

significant market power, and government regulation has been ineffective in constraining that exercise of market power. These conditions have led to government efforts to promote more effective competition as the means to foster an efficiently functioning market and good economic performance in terms of price and quality of service.

48. Competition generally provides an effective “discovery procedure” for identifying efficient suppliers and an efficient allocation of resources. In order to function effectively in this capacity, the competitive process must not be artificially biased in favor of one supplier over another.⁵¹ If it is so biased, the results of the competitive contest cannot be relied upon to supply an accurate gauge of competitive effectiveness.

49. If a federal copyright licensing scheme does not give either multichannel technology an artificial advantage in a particular community, it is more likely that, in the contest for any given customer’s favor, the technology best able to satisfy that customer’s tastes and preferences at the lowest cost will win. Winning will more likely reflect genuinely superior performance than an artificial advantage conferred by differential treatment by Congress—in particular, more favorable terms of access to copyrighted material under a compulsory license.

50. For this reason, there was compelling economic justification for Congress’ making a compulsory license available to DBS suppliers. In the absence of such a license, these operators might be hampered in their contesting for customers’ favor in competition with cable system operators, who are afforded a compulsory license. In the absence of such a license, Congress would give cable operators an artificial competitive advantage. In the absence of such a license, the competitive process could not be reasonably expected to function as effectively as

⁵¹ If the goal of a race is to identify the swiftest runner, imposing differential handicaps on the various runners will frustrate achievement of this objective. The goal of discovering the efficacy of a particular medication will be frustrated by tampering with the evidence of testing trials.

a means of discovering efficient methods for addressing consumers' demands for programming or video program services' demands for distribution to residence households.

51. By the same token, economic logic also implies that there is a compelling economic justification for Congress' *not* making a compulsory license available to DBS operators on terms substantially more favorable than those offered to cable operators. To do so would afford an artificial competitive advantage to DBS operators and bias the competitive process in their favor on this account. With such favored treatment, their marketplace success would, in part, simply reflect differentially favorable government treatment in the form of more favorable license terms of access to copyrighted material.

52. In this regard, the carriage schemes for cable and satellite are not, in fact, identical. Cable operators are required to afford carriage to broadcast stations (subject to certain limitations). With cable carriage required, copyright holders would be in a position to extract extraordinary payments were they permitted to do so. Plainly, a situation in which cable system operators were required to carry stations *and also* required to pay what copyright holders demanded would be unbalanced and unworkable; the Congressional balancing effort in the cable setting was to offer cable system operators a compulsory license under which the right to transmit copyrighted material was offered in exchange for a free ride with regard to copyright royalties. In this way, the operators' potential exposure to exploitation, deriving from a carriage requirement, was avoided.

53. DBS operators, in contrast, are under no governmental compulsion to carry broadcast stations. If a satellite system operator wishes to carry a broadcast station, it can contract for the rights to do so. *Alternatively*, satellite operators may avail themselves of the

newly created satellite compulsory license to get a free ride with respect to copyrighted royalties from the material embodied in broadcast signals. Under the terms of this license, the system operator is required to carry all broadcast signals in a market should it seek to carry any *and* (choose) to utilize the statutory license.

54. In the cable setting the operator has no choice over carriage but is protected from exploitation, given the carriage requirements, through the compulsory license, which affords permission to use copyrighted material without paying royalties. In the satellite setting, the operator has complete choice over carriage. But, if it chooses to meet copyright obligations by invoking the statutory license in a particular local market, it is required to carry all local signals in that market.

55. If Congress were to afford satellite operators a compulsory license with more favorable terms than that afforded cable system operators, that would thwart the ability of competition to function as an effective discovery procedure for identifying efficient suppliers and supply arrangements. For this reason, there was compelling economic justification for Congress' not making the satellite compulsory license any "sweeter" than the cable compulsory license. In particular, had Congress artificially "sweetened" the satellite compulsory license without imposing any offsetting conditions that economically justify the abrogation of the rights of copyright holders, it would have skewed the efficient operation of the competitive process.

