, foreign language, educational, or other programs that appeal to specialized audiences.

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20 See Seventh Cable Competition Report at P. 13. The FCC stated that "[c]onsumers historically reported that their inability to receive local signals from DBS operators negatively affected their decision as to whether to subscribe to DBS." Goldman Sachs added that, "The ability to offer local-into-local programming is extremely important for DIRECTV and DISH Network because it enables the companies to more effectively compete with cable operators." See Goldman Sachs, "Satellite Communications: DBS Operators," December 18, 2000, page 26.

21 EchoStar currently offers four HDTV channels (including a pay-per-view channel), while DIRECTV offers two channels. In addition to a HDTV HBO channel, DIRECTV provides a combination of live and taped sports and entertainment programming and pay-per-view programming on one of its HDTV channels. (The sports and entertainment programming is broadcast for roughly 18 hours per day, while pay-per-view is available for approximately six hours per day.)

24. Another important benefit is that the merger may spur further innovations in DBS product offerings. New EchoStar's larger subscriber base would significantly increase the ability of the firm to make the investments necessary to develop advanced services, such as price-competitive high-speed Internet access, and to achieve the scale necessary to spread the fixed costs among a sufficient number of subscribers.<sup>22</sup> These new services could include:

- 0 Competitive broadband services. A larger customer base would allow New EchoStar to increase the speed of deployment and the scale of investment in satellite-based, high-speed Internet access systems that could effectively compete with cable modem and DSL services. Industry executives believe that current satellite-based, high-speed Internet offerings are not competitive with cable modem and DSL services for a variety of reasons. For example, given current spectrum allocations and technological constraints, executives stated that the number of subscribers that could be provided broadband service by either EchoStar or DIRECTV was significantly below the subscriber levels needed to achieve a price-competitive satellite-based system. Because of its broader base of DBS subscribers, however, the combined entity would be in a better position to develop a satellite-based broadband system that achieves sufficient economies of scale to compete with cable modem and DSL services. Such economies of scale could be captured by the proposed merger because satellite-based broadband service requires a "redundancy" system, in case a primary

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<sup>22</sup> The FCC has recognized that firms that can take advantage of scale economies by spreading development costs over a larger customer base are more likely to invest in infrastructure. See Competition, Rate Regulation, and the FCC's Policies Relating to the Provision of Cable Television Services, Report, 5 FCC Rec. 4962, 5003, at P. 71:

satellite fails, and doubling the number of subscribers does not require a doubling of the number of back-up satellites. The acceleration of competitive satellite-based broadband services would benefit consumers across the United States by providing an alternative to cable modem and DSL services; it would also be particularly beneficial to those in areas - such as rural America - without access to cable modem or DSL service. (See below for further discussion of the competitive impact on the high-speed Internet access market and the consumer benefits to rural areas.)

- 0 New services. The elimination of spectrum redundancies will allow New EchoStar to provide a variety of services, including interactive offerings and the necessary bandwidth to provide video-on-demand using personal video recording devices. DBS providers are currently adding these options, but spectrum constraints limit their ability to expand the services to include more choices and more features. For example, as I understand it, spectrum constraints limit the "near" video-on-demand offerings of DBS providers to the top 10 or 20 movies; additional bandwidth would allow New EchoStar to significantly expand such services to include a larger library of movies and potentially "true" video-on-demand. Because digital cable has more bandwidth available and is therefore able to offer such advanced services, DBS providers must offer a similar set of services to be competitive.

25. The merger would also reduce per subscriber programming costs through the

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"[I]ncreased concentration [in the cable industry] has provided economies of scale and fostered program investment."

expansion of the subscriber base. According to executives at EchoStar and DIRECTV, programming costs account for between one-third and two-fifths of the firms' expenses of providing service, and a significant share of MVPD/programmer contracts - including many existing contracts between programmers and either EchoStar and DIRECTV - include volume discount clauses. Since the merger will increase the customer base of New EchoStar substantially, such volume discount clauses would allow the combined entity to benefit immediately from lower programming costs. The larger customer base would also allow New EchoStar to obtain future programming contracts that are more consistent with the prices paid by the largest cable operators, such as AT&T and Time Warner Cable. Neither DBS company believes it would be able to achieve such programming cost savings on its own.

26. Another obvious area of cost savings involves operational costs. A merger would produce significant savings in key business areas, such as uplink and backhaul expenditures and satellites (satellites typically cost between \$220 million and \$300 million to construct, launch, and insure).<sup>23</sup> One other potential long-term efficiency gain involves the standardization of set-top boxes. Such standardization could reduce manufacturing costs through volume purchasing, allow easier integration into TVs and other hardware, and facilitate the production of new technologies. Moreover, the merger would produce administrative cost savings.

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23 The costs of construction, launch, maintenance, and insurance of the "spot beam" satellites do not depend on the number of consumers receiving the signal. A combined entity, with a larger customer base in each local area, would be more willing to assume the fixed costs associated with the required satellites.



## V. COMPETITIVE EFFECTS

27. The characteristics of the MVPD market and of DBS firms, in particular, make it very unlikely that this merger will result in higher prices and lower output through either coordinated behavior among the participants in the MVPD market or unilateral behavior by the merged firm.

28. A price increase as a result of coordinated interaction is unlikely following the proposed merger, in part due to the way the DBS and cable industries are structured. Both DBS firms currently set their monthly subscription and other programming fees on a national basis;<sup>24</sup> both firms' executives indicate that allowing the price to vary on a regional or local basis would be impractical.<sup>25</sup> First, customers not adequately served by cable are geographically dispersed.

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24 In 1992, DIRECTV entered into an agreement with the National Rural Telecommunications Cooperative (NRTC). As part of the agreement, which was substantially revised in 1994, NRTC paid more than \$100 million and, in exchange, received an exclusive right in certain regions of the country to distribute most DIRECTV programming transmitted on 27 of the 32 frequencies at the 101(0) slot. (According to NRTC, it holds such exclusive distribution rights for eight percent of television households.) The influx of resources for DIRECTV was important in the early 1990s because it provided a rural distribution network and, as the Chief Executive Officer of NRTC has noted, it helped to "capitalize the launch of the first DBS service in America." See, for example, B.R. Phillips, Chief Executive Officer of NRTC, Testimony Before Subcommittee on Courts and Intellectual Property, Committee of the Judiciary, United States House of Representatives, February 4, 1998. As a result of the agreement, for customers in "NRTC areas," prices for the DIRECTV programming exclusively distributed by NRTC and its affiliate entities are determined by NRTC and its affiliate entities; prices for all other programming distributed by DIRECTV (e.g., premium channels) are determined by DIRECTV on a national basis. DIRECTV and NRTC are currently engaged in a contractual dispute regarding the scope of NRTC's exclusive distribution rights. New EchoStar will commit to continued uniform and non-discriminatory pricing and service throughout the country.

