

**TABLE 10**  
**PERCENT OF DOMESTIC TRANSPONDERS**  
**ACTIVATED BY FIXED SATELLITE OPERATORS<sup>231</sup>**

	TV Relay (Video Contribution and Distribution)		MVPD		Network Services (VSATs)	
	2001	2006	2001	2006	2001	2006
Intelsat	5%	15%	0%	0%	9%	42%
PanAmSat	33%	29%	0%	0%	10%	13%
Loral	23%	3%	0%	0%	25%	3%
SES Americom (GE Americom)	33%	34%	0%	14%	37%	25%
New Skies	N/A	3%	N/A	0%	N/A	9%
Other	7%	15%	0%	0%	20%	9%
DirecTV (self-supplied)			67%	52.5%		
EchoStar (self-supplied)			33%	33.5%		
Note: Percentages reflect the operators' proportion of utilized capacity for each application.						

Source: Futron Corporation

173. Profitability Ratios and Lerner Indices for Wholesale Markets. Using information derived from the operators' globally consolidated financial statements, we can examine time series financial statistics for the four major operators that did not enter bankruptcy proceedings during the study period. Tables 11 and 12 below provide profitability ratios and Lerner Indices for these major wholesale service providers.<sup>232</sup>

<sup>231</sup> Data used in this table do not reflect the recent mergers of Intelsat with PanAmSat or New Skies with SES

<sup>232</sup> Company price data necessary for a pure Lerner Index are not readily available. The Commission does not require prices for satellite communications services to be filed in tariffs; rather, wholesale prices are negotiated on a customer by customer basis and are not published. In most cases, it is also difficult to compute reliable estimates of marginal cost at the equilibrium level of output. As a proxy for pricing data, we rely upon the ratio of operating cash flow to sales, or of free cash flow (operating cash flow minus investment) to sales reported in individual company financial statements.

**TABLE 11**  
**PROFITABILITY RATIOS**  
**FOR MAJOR WHOLESALE FIXED SATELITE OPERATORS<sup>233</sup>**

Profit/Sales	2001	2002	2003	2004	2005	Average	Standard Deviation	St. Dev./ Average
PanAmSat <sup>234</sup>	0.0352	0.1047	0.1198	-0.0955	0.0845	0.1131	0.1005	0.8885
SES <sup>235</sup>	0.5360	0.3921	0.3078	0.3646	0.3782	0.3957	0.0746	0.1885
New Skies <sup>236</sup>	0.1584	-0.0234	0.0549	-0.0243	N/A	0.0414	0.0669	1.6159
Intelsat <sup>237</sup>	0.4603	0.2764	0.1914	-0.0371	-0.2777	0.12266	0.1959	1.5971

Source: Company Annual Reports.<sup>238</sup>

**TABLE 12**  
**PROXY LERNER INDICES**  
**FOR MAJOR WHOLESALE FIXED SATELITE OPERATORS<sup>239</sup>**

Lerner Index	2001	2002	2003	2004	2005	Average
PanAmSat	0.1629	0.2801	0.2926	0.1366	0.4203	0.2585
SES	0.6976	0.7795	0.7236	0.7658	0.5719	0.70768
Intelsat	0.4610	0.3218	0.2766	0.1403	0.0369	0.24732
New Skies	N/A	N/A	N/A	N/A	N/A	

source: Company Annual Reports.<sup>240</sup>

174. As can be seen, earnings as measured by profitability ratios and Lerner indices in the wholesale markets are relatively high as compared to retail markets, but also highly variable. The level of earnings is consistent with customers' lack of significant 'outside options.' Further, the general trend in these measures for the U.S. market is downward. Both the variability and downward trend in earnings are consistent with the earlier discussion of the bilateral negotiation nature of competition in the wholesale market. The downward trend in these metrics suggests an increase in rivalry for most wholesale services.

<sup>233</sup> Data used in this table do not reflect the recent mergers of Intelsat with PanAmSat or New Skies with SES

<sup>234</sup> PanAmSat Corporation 10-Ks at 48.

<sup>235</sup> SES Annual Report at 87, available at <http://www.ses-global.com/ses-global/site/Sections/mediaroom/publications/financial/index/php>, (visited July 20, 2006).