VI. AVOIDING INFLICTING HARM ON THE SYSTEM OF LOCAL TELEVISION BROADCASTING

56. One cannot expect the interests of over-the-air viewers interests to be adequately protected in market transactions between multichannel operators and individual broadcast stations, and in transactions between DBS suppliers and their customers. As is widely

recognized,⁵² a variety of phenomena may cause markets to work imperfectly. Two sources of market failure loom significantly in the instant setting: (1) the “gatekeeper” market power possessed by multichannel operators; and (2) potentially deleterious external effects (*i.e.*, effects on other market participants) resulting from transactions between DBS suppliers and broadcast stations.⁵³

57. DBS suppliers have the power to extract rents from small stations in exchange for carriage. That is, DBS suppliers have the ability to extract a share of the profits that broadcast stations would otherwise gain from carriage. They can do so, because they have significant market power as gatekeepers in the *markets for access to particular households*.⁵⁴ A particular household may have a choice (among a limited number) of multichannel suppliers, but a broadcast station usually has no choice but to deal with the multichannel operator actually supplying access to a particular household. That leaves the broadcast stations at risk of monopolistic (actually, monopsonistic) exploitation by the multichannel operator. This market power would exist in the short term in any event, because consumers do not frequently change multichannel suppliers. The market power is further enhanced because viewers have often made irreversible investments in customer-owned equipment and/or are locked in by contractual agreements for some time.

58. At the same time, transactions between DBS suppliers and their customers cannot be expected to take account of the interests of over-the-air viewers, who may be harmed by the transactions. In particular, non-carriage of, and/or rent extraction from, small stations has a

⁵² See Francis M. Bator, “The Anatomy of Market Failure,” *The Quarterly Journal of Economics*, August 1958, reprinted in *Readings in Microeconomics*, Breit & Hochman, eds. (1968).

⁵³ In economics jargon, these deleterious effects on others are known as “external diseconomies.”

⁵⁴ This is sometimes referred to as the market for “terminating access.”

predictable negative impact on program quality. Non-carriage reduces a station's potential audience size and, through the resultant adverse impact on advertising revenues, the quality of programming the station can offer. The result is that non-carriage results in lower-quality programming for *non-subscribers*.⁵⁵ Similarly, extraction of rents increases the difficulty of stations' recovering ("first-copy") program production costs and results in lower-quality programming.

59. These problems derive from the DBS supplier's market power as a gatekeeper and the external effects of its transactions with broadcast stations. The problems do *not* derive from selection biases in multichannel operators' carriage decisions, in particular, biases deriving from ownership interests in competing program services or financial interests related to the sale of local advertising availabilities in competition with broadcasters. The existence of such interests may exacerbate the problem of economically inefficient carriage decisions, but they are not a necessary condition for the existence of such problems. Focus on these interests would therefore be misplaced. The fundamental problems addressed by SHVIA derive from the fact that non-subscribers are affected by carriage decisions and the fact that multichannel operators possess substantial market power as gatekeepers and can be expected to exercise this power in dealings with *upstream* input suppliers, notably, local broadcast stations seeking distribution to subscriber households.

60. For purposes of assessing DBS suppliers' market power as a gatekeeper, it is economically incorrect to characterize market shares as if there were a national market for multichannel services—markets for multichannel services are inherently local consisting of

⁵⁵ The ability of cable carriage rules to avoid this type of harm was recognized in the Supreme Court's *Turner* decision.

individual households. As I have noted above, neither are market shares within local markets particularly germane to the issue of the market power multichannel operators can exercise *upstream* against broadcast stations. With regard to DBS's upstream market power as a gatekeeper, it possesses close to a 100 percent share with respect to (say) 16 percent of the individual "markets" (*i.e.*, markets that consist of individual households). For the market that is an individual household, in the absence of concurrent subscription to cable **REDACTED**

REDACTED a broadcast station has no good/close alternative to the single path that actually is maintained.