25 Another element of obtaining DBS service is the upfront cost to the subscriber for the equipment and installation. Local variations for such costs are more practical, and both firms, in fact, have offered temporary local promotions on equipment and installation in the past. However, these local promotions have been offered as a reaction to cable firm activities (e.g., a cable price increase) in particular local areas; according to executives of both firms, these promotions have been aimed at cable subscribers - and not in response to activity by the other DBS provider. Furthermore, several factors suggest that New EchoStar would not want to, and likely could not, raise equipment and installation prices in specific regions above their competitive levels, especially for any extended period of time. First, consumers could purchase their equipment at any location - including over the Internet - making extended regional price differentiation difficult, if not impossible, to implement. Second, EchoStar and DIRECTV executives

Thus, it would be extremely difficult to segment such customers from others. Second, pricing by region or local area would require modifications to the companies' billing and customer support systems; would require retraining of customer service representatives; would limit the companies' ability to engage in national price advertising, including advertising and marketing over the Internet; and may cause customer confusion and dissatisfaction. New EchoStar has committed to maintaining its policy of uniform national pricing for its programming.

29. To set their national prices, DBS firms examine the prices charged by the various cable systems around the country and use these cable prices as a benchmark for setting their prices. Cable firms, on the other hand, set price on a local franchise-by-franchise basis, and prices can differ depending on many factors that are specific to the market in which the franchise is located. Although New EchoStar will face competition from at least one cable firm in any particular franchise area, tacitly reaching an agreement on a coordinated price is not simply a question of reaching an agreement with one other firm. New EchoStar will set its price based on a function of what cable firms are charging in the various franchise areas. In order to elevate price, the various cable multiple system operators (MSOs), each of whom owns systems in a mix of areas, would somehow need to raise price across their range of systems. From the perspective of the cable firms, the optimal price for New EchoStar to charge would likely differ from firm to firm, making an agreement all the more difficult to reach. Thus, a coordinated price increase after the merger would require an agreement among multiple cable firms and New EchoStar, not just an agreement between two firms.

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emphasize that they have reduced upfront costs in the past to attract customers, and that they would continue to offer promotions and other incentives so that New EchoStar's upfront consumer costs would be low enough to attract

30. The danger of a coordinated price increase is further attenuated by the fact that many of the major metropolitan areas have more than one non-cable, non-DBS MVPD provider.<sup>26</sup> For example, in New York City, Cablevision has argued that it "faces significant competition from various providers of SMATV service.... Terrestrially, RCN also provides service throughout much of the New York metropolitan area, and boasts of its 'substantial growth' in the New York market."<sup>27</sup> In Washington, DC, Starpower - a joint venture between RCN and the local utility - is competing against Comcast, the DBS providers, and SMATV entities.<sup>28</sup> More broadly, one overbuilder (RCN) is currently providing service in seven of the ten largest metropolitan telecommunications markets.<sup>29</sup>

31. Furthermore, a unilateral price increase is unlikely after this merger for two principal reasons. First, under current market conditions, I understand that in response to any price increase by either of the DBS firms, subscribers who would leave DBS for cable would substantially outnumber the subscribers who would leave one DBS firm for the other DBS firm. As noted above, executives at both EchoStar and DIRECTV indicated that the majority of subscribers to DBS service were previously cable subscribers and the majority of subscribers that

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cable consumers to DBS.

<sup>26</sup> These non-cable, non-DBS providers include "overbuilders," multi-channel multi-point distribution service (MMDS), private cable or satellite master antenna television (SMATV) systems, and incumbent local exchange carriers (ILEC) using Very High-Speed Digital Subscriber Lines (so-called VDSL).

<sup>27</sup> See Reply Comments of Cablevision Systems Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 3-4.

<sup>28</sup> See Reply Comments of Comcast Corporation, In the Matter of Annual Assessment of the Status of Competition in the Market for the Delivery of Video Programming, Notice of Inquiry, CS Docket No. 01-129, (dated September 5, 2001), at 10-11.

<sup>29</sup> See "RCN Announces Third Quarter Results," Press Release, November 7, 2001.

discontinue one DBS service choose to subscribe to cable rather than to subscribe to the other DBS service. The smaller the diversion of subscribers from one DBS firm to the other, the smaller would be the expected price increase from conceivable unilateral competitive effects after the merger.<sup>30</sup>

32. Second, the merger could reduce marginal costs through a reduction in the cost of programming per additional subscriber. Even if some subscribers would be diverted from one DBS firm to the other after a price increase, a reduction in marginal costs resulting from the merger could cause the DBS firms to lower their price.<sup>31</sup>

33. In addition, the merger could serve to promote competition by providing New EchoStar with the bandwidth and economies of scale to match the new bundled services offered by cable companies. According to executives at both EchoStar and DIRECTV, the introduction of digital cable - which reduces or eliminates the historical quality and capacity advantages of DBS over (analog) cable - combined with the possibility of bundling high-speed Internet access, video-on-demand, and other advanced services is a competitive threat to future DBS subscriber growth.<sup>32</sup> Given spectrum constraints, DBS firms are unable to fully match the existing and potential services offered by cable companies that can unilaterally increase their bandwidth. The danger is therefore that DBS will become less competitive with the leading cable providers. As

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30 Robert D. Willig, "Merger Analysis, Industrial Organization Theory and Merger Guidelines," Brookings Papers on Economic Activity: Microeconomics, 1991 at 299.

31 Carl Shapiro, "Mergers with Differentiated Products," Remarks before the American Bar Association, 1995.

32 For example, Goldman Sachs concluded that "We see the bundling of [cable] services as the most significant threat to DBS because of its potential not only to slow gross additions, but also to win back subscribers (seen through higher churn). Both have the obvious effect of slowing net subscriber growth for DISH Network and DIRECTV." See Goldman Sachs, "Satellite Communications: DBS Operators," December 18, 2000, page 1.

discussed above, New EchoStar has committed to providing more local channels, more diverse programming, and more advanced services. In addition, executives at the two DBS firms believe that the proposed merger will enable them to develop a more competitive satellite-based, high-speed Internet access option that will help New EchoStar better compete with digital cable's bundled offerings. The combined entity could therefore represent a more effective competitor to the dominant cable firms than the combined competitive impact from each DBS provider on its own.