<sup>236</sup> New Skies Satellites B.V., Annual Report on Form 10-K Pursuant to Section 13 or 15(d) of the Securities Exchange Act of 1934 for the Fiscal Years ended December 31, 2001-2005 ("New Skies 10-Ks") at 34, available at <http://www.sec.gov/edgar.shtml> (visited July 11, 2006).

<sup>237</sup> Intelsat 10-Ks at 38.

<sup>238</sup> Intelsat, PanAmSat, SES and New Skies 10-Ks.

<sup>239</sup> Data used in this table do not reflect the recent mergers of Intelsat with PanAmSat or New Skies with SES

<sup>240</sup> Intelsat, PanAmSat, SES and New Skies IO-Ks.

175. The degree of terrestrial competition faced by satellite providers varies significantly among wholesale markets. For Video Contribution and Distribution services, terrestrial alternatives have a limited competitive impact, because the economics of multi-point content distribution favor satellite technology, as does the inherently mobile nature of some Video Contribution activities. This may account for the relatively high values in the Tables above.

176. We note that the Lerner Index on its own may not be a reliable test of competition in markets with substantial capital or fixed costs and economies of scale such as satellite communications services markets.<sup>241</sup> Prices above marginal costs in such a market do not conclusively indicate market power because such prices may simply be necessary for a firm to cover its substantial capital or fixed costs.

a. Network Services

177. Little company-specific data are available for market participants in these wholesale markets, which includes the provision of satellite capacity for telecommunications backbone services, as well as satellite-based communications services using VSAT and teleport services. The allocation of satellite capacity for these services is indicated above in Table 10, revealing disparate emphasis among the major operators on this sector. The World Teleport Association estimates that the global teleport industry generated \$12.8 billion at year-end 2004. Of this, the U.S. market generated \$3.1 billion, representing a quarter of the world market.<sup>242</sup> The SIA/Futron Study estimates the U.S. VSAT industry generated \$1.4 billion in revenues in 2005, double the sector's 2000 revenues.<sup>243</sup>

178. It is, however, clear that terrestrial competition is making inroads into what has been historically a market dominated by satellite. Increasingly, VSAT satellite operators are providing 'hybrid' networks to corporate customers that combine satellite and terrestrial components. This is particularly true for the corporate VSAT network sector, where both major market participants, Hughes and Gilat, offer such service.<sup>244</sup> Gilat includes a specific hybrid service, Connexstar DSL, in its service portfolio.<sup>245</sup>

2. Domestic Retail Markets

179. For the SDARS market, we compute HHIs, both on the basis of revenues and subscribers, as well as the various financial measures. Because the fixed satellite broadband businesses are still developing, we lack adequate data to perform the metrics applied to the SDARS markets. For the nascent fixed satellite broadband market, we provide various consumer-oriented indices to illustrate their respective market dynamics.

a. SDARS

180. Although the SDARS market appears to be in the early stages of development, sufficient

<sup>241</sup> Markets for satellite communications services are characterized by substantial fixed costs: more than \$100,000,000 in capital to construct and launch a satellite, and the high cost of leasing transponders shown in Table 7 above.

<sup>242</sup> *Sizing the Teleport Market*, World Teleport Association (March 2005).

<sup>243</sup> See SIA/Futron Study at 11.

<sup>244</sup> A Hughes spokesman notes that 'we use the appropriate platform to meet the needs of our customers' and Gilat has formally teamed with Cisco for its VSAT Network Module. Jason Bates, *The Future of Private Networks: What Next for VSAT Systems*, Via Satellite (Aug. 2006).

<sup>245</sup> Spacenet's Portfolio of Services, available at <http://www.spacenet.com/services/connexstar.asp> (visited Aug. 9, 2006).

data exists to analyze the performance of the market. XM<sup>246</sup> had its first full commercial year in 2002, followed by Sirius<sup>247</sup> in 2003. As expected in a relatively new market, neither provider is currently profitable? but growth rates for both subscribers and revenues are high and revenues per user have begun to rise.

181. **HHI.** For SDARS service providers, the HHI trend shows a decrease, reflecting intensifying rivalry among the providers in this market. Table 13 below indicates that the HHI as of 2005 reflected a 70/30 market share favoring XM, but it should be noted that in 2006, Sirius has exceeded XM in terms of new subscriber acquisition.