61. The problem of gatekeeper market power deriving from control of the access pathway to an individual household is a common one in the economics of communications industries that has received considerable attention from regulators both in the United States and abroad. It is a problem that arises in telecommunications when there is a requirement that carriers pay the called party's network to terminate calls. This problem has thus been confronted by the Federal Communications Commission in the context of interconnection of competing telephone networks, both foreign and domestic, where there have been frequent complaints about excessive call termination charges.⁵⁷ Similar problems have arisen in many foreign countries where (unlike in the U.S.) calling parties pay for completion of (domestic) wireless calls, thus affording carriers who terminate the calls an opportunity to charge high termination charges

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⁵⁷ The FCC recently adopted a proposal to review the intercarrier compensation regime (*Notice of Proposed Rulemaking, In the Matter of Developing a Unified Intercarrier Compensation Regime*, CC Docket No. 01-92, adopted April 19, 2001). Current intercarrier arrangements are a complex system of regulations that treat carriers and services differently. The FCC plans to examine the existing patchwork of interconnection rules and seek instead an approach that minimizes need for regulatory intervention. One option being considered is "bill-and-keep," whereby carriers recoup all costs of originating and terminating traffic from their own customers rather than from other carriers. The rationale for this approach is precisely to avoid the exploitation of gatekeeper market power.

—even where several wireless carriers compete with one another. There have been several enforcement actions there to constrain the level of call termination charges set at excessive levels.⁵⁸

62. Requirements that carriers pay the called party's network to terminate calls confer monopoly power on the called party's network with respect to terminating access. As FCC Economist Patrick DeGraba has observed:

This market power arises from the fact that the calling party's carrier, whether a local carrier or an IXC [long-distance carrier], *has no alternative carrier that can terminate a call to a particular called party*. Thus, the calling party's carrier must pay the terminating network whatever price it demands in order to reach the called party. In effect, *each terminating carrier, no matter how small, has a monopoly over termination to its own customers*. Recently, in fact, IXCs have begun to complain that certain CLECs [small competitive local exchange carriers] have exploited their monopoly power in termination by setting access charges that far exceed those charged by major incumbent LECs [local exchange carriers].⁵⁹

DeGraba references, "*Pricing Flexibility Order and NPRM*, 14 FCC Rcd at 14316-17, para. 186 (discussing AT&T's petition for declaratory ruling that complained of excessive CLEC access charges)."

⁵⁸ In the United Kingdom, for example, OFTEL studied mobile interconnection payments and concluded that mobile operators have monopoly power over the termination of calls on their networks. OFTEL concluded that interconnection pricing for calls between fixed and mobile networks exceeded those that would result in a competitive market, and a Monopolies and Mergers Commission ("MMC") inquiry followed. The MMC found call termination rates to be far above the public interest benchmark, and decided to impose a price control on termination charges. The action resulted in reductions of both the payment to the mobile operators and the BT's retention amount. As a result, BT's prices for calls to mobile telephones fell by around 25 percent on April 30, 1999. At the same time, British authorities have *not* regulated the prices that wireless carriers charge their own customers, because the authorities believe that competition is effective in that market.

⁵⁹ "Bill and Keep at the Central Office as the Efficient Interconnection Regime," Federal Communications Commission Office of Plans & Policy Working Paper Series, No. 33 (December 2000) at 26 (emphasis added). The FCC recently adopted a reform of access charges imposed by competitive local exchange carriers ("CLECs"): "Specifically, we limit the application of our tariff rules to CLEC access services 2 in order to prevent use of the regulatory process to impose excessive access charges on IXCs and their customers" [*Seventh Report and Order and Further Notice of Proposed Rulemaking, In the Matter of Access Charge Reform--Reform of Access Charges Imposed by Competitive Local Exchange Carriers*, CC Docket 96-262), adopted April 26, 2001].

63. A carrier need not possess a significant or substantial aggregate share of customers to be in a position to exercise gatekeeper market power. As Jean-Jacques Laffont and Jean Tirole, two of the world's leading industrial-organization economists, remark in their treatise on *Competition in Telecommunications*:

It is worth recording here the *common fallacy that small players do not have market power and should therefore face no constraint on their termination charges*. This fallacy results from a misunderstanding of the definition of a market. A network operator may have a small market share in terms of subscribers; yet it is still a monopolist on the calls received by its subscribers. Indeed, under the assumption that retail prices do not discriminate according to where the calls terminate, *the network has more market power, the smaller its market share*: whereas a big operator must account for the impact of its wholesale price on its call inflow through the sensitivity of its rivals' final prices to its wholesale price, a small network faces a very inelastic demand for termination and thus can impose higher markups above the marginal cost of terminating calls.⁶⁰