34. Finally, satellite and uplink infrastructure require substantial investments. By contrast, the marginal costs of providing additional customers with service are relatively low. Such a cost structure would provide New EchoStar with strong incentives to spread its fixed costs among a wider subscriber base. Executives at both firms emphasize that New EchoStar's incentives are to attract new customers before digital cable becomes further entrenched, since consumers who commit to a digital cable/cable-modem bundle may perceive fewer benefits to moving to DBS (relative to analog cable customers).<sup>33</sup> The dynamic incentive to expand the customer base of DBS service will continue after the proposed merger.

#### Competitive issues in rural America

35. A number of analysts have raised concerns about the impact of an EchoStar-DIRECTV merger on rural consumers. The concern appears to arise from the perception that

cable is not available in some rural areas, and therefore that the proposed merger would create a monopoly in the rural MVPD market. Based on interviews with top executives of both firms and a review of publicly available industry data, such concerns appear to be unfounded for three reasons.

36. First, nearly every household in America with a television is passed by cable: according to the FCC, 96.6 percent of TV households are passed by cable.<sup>34</sup> After the merger, the vast majority of households would thus continue to have the benefit of direct price competition described earlier. Furthermore, those households not passed by cable are geographically diverse - that is, they do not appear to be concentrated in any specific areas. Even in the absence of its national pricing commitment, it would be very difficult for New EchoStar to price discriminate in its monthly subscription and other programming fees against households that are not passed by cable (given the geographical mixing of those with and without cable access and the other impediments to price discrimination for DBS service described above).<sup>35</sup>

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33 Goldman Sachs similarly notes that "As cable operators upgrade their networks and roll out new service, cable subscribers will have less incentive to 'churn' to DBS." See Goldman Sachs, "Satellite Communications: DBS Operators," December 18, 2000, page 33.

34 A debate exists about precisely the correct way to calculate the percentage of households passed by cable. See Seventh Annual Report at P. 18. See also U.S. Department of Commerce and U.S. Department of Agriculture, Advanced Telecommunications in Rural America: The Challenge of Bringing Broadband Service to All Americans, April 2000 at 19. I have cited the most commonly used statistic, which is also the principal statistic cited by the FCC in the current and past reports on competition in the market for the delivery of video programming.

35 As noted in footnote 25, the cost of equipment and installation has on occasion varied across markets as a result of targeted local promotions. But, as discussed above, several factors suggest that the prices of equipment and installation would not rise above their competitive levels following the proposed merger. Furthermore, rural subscribers should be able to take advantage of retail subsidies that are made through geographically diverse retail chains or over the Internet. In other words, rural customers would likely be no worse off following the merger, and may benefit from more intense competition between New EchoStar and cable companies; rural customers would also benefit from the above-mentioned expansions of DBS programming and services that would otherwise not be available in the absence of the merger.

37. Second, many rural consumers not passed by cable would still enjoy some choice of MVPD providers. For example, C-Band Satellite or Home Satellite Dish (HSD) has nearly one million subscribers.<sup>36</sup> New C-Band digital equipment continues to be developed and made available to customers in order to access and view digital programming. Companies like Motorola have developed C-Band products to compete directly with DBS and allow subscribers to receive digital signals.<sup>37</sup>

38. Third, New EchoStar has committed to maintaining its national pricing plan. The implication of such a commitment is that MVPD prices for rural consumers will be driven by competition in urban areas. As noted above, executives at both EchoStar and DIRECTV view a national pricing strategy as providing cost savings and advertising benefits, and contributing to higher levels of customer satisfaction. This history suggests, and New EchoStar's stated commitment underscores, that national pricing would be perpetuated.

39. In addition, as noted above, with national pricing, monthly service prices are not likely to rise as a result of the merger. According to executives at EchoStar and DIRECTV, these prices are generally driven by the prices set by the major cable MSOs throughout the country, which often face competition from overbuilders and other MVPD providers. Such

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36 See Sky Research, Volume 8, Number 11, November 2001, page 3.

37 It is important to note that C-Band has high up-front costs, with dish costs averaging \$2,000. However, more than a hundred broadcast channels are available for free, and a package of two movie channels and 50 basic services can be purchased for as low as \$30 to \$35 per month. See Orbit magazine's C-band Frequently Asked Questions (FAQ) at <http://www.orbitmagazine.com/orbfaqs.htm>. Motorola's 4DTV offers nearly 300 free channels. For \$30 per month, 4DTV offers 59 subscription channels and 22 movie channels, in addition to the free channels. See [http://www.4dtv.com/4DTV/what\\_4dtv.html](http://www.4dtv.com/4DTV/what_4dtv.html).

pricing pressure would not change after a merger of EchoStar and DIRECTV.

40. Thus, it is more likely that the merger would be of distinct benefit to rural TV households than that it would diminish competition's benefits available to them. First, many of the new programming services that could be potentially created from spectrum freed up by the merger would benefit all customers, including rural customers. Second, as emphasized above, the proposed merger will allow the combined entity to have the subscriber base and the spectrum needed to offer a more price-competitive, satellite-based broadband service to rural consumers. For many such rural consumers, satellite broadband is the only feasible means of obtaining high-speed access to the Internet. In evaluating the impact of the proposed merger on rural consumers, it is therefore significant to consider the benefits of expanded broadband delivery.

#### VI. VERTICAL INTEGRATION

41. In the past, the FCC has raised the concern that vertical integration between video programmers and MVPD providers may "deter competitive entry in the video marketplace and/or limit the diversity of programming."<sup>38</sup> At the same time, the FCC has instituted program access rules, with the stated purpose of preventing vertically integrated MVPDs from treating non-integrated MVPD providers in a discriminatory fashion to the detriment of competition in the MVPD market.<sup>39</sup> Put simply, the concern is that an integrated entity (a) would not want to carry programming that competes with programming it owns or (b) would not make available

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<sup>38</sup> See Seventh Annual Report at P. 172.