TABLE 13  
MARKET SHARES AND HHIs FOR SDARS

	2001	2002	2003	2004	2005
(revenue)					
XM	100.0000%	96.1641%	87.7003%	78.5240%	69.7387%
Sirius	0.0000%	3.8359%	12.2997%	21.4760%	30.2613%
HHI	10,000.00	9,262.25	7,842.63	6,627.24	5,779.23
XM		92.0587%	83.8979%	73.8527%	64.1434%
Sirius		7.9413%	16.1021%	26.1473%	35.8566%
HHI		8537.8684	7,298.14	6,137.91	5,400.07

Source: Company Annual Reports.<sup>249</sup>

182. **Consumer-Oriented Measures.** Revenue statistics for SDARS operators show a very high growth rate. Revenue for SDARS in 2002 was approximately \$21 million, but the industry generated revenues of over \$800 million in 2005. During this time period, ARPU has increased slowly. For example, Sirius' monthly charge rose from \$9.48 in 2003 to \$10.34 in 2005 while industry subscribers rose from 1.3 million in 2003 to 9.2 million in 2005.

**b. Fixed Satellite Broadband Services**

183. Two-way satellite-based fixed broadband service was first offered only in 2005, and satellite-based broadband of all types represents less than 1 percent of the U.S. broadband subscriber base. The sector does show growing subscriber up-take and increasing competition among three emerging providers.

184. WildBlue began to offer service in June 2005 on a Canadian-licensed Anik Ka-band satellite. The company's own satellite, WildBlue-1, was successfully launched in December 2006.<sup>250</sup> In

<sup>246</sup> XM 10-Ks

<sup>247</sup> Sirius 10-Ks.

<sup>248</sup> In fact, for the second quarter of 2006, XM's loss increased from \$ 148 million in 2005 to \$231 million, even though revenue nearly doubled over the same period. Sarah McBride, *XM Satellite Posts Wider Loss, Lowers Subscriber Targets*, Wall St. J. at A12 (July 28, 2006). Also, Sirius has reported a comparable loss of \$238 million and is forecast to have continuing losses at least through 2008 by UBS Investment Research. UBS First Read, *Sirius Satellite* (July 6, 2006).

<sup>249</sup> XM and Sirius 10-Ks.

<sup>250</sup> Arianespace, *Mission Update*, [http://www.arianespace.com/site/news/news\\_sub\\_missionupdate2\\_index.html](http://www.arianespace.com/site/news/news_sub_missionupdate2_index.html) (visited Dec. 29, 2006)

addition, Hughes will provide limited HughesNet Ku-band service until the launch of the Ka-band satellite Spaceway 3, scheduled for 2007. These additional satellites will greatly expand satellite broadband capacity dedicated to the residential/SOHO market because all of WildBlue-1 and some portion of Spaceway will be dedicated to that market.

185. Table 14 provides a comparison of the current satellite-based market participants' offerings, indicating the similarity of each company's service offerings and prices charged, particularly for services targeted at residential/home office customers.

**TABLE 14**  
**SERVICE OFFERINGS AND PRICES CHARGED**  
**BY SATELLITE-BASED BROADBAND PROVIDERS**

WildBlue <sup>251</sup>				
	Downstream speed	0.5 Mbps	1.0 Mbps	1.5 Mbps
	Upstream speed	128 Kbps	200 Kbps	256 Kbps
	Upfront cost	\$ 299	\$ 299	\$ 299
	Monthly price	\$ 49.95	\$ 69.95	\$ 79.95
Hughes <sup>252</sup>				
	Downstream speed	0.5-0.7 Mbps	0.8 -1.0 Mbps	1.5 Mbps
	Upstream speed	N/A	N/A	N/A
	Upfront cost	\$ 299.98	\$ 299.98	\$ 699.98
	Monthly price	\$ 59.00	\$ 69.00	\$ 199.00
Starband <sup>253</sup>				
	Downstream speed	Up to 10x faster than dialup	0.75 Mbps	Up to 20X faster than dialup
	Upstream speed	100 Kbps	128 Kbps	256 Kbps
	Upfront cost	\$499.99	\$ 599.99	\$899.99
	Monthly price	\$69.99	\$109.99	\$149.99