64. The economic analysis of the problem of terminating access has also been directly applied to video economics by Professors David Waterman and Andrew Weiss in their book on *Vertical Integration in Cable Television*.⁶¹ They argue that the usual benchmarks of firm concentration should not be used to analyze monopsony power based on control of terminating access. Waterman & Weiss show how, under reasonable assumptions, a carrier having a relatively small national market share "could exert significant monopsony power over many cable networks."⁶²

⁶⁰ *Competition in Telecommunications* (The MIT Press: Cambridge, Massachusetts/London, England, 2000) at 186 (emphasis in original).

⁶¹ (The MIT Press: Cambridge, Massachusetts/London, England and The AEI Press: Washington, D.C., 1997).

⁶² *Ibid.* It is important to note that in setting a subscriber cap, the FCC must necessarily balance beneficial and adverse consequences of subscriber consolidation. Setting a cap at any particular level does not in any way imply that monopsony power is *not* a problem as long as that level is not exceeded, rather merely that losses suffered on that account may be balanced by offsetting benefits. It is an error to allege that losses due to monopsony power are not suffered as long as some designated cap is not exceeded.

65. The Waterman-Weiss (W/W) argument is that gatekeeper control of terminating access to a household affords opportunities for multichannel video operators to exercise market power in bargaining for programming retransmission rights. Their doing so undermines support for provision of broadcast programming and generally produces a tendency toward under-provision, in particular, under-provision of programming quality. W/W conclude that “the flow of subscriber revenues to the production industry could be significantly constrained, thus reducing the supply of programming.”⁶³

66. The same analysis applies to DBS operators. Given their gatekeeper control of programmer access to particular households, they can (if their terms are not met) make a credible threat to refuse carriage of particular local stations as the stations lack alternative means of reaching those households. As I discuss in more detail below, individual broadcast stations in local markets often have no good alternative delivery path to the multi-channel operator (whether cable or satellite) that provides service to a particular household. In particular, over-the-air reception is almost always of inferior quality. It may be completely unsatisfactory if the viewer has not maintained his or her outside antenna or never had one in the first place.

67. In contrast, a DBS supplier has a plethora of alternative program services from which to choose. In particular, it has the option to carry a local station in a different DMA.

68. Large network affiliates, especially those in large DMAs, have countervailing leverage. They know that if the DBS supplier does not carry them, its offering in the local area will be less attractive to customers. It may therefore lose customers to the other DBS supplier or to cable. Furthermore, the DBS supplier will be reluctant to pass up a large DMA in order to

⁶³ *Op. Cit.*, at 74-75.

provide local service to much smaller DMAs. This balance of bargaining power between large network affiliates and DBS suppliers has led to the payment of moderate fees for retransmission consent.

69. Payments are likely to go the other way with respect to small independent stations. Any such station knows that the DBS supplier has good alternatives to carrying it, and it therefore has little bargaining leverage. As I discuss in more detail below, small independent stations are unlikely to be able to make any substantial payments that may emerge from this unbalanced bargaining process and still maintain the quality of their programming. The DBS supplier gains from the process, but over-the-air viewers lose.

70. In many competitive markets, bargaining among market participants leads to economically efficient outcomes. Efficiency is far less likely in communications industries where a supplier enjoys gatekeeper market power. Efficiency is all the less likely if important market participants (in this case, over-the-air viewers) are excluded from key transactions.

VII. BENEFITS OF CARRIAGE

71. The government licenses broadcast stations' utilization of electromagnetic spectrum resources to operate in the public interest. There is a strong public interest in the competition that local independent broadcast stations offer to network affiliates. The multiplicity of viewpoints and benefits of localism are enhanced by the effective operation of local broadcast stations, and the benefits of free, over-the-air broadcast programming particularly to non-multichannel subscribers, which include many who are economically less well-off.