<sup>39</sup> Id at P. 178.



programming it owns to competing MVPD providers on reasonable commercial terms. This merger, however, clearly does not create or exacerbate any concerns the FCC might have about vertical integration because EchoStar and DIRECTV do not have any significant vertical relationships with programmers.<sup>40</sup>

42. If anything, this merger may increase competition among program providers. The FCC has noted that many programming services have been planned, but have not been able to launch. One factor that has limited the launch of these new networks is the lack of channel capacity, particularly among analog cable systems.<sup>41</sup> The merger between EchoStar and DIRECTV, as stated above, will remove duplication among the two services and thereby provide bandwidth to be used as vehicles to launch new programming services.<sup>42</sup> In addition, the approximately 15 million subscribers of the combined entity should provide an attractive platform for launching new programs, providing an interested programmer with a large percentage of the subscribers it would need to create a viable network.<sup>43</sup> New EchoStar would be unaffiliated with any programming interests, and therefore, would not face any disincentives to carry new programming that its subscribers would value. Therefore, this merger could result in an increase in the programming offerings available to consumers.

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<sup>40</sup> News Corporation has an ownership interest in EchoStar that it has been selling off over time. It currently has less than a five-percent interest in EchoStar.

<sup>41</sup> See Seventh Annual Report at P. 176.

<sup>42</sup> For example, the President of Moviewatch, a network that will be launched next year, recently stated that one advantage of an EchoStar and DIRECTV merger is that "additional spectrum... gives us opportunities to place networks." See "New Nets Squeeze Into Consolidated Market," Multichannel News, November 26, 2001, page 60.

<sup>43</sup> This estimate of the combined subscriber base of New EchoStar excludes the subscribers of NRTC and its affiliate entities who receive DIRECTV programming.

## VII. CONCLUSION

43. The proposed merger of EchoStar and DIRECTV offers the possibility of substantial efficiency improvements, especially in radio spectrum use, which would directly benefit DBS consumers by providing an expanded array of services (e.g., the provision of local broadcast programming to more metropolitan areas, more High-Definition Television channels, more interactive services, and more specialized programming), and also benefit a broader number of consumers by increasing competition with the cable industry. These efficiencies do not appear to be available without the merger.

44. Furthermore, the nature of MVPD market competition makes it unlikely that a merger of EchoStar and DIRECTV would result in higher prices and lower output through either coordinated behavior among the participants in the MVPD market or unilateral behavior by the merged firm. Indeed, the proposed merger could serve to promote competition by providing New EchoStar with the bandwidth and economies of scale to match the new bundled services offered by cable companies. The proposed merger of EchoStar and DIRECTV is thus in the public interest.

JOINT ENGINEERING STATEMENT IN SUPPORT OF TRANSFER OF CONTROL APPLICATION

This joint engineering statement is being submitted to the Federal Communications ("FCC") by EchoStar Communications Corporation ("ECC") and Hughes Electronics Corporation ("Hughes") in support of their Consolidated Application for Authority to Transfer Control of various FCC licenses. This statement will address some of the more significant efficiencies that will be achieved by the proposed merger of ECC and Hughes.

Transition Plans. ECC and Hughes have determined that there will be substantial efficiencies and synergies (including expense savings and revenue enhancements) as a result of the merger of their two businesses. Many of these benefits will occur almost immediately, while others will take some period of time to be fully achieved. ECC and Hughes have developed a process for determining how best to transition their respective businesses upon completion of the merger. The parties anticipate that many of these transition decisions will have been made by the time the merger closes within the constraints of applicable law, while many other decisions will be made upon consummation of the merger.

Explanation of Transition Process. A joint ECC/Hughes team of key executives and employees has been formed to address the most important transition issues associated with the merger of the businesses of both companies. This team will be led by Charles W. Ergen, the Chairman and Chief Executive Officer of ECC and the person designated to become the Chairman and CEO of the combined company ("New EchoStar"). Other members of this transition team include Michael T. Dugan, President and Chief Operating Officer of ECC, Eddy Hartenstein, Chairman and CEO of DIRECTV and Jack A. Shaw, President and CEO of Hughes. All decisions will be made in the best interests of the combined companies and their subscribers. Some of the

more important operational issues that will need to be addressed include: which set top box platform to use, how best to transition customers to a common set top box platform, the repositioning of existing and planned satellite resources that takes the maximum advantage of the spectrum efficiencies gained by the merger, and the types of programming to be added to the current mix of local, national and high definition programming.

Set Top Box Transition. One of the most important issues that will have to be addressed is which set top box platform to employ on a going forward basis. Each company has chosen different methods for meeting the anticipated needs of its respective customers, including different conditional access systems, transport streams and descrambling structures, which has resulted in the development of set top boxes that are not compatible with one another. ECC has chosen to deploy an MPEG-2, DVB compatible digital architecture that allows for software upgrades via satellite and enhanced addressable security features to minimize signal piracy. ECC's entire family of receivers and outdoor units currently supports multiple satellites in multiple orbital locations. While ECC is the principal manufacturer of its set top boxes, JVC and others also produce consumer equipment compatible with ECC's system architecture. ECC's latest models include hard drives that allow for personal video recording (PVR) of up to 35 hours of programming, as well as a High Definition (HDTV) receiver that offers state-of-the-art picture quality.

DIRECTV's digital technology to deliver its programming differs from ECC's in that DIRECTV's receivers use a slightly different error correction method, slightly different compression techniques, and a substantially different conditional access system for protection from signal theft. DIRECTV also employs an MPEG-2 based digital architecture in its set top boxes, but the transport format differs from ECC's as does its signal encryption scheme. The signal format

and receiver technology used by either company can provide similar, video quality and consumer oriented features. In many receiver models, the primary integrated circuits used are identical. The receiver software provides the unique characteristics associated with either service.

In order to obtain the most significant consumer benefits from the merger, it will be necessary to transition to a common set top box platform. One platform will enable the combined company to achieve substantial manufacturing efficiencies, lowering the overall research and development costs as well as the per unit cost of building receivers for a larger subscriber base. A common set top box platform will also allow each subscriber to receive the maximum amount of programming that a combined fleet of satellites and ground stations can offer. Also, a common set top box will place the combined company on a more level playing field with cable, which has for some time had common technology and shared research and development costs for their set top boxes.