186. Subscriber Levels. At the end of 2005, Hughes reported 275,000 total subscribers for North America,<sup>254</sup> which reflects its early entry into the market. Space News reports, however, that for the last six months of 2005 (the time in which WildBlue began commercial operation) Hughes and WildBlue each added approximately 25,000 customers.<sup>255</sup> By the end of the third quarter of 2006,

<sup>251</sup> WildBlue, *About Wildblue*, [http://www.wildblue.com/aboutWildblue/vs\\_dial\\_up.jsp](http://www.wildblue.com/aboutWildblue/vs_dial_up.jsp), and *Get WildBlue*, <http://www.wildblue.com/getWildblue/doServiceAvailabilitySearchAction.do> (both visited Oct. 31, 2006).

<sup>252</sup> *HughesNet Broadband Unbound* available at <http://www.diracwayhz/orderhughesnet.html> (visited Aug. 10, 2006).

<sup>253</sup> Starband, *Starband Telecommuter* available at <http://www.starband.comhelecommuter/index.asp> (visited Aug. 30, 2006).

<sup>254</sup> Hughes Commun., Inc. Overview, available at <http://www.hughes.com> (visited Aug. 10, 2006).

<sup>255</sup> Peter B. de Selding, *WildBlue On Par with DirecWay in New Customer Sign-ups*, Space News (Jan. 16, 2006), available at [http://www.space.com/spacenews/archieve06/WildBlue\\_011606.html](http://www.space.com/spacenews/archieve06/WildBlue_011606.html) (visited Aug. 8, 2006).

Hughes reported that it had 313,000 subscribers,<sup>256</sup> up from 300,000 subscribers at the end of the second quarter (of which 250,000 were residential and 50,000 were *business*<sup>257</sup>) and *WildBlue* reported 85,000 customers.<sup>258</sup> Additionally Space News reports that *Gilat Starband* had 30,000 broadband subscribers in August 2006.<sup>259</sup> This indicates that satellite competition for broadband services has developed.

187. Due to the fledgling state of the satellite-based broadband market during the specified study period, no further detailed analysis is possible.

## VI. COMPETITION ASSESSMENT AND CONCLUSIONS

188. In this Report, we find that markets for commercial communications satellite services are subject to effective competition and that consumers realize significant net benefits in terms of service choice, innovation, and improvements in service quality. Market performance measures indicate good market performance and support an expectation that such performance will be sustained in the coming year.

189. For wholesale markets, we observe that the lumpy nature of satellite infrastructure investment leads to recurring excesses of capacity, creating a certain degree of inherent but predictable, economic instability. Costs for wholesale markets are predominantly fixed and centered around network-related costs, and there are relatively few buyers and sellers in the market. Pricing behavior in wholesale markets reflects in substantial part the relative bargaining power of the satellite carrier and the wholesale customer. In two wholesale markets, Video Contribution and Video Distribution, trends in major market performance indicators show that any ability by satellite providers to influence the markets is gradually eroding, despite the recent mergers of Intelsat and PanAmSat, and of SES and New Skies. We also note that the VSAT and teleport operators competing in the wholesale market for Network Services continue to post significant revenues, even as they face increasing competition from terrestrial alternatives.

190. In general, we observe that retail market participants invest relatively more in advertising and other quality-related expenditures directed toward product improvements than in network costs. Retail markets generally feature a relatively large number of buyers. Competition in the retail markets for SDARS is still emerging. Similarly, the fixed Wireless Broadband Service markets are in early stages, characterized by high subscriber growth rates and product innovation.

191. We observe significant improvements in market entry conditions in recent years. As a result of the *DISCO II Order* to implement the satellite market-opening commitments made by the United States in the WTO, the Commission has approved many foreign-licensed satellites to provide services within the United States. We also identify six broad legal and regulatory barriers established by foreign nations that affect foreign market entry by U.S. operators, and list those countries identified as exhibiting these barriers.