72. If a DBS operator carried only the largest stations in a local area, viewership of the other local stations would likely decline, with adverse consequences for station economics and the quality of programming offered. In the first instance, DBS subscribers who do not have a rooftop antenna and who are unwilling or unable to incur the expense of subscribing to both satellite and cable service will not have any effective means of viewing non-carried stations.

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The composite effect of all of these factors is that stations that are not carried by a DBS supplier operate at a competitive disadvantage relative to stations that are carried. Broadcast stations' remuneration depends on their ability to produce

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audience exposures and they are less able to produce exposures than their rivals whose signals are carried.

74. As Congress noted,⁶⁸ this imbalance would be a direct consequence of the affirmative governmental action of giving DBS suppliers a compulsory license *without* carriage obligations. In particular, the competitive disadvantage would arise precisely because DBS suppliers carried a subset of local stations in the small station's DMA. No competitive imbalance would occur if DBS suppliers carried no local stations in a DMA or if they met the carriage obligations of SHVIA.

75. This disadvantage can reasonably be expected to grow over time if viewers who sign up for satellite service do not maintain their outside antennas and allow them to deteriorate.⁶⁹ Again, Congress was especially concerned that the affirmative governmental action of giving DBS suppliers a statutory copyright license without carriage obligations would provide stimulus for DBS subscribers not to maintain their outside antennas.⁷⁰

76. The competitive disadvantage deriving from inadequate antennas would apply from the start with respect to most subscribers who migrate from cable service since they have likely already let their over-the-air signal reception capability deteriorate or never had an antenna installed in the first place. The disadvantage can be expected to grow over time, now that DBS operators have shifted their marketing focus away from areas not served by cable and

⁶⁸ Conference Report at 102.

⁶⁹ In some cases, the viewer may have previously had a cable subscription.

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⁷⁰ Conference Report at 101-102.

toward large urban and suburban markets.

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77. In the remainder of this section, I address the effects of the carriage provision on independent local broadcasters. In particular, I compare the following two scenarios: (A) DBS suppliers carry all local stations; and (B) DBS suppliers carry only the four major networks.

78. Independent stations that are not carried in Scenario B obviously have higher viewership in Scenario A, where they are carried. The percentage difference in viewership is not, however, necessarily equal to the percentage of television households that are DBS subscribers. Some factors tend to make the difference in viewership disproportionately large and other factors tend to make it disproportionately small:

79. Two factors tend to make the difference in viewership disproportionately large. First, DBS viewers have made large expenditures for a premium service and may therefore watch television more than the average viewer. Second, the quality of reception over DBS is better than over the air. This factor is especially important for UHF stations whose over-the-air signals are relatively poor in some parts of their DMA.

80. On the other hand, there are factors that tend to make the difference in viewership disproportionately small. They are: (1) DBS subscribers have a wider range of choices; so they may be less likely to watch any particular programming; and (2) DBS subscribers may have special interest in programming that is available only over DBS. It is not obvious which of these two sets of factors predominates. In any event, it is certainly reasonable

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to conclude that the difference in viewership of stations not carried in Scenario B would be *significantly* less in Scenario B than in Scenario A.

81. As viewership of a broadcast station decreases, the advertising revenues of the station decrease directly. Indeed, the percentage decrease in revenues may exceed the percentage decrease in viewership. This outcome is not unlikely, because advertisers generally try to reach as large and as distinct an audience as possible. Advertisers often have a preference to advertise to one audience of 1 million viewers as opposed to two audiences of 500,000 viewers, since the latter can involve significant duplication of viewers. Generally, the top watched shows get disproportionately more advertising revenue than less watched shows. In addition, the single, larger audience may involve lower transactions costs.

82. As a station's viewership and revenues decline, the costs that it must pay to license programming are also likely to decline. Program suppliers (e.g., syndicators) typically offer licenses for any given programming for lower monetary cost to stations with lower viewership.⁷² At the same time, however, the station's other costs — including the cost of programming that it produces itself — are subject to no such reductions. As a result, cash flow (revenues less expenses apart from depreciation) tends to decrease at a faster rate than revenues.