The transition to a common set top box platform will begin almost immediately after the merger. Currently, ECC and DIRECTV together serve approximately 15 million subscribers utilizing separate fleets of DBS satellites located in different orbital positions.<sup>1</sup> The amount of time it will take to complete such a transition is dependent upon the number of set top boxes that may need to be exchanged. Of course, this exchange program would be done as seamlessly as possible at no cost to existing subscribers. During this transition period, satellite signals will be simulcast or simulcrypted, so that subscribers owning either set top box platform can receive their existing programming.

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<sup>1</sup> This subscriber number is exclusive of those subscribers who receive DIRECTV programming directly from NRTC and its affiliate entities.

Satellite Fleet Transition. In addition to developing a plan for obtaining a common set top box platform, it will be necessary to develop a complementary plan for transitioning the existing and planned satellite fleets of each company. Today, ECC has six DBS satellites located at four orbital locations. (See Exhibit 1 attached hereto.) From two of these locations (119(degree) W.L. and 110(degree) W.L.) ECC can reach virtually all of the Continental United States (CONUS) as well as Hawaii and portions of Alaska. Due largely to the fact that its first two satellites were assigned to 119(degree) W.L., most of ECC's national programming and approximately 10 percent of its local broadcast programming originate from that location, where it now has two satellites (EchoStar 4 and 6) operating on 21 DBS frequencies.<sup>2</sup> (One of these satellites - EchoStar 4 -- only has limited operational capacity due to a deployment failure and other in-orbit anomalies.) ECC's only other CONUS location is at 110(degree) W.L. where it currently has one satellite (EchoStar 5) providing both national programming and most of its local broadcast programming over 29 DBS frequencies. Two other DBS satellites (EchoStar 1 and 3) provide several types of programming, including HDTV, niche and international programming from the non-CONUS 61.5(degree) W.L. and 148 (degree) W.L. orbital locations.<sup>3</sup> (EchoStar 2 is in the process of relocating to the 148(degree) W.L. orbital location to augment service at that slot.) In the near future, ECC will launch its first spot-beam satellite (EchoStar 7) to the 119(degree) W.L. orbital slot. Later next year ECC intends to launch its second spot-beam satellite (EchoStar 8) to the 110(degree) W.L. orbital slot.

ECC's satellites operate in a combination of low power and/or high power modes. Generally, the higher the power, the stronger the received signal, the less need for error correction,

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<sup>2</sup> Throughout this Engineering Statement, reference will be made to DBS frequencies or DBS transponders. The FCC has allocated 500 MHz of downlink spectrum for DBS service at 12.2 - 12.7 GHz. This spectrum has been further channelized into 32 frequencies/transponders.

<sup>3</sup> The 61.5(degree)W.L. and 148(degree)W.L. orbital locations can reach varying parts of the CONUS with a quality DBS signal.

and the more video and audio channels that can be compressed into each DBS transponder. EchoStar 1 and 2 are only capable of operating in a low power mode utilizing up to 16 CONUS transponders. EchoStar 3, 4, 5 and 6 were each designed to operate with up to 32 low power CONUS transponders or up to 16 high power CONUS transponders or a combination of both, while EchoStar 7 and 8 were each designed to operate with 16 high power CONUS transponders and, by operating on five other frequencies re-used 5 times, 25 spot-beam transponders.

While one antenna dish can "see" both the 110(degree) W.L. and 119(degree) W.L. orbital locations, multiple dishes are required to receive programming from the 110(degree)/119(degree) W.L. and either of the 61.5(degree) or 148(degree) W.L. non-CONUS slots. Approximately 80 percent of ECC's subscribers currently have antenna dishes capable of viewing programming from both the 110(degree) and 119(degree) W.L. orbital locations. Approximately five percent of ECC's subscribers have installed multiple antenna dishes for viewing the programming from the non-CONUS orbital locations.

DIRECTV currently has five operational DBS satellites located at three CONUS locations - 101(degree), 110(degree) and 119(degree) W.L. (See Exhibit 1 attached hereto.) Most of its national and local programming currently originates from the three satellites (DIRECTV 1R, 2 and 3) located at 101(degree) W.L. and operating over its 32 assigned DBS frequencies. Recently, DIRECTV's first spot-beam satellite (DIRECTV 4S) was launched into orbit and soon will be located at 101(degree) W.L. to provide primarily additional local broadcast programming. Additional programming is originated from DIRECTV 6, which is located at 119(degree) W.L. DIRECTV is assigned 11 DBS frequencies at that location. Another satellite (DIRECTV 5) is planned to be launched during the first quarter of 2002 and will be located at 119(degree) W.L. in order to replace DIRECTV 6, which is operating at reduced capacity due to power subsystem issues. DIRECTV also has one satellite (DIRECTV 1) operating on 3 assigned DBS frequencies at 110(degree) W.L. DIRECTV 1 is currently being used for

local broadcast service only. DIRECTV currently has on order another spot-beam satellite that is planned to be in service by the end of the year 2003.

DIRECTV's satellites also have both high power and low power DBS transponders. DIRECTV 1, 2 and 3 can operate with a maximum of 8 high power CONUS transponders or 16 low power CONUS transponders. DIRECTV 1R has 16 high power CONUS frequencies, whereas DIRECTV 5 and 6 were each designed to operate with a maximum of 16 high power or 32 low power CONUS transponders (although DIRECTV 6 is now limited to 11 low power DBS transponders due to power subsystems issues). DIRECTV's newest spot beam satellite (DIRECTV 4S) is capable of operating on up to 10 high power CONUS transponders as well as 44 spot beam transponders (by re-using 6 frequencies an average of 7.33 times). Most DIRECTV subscribers currently have a single antenna dish that can view only the satellites located at 101(degree) W.L. A small percentage of its subscriber base have antenna dishes that can view programming from DIRECTV's 101(degree) W.L. and 119(degree) W.L. satellites, and an even smaller subscriber base can view programming from the 110(degree) W.L. orbital slot.

There are several possible scenarios for redeploying the combined satellite fleets post merger that would significantly improve the utilization of the DBS spectrum and satellite resources. Under one possible scenario, most national programming could be placed on the 32 DBS frequencies at 110(degree) W.L. with most Western U.S. local and specialty programming moving to 119(degree) W.L. and most Eastern U.S. local and specialty programming moving to 101(degree) W.L. Under another possible scenario, most national programming could be placed on the 32 DBS frequencies at 101(degree) W.L. with corresponding local and specialty programming located on satellites at other CONUS slots. With the existing satellite resources of both companies (assuming spot beam satellites are successfully placed in service), New EchoStar could provide from the three CONUS



locations upwards of 320 national standard definition (SDTV) programming channels (assuming a 10:1 compression ratio - i.e., each DBS transponder compressing 10 SDTV channels) and over 1000 local broadcast stations for up to 100 metropolitan areas throughout the United States, including Alaska and Hawaii.