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<sup>256</sup> Spaceway, *Hughes Communications Inc. Announces Third Quarter 2006 Results*, [http://www.spaceway.com/HUGHES/Doc/0/OVSTPRT5QUCKFDAQF7CSGLI16F/11-14-06\\_HCI\\_Q3\\_Earnings\\_Release\\_Final.pdf](http://www.spaceway.com/HUGHES/Doc/0/OVSTPRT5QUCKFDAQF7CSGLI16F/11-14-06_HCI_Q3_Earnings_Release_Final.pdf) (visited December 29, 2006).

<sup>257</sup> The Bridge, *The Hughes Net Business Case*, Aug. 25, 2006.

<sup>258</sup> *Wildblue completes \$350M Debt Funding Deal*, Communications Daily (Aug. 22, 2006).

<sup>259</sup> *Starband stabilizes under New Ownership*, Space News Business Report (Aug. 25, 2006).

**VII. PROCEDURAL MATTERS**

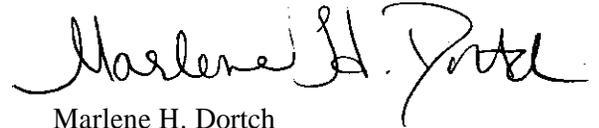
**192.** This First Report is issued pursuant to authority contained in section 703, 47 U.S.C. § 703.

**VIII. ORDERING CLAUSES**

**193.** It is **ORDERED** that the Secretary shall send copies of this Report to the appropriate committees and subcommittees of the United States House of Representatives and the United States Senate.

**194.** It is **FURTHER ORDERED** that the proceeding in the **IB** Docket No. **06-67** IS **TERMINATED**.

FEDERAL COMMUNICATIONS COMMISSION



Marlene H. Dortch  
Secretary

APPENDIX A

**List of Parties Filing Comments and Other Papers**

Comments

DIRECTV Inc.

EchoStar Satellite, L.L.C.

Inmarsat plc

Mobile Satellite Ventures Subsidiary LLC

Stratos Global Corporation

**The** Satellite Industry Association

Reply Comments

EchoStar Satellite, L.L.C.

Inmarsat plc

Iridium Satellite, LLC

**APPENDIX B**

## List of Foreign Nations Raising Barriers to Market Entry by United States Satellite Providers

This Appendix is a compilation of foreign nations identified in the record in this proceeding as having legal or regulatory practices that constitute market barriers for U.S. satellite companies.

Countries Identified as Lacking Transparent, Non-Discriminatory and Timely Licensing Procedures for U.S. Satellite Operators.

- Brazil
- China
- Egypt
- India
- Indonesia
- Russia

Countries Identified as Not Providing National Treatment (*i.e.*, Most Favored Nation status) for U.S. Satellite Operators.

- Brazil
- China
- India
- Indonesia
- Israel
- Kazakhstan
- Korea
- Malaysia
- Philippines
- Russia
- Saudi Arabia
- Vietnam
- Venezuela

Countries Identified as Not Permitting U.S. Satellite Operators to Transport Broadcast Video Signals and Associated Audio Signals.

- Canada
- India
- Kazakhstan
- Russia

Countries Identified as Requiring a Local Presence or Local Partner for U.S. Satellite Operators.

- Bangladesh
- Brazil
- Indonesia
- Israel

- Kazakhstan
- Mexico
- Philippines
- Russia
- Saudi Arabia
- Venezuela

Countries Identified as Requiring Completion of the ITU Frequency Coordination Process Prior to Market Access for U.S. Satellite Operators.

- Brazil
- Russia

Countries Identified as Having a Monopoly for the Domestic Satellite Operator.

- Egypt (duopoly)
- Indonesia
- Kazakhstan
- Russia
- South Africa
- Thailand
- Vietnam

**STATEMENT OF  
COMMISSIONER MICHAEL J. COPPS,  
CONCURRING**

Re: *Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services*, IB Docket No. 06-67, First Report

When Congress amended the Communications Satellite Act to require this Report, the central assessment that Congress asked the Commission to provide is “an analysis of whether there is effective competition in the market for domestic and international satellite services.” This inaugural Report does not provide, to my mind, that kind of analysis, so I will therefore respectfully concur.