Such a combined fleet of satellites would also eliminate the obvious inefficiencies associated with splitting up the 32 DBS frequencies at the 110(degree) W.L. and 119(degree) W.L. orbital slots between the two companies. Today, in order for DIRECTV to provide service from its three assigned DBS frequencies at 110(degree) W.L. it must place one of its satellites at that location and equip its subscribers that want to receive its programming with a special three-feed antenna. Even after its spot beam satellite (DIRECTV 4S) becomes operational, DIRECTV will use at least two of its CONUS frequencies at 101(degree) W.L. for the retransmission of local broadcast programming, leaving approximately 240 SDTV video channels available for national programming (again, assuming 10:1 compression ratios). Conversely, ECC is currently limited to providing approximately 210 national SDTV video channels from its 21 assigned DBS frequencies at 119(degree) W.L., assuming no local broadcast channel feeds. Without spot beam satellites, this figure would be reduced on a one-for-one basis as every local station is added, and would be lowered to a maximum of approximately 160 national SDTV video channels when EchoStar 7 becomes operational (i.e., ECC would be able to retransmit up to 250 local SDTV stations using five CONUS frequencies, but in so doing reduce the number of SDTV channels available for national programming by 50).

Ground Station Transition. Today, ECC operates two ground station complexes, one in Cheyenne, Wyoming and the other in Gilbert, Arizona, primarily to backhaul national and local programming and to uplink that programming to its fleet of satellites. These facilities also provide primary and backup telemetry, tracking and command (TT&C) for its in-orbit satellites.

DIRECTV has similar earth station complexes in Los Angeles, California and Castle Rock, Colorado. Each complex includes numerous earth station antennas and associated electronics and hardware, and must be manned by an extensive staff of skilled technicians, operators, and engineers on a 24x7 basis.

There are several potential scenarios post merger that will result in significant cost savings for the New EchoStar. Clearly, both companies must invest significant recurring dollars to backhaul local stations across the country to each of their uplink facilities which requires nearly a one hundred percent duplication of equipment and fiber. Much of this duplication could be eliminated post merger. While it is desirable to maintain some site diversity between uplink centers, additional benefits can be obtained by minimizing equipment redundancy between the companies, and by eliminating the need to expand continually the existing facilities to support the growing list of must carry local broadcast channels.

Comparison of Channel Capacities. A combined ECC/DIRECTV will have significantly more DBS channel capacity at its disposal to provide more national and local programming to its subscribers than each company would have absent the merger. ECC and DIRECTV currently are assigned 50 and 46 CONUS transponders, respectively. Assuming a 10:1 compression ratio for SDTV channels and no spot beam satellites (which is the case today), ECC can employ up to 500 SDTV video channels while DIRECTV can employ up to 460 SDTV video channels. Of this amount, however, a substantial number of these channels are currently being utilized by each company for the provision of the same local broadcast channels (4 to 5 channels per metropolitan area) in approximately 35 metropolitan areas. Upon the successful launch and placement in orbit of spot beam satellites, each company should be able to maintain approximately

the same number of metropolitan areas with local broadcast stations while fulfilling its must carry obligations under the Satellite Home Viewer Improvement Act of 1999 ("SHVIA").

Today, each company also offers its subscribers a national programming lineup that is very similar in content, substantially duplicating each other's programming. (See Exhibit 2 attached hereto.) ECC has approximately 235 national programming channels and DIRECTV has approximately 179 national programming channels. Of these, approximately 150 channels are duplicative. DIRECTV also carries about 40-50 pay-per-view (PPV) channels depending on the season, whereas ECC carries about 39 PPV channels, six of which are simulcast on the satellites located at 61.5(degree) W.L. and 148(degree) W.L. This leaves only enough channel capacity to offer the requisite minimum of educational and public affairs programming and a few HDTV channels, which require significantly more bandwidth than SDTV video channels.

The combined company would be able to eliminate much of the substantial duplication of local broadcast and national programming and thereby increase significantly the amount of national programming choices and local broadcast areas, as well as more HDTV, educational, niche and international programming.

More Local-Into-Local Stations and Metropolitan Areas. Each DBS company typically offers only a few local broadcast stations to a small number of metropolitan areas. Today, ECC offers 4-5 local stations in 36 metropolitan areas, whereas DIRECTV offers approximately the same number of local stations in all but one of these metropolitan areas plus an additional 6 metropolitan areas for a total of 41 metropolitan areas. (See Exhibit 2 attached hereto.) Post merger, the combined company will be able to eliminate much of this local channel duplication and free up additional channels to serve upwards of 100 metropolitan areas with local programming, including at least one metropolitan area in each of the fifty states.

More HDTV Programming. Currently, DIRECTV and ECC only have enough satellite capacity to offer 2-3 full-time HDTV channels to their subscribers. Moreover, in order for any subscriber to obtain this programming he or she must purchase and install a special antenna dish. This is because ECC only offers HDTV programming from its non-CONUS 61.5(degree) W.L. and 148(degree) W.L. locations, while DIRECTV utilizes some of its capacity at 119(degree) W.L. for this programming. Absent the merger, it is unlikely that many more, if any, additional HDTV programming would be carried on either DBS company's channel lineup due to the significant bandwidth requirements for such programming and the competing demands for other programming choices. Post merger, with the spectrum freed up by avoiding the duplication of national and local programming, it is anticipated that New EchoStar will be able to offer at least 12 HDTV channels from one or more of its full CONUS orbital locations.

Better Service to Alaska and Hawaii. It has been a challenge for DBS providers to offer the full range of programming choices to residents in Alaska and Hawaii due to their far western and northern locations in relation to the CONUS orbital slots centered over the United States. Most subscribers in these locations also require larger antenna dishes. Neither company is able to offer any local broadcast channels over their current operational fleet of satellites; however, with the upcoming launches of ECC's spot beam satellites, it will be able to offer such programming if it can do so and still meet its satellite must carry obligations.

With the combined satellite and spectrum resources of both DBS companies, New EchoStar will be able to offer more program choices to the residents of Alaska and Hawaii. Not only will they receive the best available programming currently being offered by each DBS provider, but they also will benefit from the increased programming choices available as a result of the spectrum efficiencies outlined above.

More Reliable Service. New EchoStar's increased spectrum efficiency and better utilization of satellite capacity will also enable it to provide more reliable service. This benefit is derived from two primary areas: the increased redundancy associated with more in-orbit satellites in case of unexpected satellite failures; and the ability to utilize the additional capacity where available to increase the amount of error correction applied to the DBS signal.

More Diverse National Programming. As shown in Exhibit 2, there is substantial duplication of the existing national programming currently being offered by ECC and DIRECTV. There is substantially more video programming, music programming, and other programming services available to DBS providers than they currently have the channel capacity to provide to their subscribers. For example, of the approximate 300 national programming channels available today, ECC currently includes about 235 on its programming menu. DIRECTV includes even fewer channels on its programming menu.

Enhanced Near Video-on-Demand Capabilities. Today, due to their spectrum constraints both ECC and DIRECTV have limited capabilities to offer their subscribers video-on-demand services. While both companies now offer set top boxes with personal video recorders (PVR) that allow the viewer to download up to 35 hours of programming on hard drives for later viewing, this convenience is not equivalent to video-on-demand service. Such service requires the storage of an extensive library of movies and other programming by the DBS provider for almost instantaneous retrieval by millions of active subscribers. Through the offering of more pay-per-view channels with staggered viewing times, as well as more extensive use of PVR caching, however, New EchoStar will be better able to approximate video-on-demand services for its subscribers.

Substantial Procurement, Operational and Manufacturing Savings. The combined company, with its larger subscriber base and unified fleet of satellites and ground infrastructure, will be able to achieve substantial cost savings as a result of the merger. ECC's preliminary estimates for these expected cost savings amount to almost \$3 billion per year. A significant portion of these savings will be achieved through reductions in subscriber acquisition costs, more efficient distribution of product offerings, reduced production cost, more cost-effective set-top box research and development, and more efficient advertising. New EchoStar should also benefit from substantial savings through reduced programming costs associated with having a larger subscriber base since most DBS distribution arrangements offer additional discounts on a volume basis. In addition, New EchoStar can expect to achieve substantial savings from a reduction in subscriber churn as more services are offered over a unified platform that can better compete with digital cable. Moreover, significant cost savings will be achieved by rationalizing the satellite fleet of both companies, by eliminating future satellite procurements and capital expenditures, by achieving operating efficiencies and by eliminating duplicative overhead expenses. For example, the merged company could serve its national customer base and fully utilize the spectrum resources at the three CONUS DBS locations with only two satellites at each orbital slot. Indeed, upon the successful launch of EchoStar 7 and 8, ECC could utilize fully all 32 DBS transponders at 110(degree) W.L. and 119(degree) W.L. orbital locations operating just two satellites at each location instead of the four that are slated to operate at there.

Technological Developments. The combined resources of the merged companies will also lead to the more rapid and efficient deployment of newer technologies, including possibly the introduction of advanced modulation, coding and compression techniques that would further enhance overall channel carrying capacity. Given the current platforms that each company

employs and their existing fleet of satellites, however, neither DBS provider alone can expect to achieve any significant improvements in channel capacity using the limited spectrum resources available to them. Each company already compresses its digital signals to achieve approximately a 10:1 ratio of SDTV programs per DBS transponder. Four to five years ago, compression ratios of 6-8 were achievable and the future outlook using existing hardware is only expected to achieve ratios of about 12:1 with acceptable service quality.

Moreover, while spot-beam satellites soon will be launched that will enable greater frequency reuse and allow for additional local programming over the same number of DBS transponders, they were designed based upon the current inefficiencies in the fragmented assignment of DBS frequencies. For example, ECC designed both of its spot beam satellites with the understanding that it had access to only 21 DBS transponders at 119(degree) W.L. With this limit in mind, ECC could only devote five of these transponders to spot beams, since it needed the remaining 16 DBS frequencies for national programming. Each spot beam satellite was also designed with the understanding that it could be used as a backup for the other spot beam satellite in case of a launch or in-orbit failure.

In any event, these future achievements in spectrum efficiencies are being more than offset by the increased demands for satellite bandwidth. As noted above, DBS providers soon will be required by the satellite must carry provisions of SHVIA to retransmit a significantly greater number of local broadcast channels in each metropolitan area that they currently provide local programming. It is estimated that ECC alone will need up to 300 more video channels to maintain all of its local programming areas. Similarly, DIRECTV will require approximately 330 more video channels in its local programming areas to comply with SHVIA. In addition, as viewers begin to watch more HDTV programming, it will become more difficult to satisfy their demand for

such programming using existing satellite and spectrum resources. Today, ECC and DIRECTV need an entire DBS transponder to produce one HDTV channel (as opposed to approximately 10 SDTV channels in each transponder). While there may be some improvements in this compression ratio over time, with the limited spectrum resources of each company it simply will not be possible to satisfy the potential demand for high definition programming.

DBS providers also compete today with digital cable that is offering an ever growing number of national and pay-per-view programming to their subscribers. ECC and DIRECTV are therefore extremely constrained in devoting any more of their national DBS capacity to local programming or other services and expect to continue to compete at a national level. Tradeoffs constantly must be made as to how best to employ their limited spectrum resources.

Broadband Satellite Deployment Efficiencies. ECC's and Hughes' experiences to date with their investments in several broadband technology companies have been mixed. While ECC currently offers a two-way broadband service through its affiliate, Starband, the subscriber take rate for this service has been slow with the prospects unlikely for increasing the number of subscribers significantly in the near future. Starband leases CONUS transponders on Ku-band satellites and offers a two-way broadband service to residential consumers starting at about \$70 per month. Hughes' satellite broadband offerings (DirecPC and now DIRECWAY) also have not yet obtained sufficient scale in their residential subscriber base to achieve stand-alone viability. When used for point-to-point services, current Ku-band satellite platforms do not provide sufficient spectral efficiency to achieve the competitive price levels needed for significantly faster subscriber ramp up.