As an initial matter, the Report does not provide a fully useful definition of “effective competition.” As with other Congressionally-mandated competition reports in other areas under the Commission’s jurisdiction, lack of a well-articulated “effective competition” standard inhibits development of an analytically solid foundation for Commission or Congressional action. **The** Report also suffers from insufficient data. In many of the markets examined, we lack the requisite data to determine specific market shares. In terms of an examination of satellite-based multichannel video programming distributors and mobile satellite services, we simply punt those analyses to other Commission reports.

**We** need to strengthen and improve our data and analysis before next year’s Report. I hope we will undertake more proactive and comprehensive information gathering efforts in order to obtain independent, verified data. Unfortunately, our task will not be any easier next year. In fact, our second annual Report will have to take into account, at a minimum, the significant mergers between Intelsat and PanAmSat and **SES** and New Skies – neither of which is reflected in the current analysis.

In terms of international competition, while the Report recognizes and defers to the role and work of the **U.S.** Trade Representative, I believe we could have presented a more robust analysis of international services that would be more in keeping with what I believe the statute envisions.

So I am hopeful we will build upon the work that went into this initial Report, and I look forward to working with my colleagues and the Bureau to make sure the charge is clear and all necessary resources are made available for such an effort. In the meantime, I hope my concurrence will signal the importance I attach to this.

**STATEMENT OF  
COMMISSIONER JONATHAN S. ADELSTEIN  
CONCURRING**

***Re: Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services; First Report; IB Docket No. 06-67***

It is significant that Congress has tasked the Commission with preparing an annual report on competition in the markets for domestic and international satellite communications services (Report). I am always pleased to put a spotlight on the satellite industry and on how satellites improve our daily lives and our nation's productivity.

Since arriving at the Commission, I have had a front row seat viewing the many key ways our country is served by satellite technology. When I spoke to the inaugural ISCe Satellite Investment Symposium in New York this past November I talked about the transformation across all segments of the industry during the past couple of years. This truly has been a significant time for satellite services, whether you consider the several mergers and acquisitions in the FSS sector; tracking the continued growth and challenges facing DBS and satellite radio providers; or considering the future of current and next generation mobile satellite system providers and their future ancillary terrestrial networks. And of course, there's an increasingly critical role for satellites in ensuring our troops have the best access to communications possible whether in training or actual deployment. While we do not necessarily touch on all of these elements in the Report, the document does a good job of describing the transformation of the satellite market over the past several decades.

While I do not necessarily disagree with many of the conclusions in this first Report, I concur in this item because I am concerned with the picture of competition presented in the document. For example, I am concerned that we lack the level of data granularity that would normally be associated with a competition report. This shortcoming may be a result of the effort to define specific domestic and international markets. **Also**, I previously raised a concern with the status of competition in the fixed satellite service market in my concurrence to the Intelsat and Panamsat merger. At that time, I noted that post-merger two companies will control approximately 80% of the transponder capacity sales market in North America. As our Report today relies on data collected prior to both the Intelsat/Panamsat and SES/New Skies mergers, I think it is important to look for next year's Report to see the impact of consolidation on this market. Finally, I think we would be well served by including HHI data for the wholesale markets in the Report. While I understand that HHI data for wholesale markets may not have the same significance as HHIs in the mass market, I think the Report would be more complete if the information was included. HHIs can be another important data point for tracking competition in the wholesale markets as this Report becomes an annual Commission release.

**STATEMENT OF  
COMMISSIONER DEBORAH TAYLOR TATE**

*Re: Annual Report and Analysis of Competitive Market Conditions with Respect to Domestic and International Satellite Communications Services, IB Docket No. 06-67*

I am pleased to support the Commission's first annual report on the status of competition in the market for domestic and international satellite communications services. The report, based on conditions prevailing in the satellite services marketplace from the beginning of the 2000 calendar year through 2006, shows a healthy and competitive commercial communications satellite market.

On a more important note, I would like to commend the satellite industry for the role it has played regarding public safety and encourage satellite carriers to continue to work with federal and state entities on these critical matters. Hurricanes Katrina, Rita, and Wilma taught us the critical importance of satellite communications for emergency first responders. I encourage the satellite industry to continue to innovate and create the next great new product. In particular, I hope the industry continues to play a role in the deployment of broadband to more consumers.