ECC and Hughes also have investments in Ka-band projects - Wildblue and Spaceway, respectively. While these programs both use Ka band satellites, they differ in their



technological and commercial approach. Wildblue has announced plans that include launching a Ka-band payload on board the Canadian satellite Anik F2 in 2002, whereas Spaceway plans on deploying a number of Ka-band satellites starting in 2003. Both companies are using spot-beams, although Spaceway will be using a larger number of beams and on-board processing (enabling services using a single hop) and packet replication which will significantly increase the flexibility of the platform. ECC also is building a Ku/Ka-band satellite (EchoStar 9) with limited spot beam capabilities. This satellite could be used to backhaul DBS programming to ECC's uplink facilities and/or to provide limited broadband services.

ECC and Hughes believe that Ku-band two-way broadband satellite services, such as those implemented by Starband and Hughes, will struggle to achieve sufficient economies of scale to effectively compete with terrestrial DSL and cable broadband services. Both companies believe, however, that the new Ka-band satellite platforms offer the opportunity to achieve price points that will allow broadband satellite services to compete with terrestrial broadband alternatives. In order to achieve the necessary economies of scale and scope, one company must have access to a sufficient number of state-of-the-art satellites in relatively close proximity to one another and must have enough spectrum to sustain a critical mass of subscribers. ECC and Hughes estimate that at least 5 million subscribers would be necessary in the next 5 years to recover the significant up front investment and subscriber acquisition costs associated with launching and marketing such two-way broadband satellite service. Since each Ka-band orbital slot can only serve at most 1.5 to 2.0 million subscribers with the use of spot beam satellites, access to a number of orbital locations is necessary to begin to meet even these minimum subscriber objectives.

Broadband satellite systems also require ground stations and access gateways, both primary and redundant, as well as the provision of customer support facilities. Considerable

efficiencies will be achieved through the merger of these operational activities and investments leading to reduced costs and lower service prices. In addition, the consumer terminals required for the provision of satellite broadband services are more expensive than the equivalent terrestrial terminals. Significant reductions in satellite terminal costs can be achieved by manufacturing efficiencies brought about by increased volumes. Increasing the size and rate of development of the Ka-band systems will have a major positive impact on terminal cost, in turn, significantly increasing the competitiveness of these systems.

In summary, New EchoStar, with its combined Ka and Ku-band spectrum and satellite resources, will be able to achieve operating scale and efficiencies that will allow it to provide broadband services that will compete effectively with terrestrial broadband systems. It will have access to a sufficient number of Ka-band orbital slots within an arc of 22 degrees, which will facilitate a one dish solution for consumers and allow for needed redundancy in case of operational problems. It also will be able to achieve scale in manufacturing to significantly reduce subscriber terminal costs, and offer bundled DBS and broadband services that will permit full competition with digital cable by significantly increasing the perceived value of the services. In addition, New EchoStar can offer its broadband services to a much larger DBS subscriber base, which will help alleviate the high subscriber acquisition costs and provide services that will compete effectively with terrestrial broadband systems. Finally, by combining the investments of both companies and standardizing the product, the fixed costs for the system will be reduced by 50%, providing a more competitive and compelling product to the American consumer.

In connection with the proposed transactions, General Motors Corporation (GM), Hughes Electronics Corporation (Hughes) and EchoStar Communications Corporation (EchoStar) intend to file relevant materials with the Securities and Exchange Commission, including one or more Registration Statement(s) on Form S-4 that contain a prospectus and proxy/consent solicitation statement. Because those documents will contain important information, holders of GM \$1-2/3 and GM Class H common stock are urged to read them, if and when they become available. When filed with the SEC, they will be available for free at the SEC's website, [www.sec.gov](http://www.sec.gov), and GM stockholders will receive information at an appropriate time on how to obtain transaction-related documents for free from General Motors. Such documents are not currently available.

General Motors and its directors and executive officers, Hughes and certain of its officers, and EchoStar and certain of its executive officers may be deemed to be participants in GM's solicitation of proxies or consents from the holders of GM \$1-2/3 common stock and GM Class H common stock in connection with the proposed transactions. Information regarding the participants and their interests in the solicitation was filed pursuant to Rule 425 with the SEC by EchoStar on November 1, 2001 and by each of GM and Hughes on November 16, 2001. Investors may obtain additional information regarding the interests of the participants by reading the prospectus and proxy/consent solicitation statement if and when it becomes available.

This communication shall not constitute an offer to sell or the solicitation of an offer to buy, nor shall there be any sale of securities in any jurisdiction in which such offer, solicitation or sale would be unlawful prior to registration or qualification under the securities laws of any such jurisdiction. No offering of securities shall be made except by means of a prospectus meeting the requirements of Section 10 of the Securities Act of 1933, as amended.

Materials included in this document contain forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995. Such forward-looking statements involve known and unknown risks, uncertainties and other factors that could cause our actual results to be materially different from historical results or from any future results expressed or implied by such forward-looking statements. The factors that could cause actual results of GM, Hughes, EchoStar, or a combined EchoStar and Hughes, to differ materially, many of which are beyond the control of EchoStar, Hughes or GM include, but are not limited to, the following: (1) the businesses of EchoStar and Hughes may not be integrated successfully or such integration may be more difficult, time-consuming or costly than expected; (2) expected benefits and synergies from the combination may not be realized within the expected time frame or at all; (3) revenues following the transaction may be lower than expected; (4) operating costs, customer loss and business disruption including, without limitation, difficulties in maintaining relationships with employees, customers, clients or suppliers, may be greater than expected following the transaction; (5) generating the incremental growth in the subscriber base of the combined company may be more costly or difficult than expected; (6) the regulatory approvals required for the transaction may not be obtained on the terms expected or on the anticipated schedule; (7) the effects of legislative and regulatory changes; (8) an inability to obtain certain retransmission consents; (9) an inability to retain necessary authorizations from the FCC; (10) an increase in competition from cable as a result of digital cable or otherwise, direct broadcast satellite, other satellite system operators, and other providers of subscription television services; (11) the introduction of new technologies and competitors into the subscription television business; (12) changes in labor, programming, equipment and capital costs; (13) future acquisitions, strategic partnership and divestitures; (14) general business and economic conditions; and (15) other risks described from time to time in periodic reports filed by EchoStar, Hughes or GM with the Securities and Exchange Commission. You are urged to consider statements that include the words may, will, would, could, should, believes, estimates, projects, potential, expects, plans, anticipates, intends, continues, forecast, designed, goal, or the negative of those words or other comparable words to be uncertain and forward-looking. This cautionary statement applies to all forward-looking statements included in this document.