83. The *2000 Television Financial Report* breaks down station information for affiliates of the top three networks (ABC, NBC and CBS) and non-network affiliated independents into net revenue classifications. Overall information is available for affiliates of WBN, UPN and PAX. Information on stations other than ABC, CBS, Fox and NBC is provided

⁷² In addition to monetary considerations, the licensing arrangement may involve the insertion of advertisements by the program supplier.

in Table 1.⁷³ As shown in the table, the largest independents have cash flow equal to over 50 percent of revenues. At the same time, cash flow is only 5 percent of revenues for the smallest stations.

Table 1
Revenues and Cash Flows of Broadcast Stations
Other Than ABC, CBS, Fox and NBC

Affiliation	Net Revenues	Avg Revenues	Avg Cash Flow	Programming Expenses	Cash Flow/Rev
WBN	All	\$25,190,262	\$9,883,178	\$8,075,068	39%
UPN	All	\$14,471,340	\$5,667,656	\$3,876,139	39%
PAX	All	\$1,779,348	\$175,764	\$127,956	10%
Independents	Over \$15M	\$45,178,563	\$22,974,980	\$6,953,088	51%
Independents	\$5M-\$15M	\$8,921,301	\$3,511,675	\$1,193,930	39%
Independents	Under \$15M	\$1,525,839	\$70,960	\$147,307	5%

Source: *2000 Television Financial Report*, National Association of Broadcasters.

84. Table 2 shows the effect of a 10 percent reduction in a station's revenues, together with a 10 percent reduction in the station's programming expenses.⁷⁴ This reduction in revenues would not be implausible if DBS suppliers carried the four major networks but did not carry the network in question for the following reasons:

- DBS now accounts for about 16 percent of television households;
- That fraction is rapidly increasing; and

⁷³ *2000 Television Financial Report*, National Association of Broadcasters, at 68-96, 180-184.

⁷⁴ These expenses include the amortization of broadcast rights, talent fees, music license fees and booked bartered programming.

- Advertising revenues may well decline by a greater fraction than viewership for reasons discussed above.

As the table shows, for affiliates of networks outside the top four networks, the reduction results in a 17 percent reduction of cash flow for WBN affiliates, a 19 percent reduction for UPN affiliates, and a 94 percent reduction for PAX affiliates. Such a reduction in revenues leads to a decrease in cash flow of 17 percent for the largest independents and 22 percent for independents with revenues between \$5 million and \$15 million. Cash flow of the smallest independents would be wiped out almost twice over. Indeed, a decrease of revenues of only 5.2 percent would wipe out the entire cash flow of the smallest independents.

Table 2
Reduction in Cash Flow Due to a 10 Percent Reduction in
Revenues and Program Expenses

Affiliation	Net Revenues	Average		Expenses			% Decrease in:		
		Revenues	Cash Flow	Total	Program	Non-Program	Revenue	Program Expenses	Cash Flow
WBN	All	\$25,190,262	\$9,883,178	\$15,307,084	\$8,075,068	\$7,232,016	10%	10%	17%
UPN	All	\$14,471,340	\$5,667,656	\$8,803,684	\$3,876,139	\$4,927,545	10%	10%	19%
PAX	All	\$1,779,348	\$175,764	\$1,603,584	\$127,956	\$1,475,628	10%	10%	94%
Independents	Over \$15M	\$45,178,563	\$22,974,980	\$22,203,583	\$6,953,088	\$15,250,495	10%	10%	17%
Independents	\$5M-\$15M	\$8,921,301	\$3,511,675	\$5,409,626	\$1,193,930	\$4,215,696	10%	10%	22%
Independents	Under \$15M	\$1,525,839	\$70,960	\$1,454,879	\$147,307	\$1,307,572	10%	10%	194%

Source: 2000 Television Financial Report, National Association of Broadcasters.

85. Faced with such a reduction in cash flow, the station would have no choice but to cut its costs in order to remain financially viable. A likely choice under these circumstances would be to reduce programming costs and, hence, the quality of programming.

IX. SHVIA'S LICENSING SCHEME DOES NOT IMPOSE A SIGNIFICANT "BURDEN" ON DBS SUPPLIERS

86. In assessing the economic consequences of SHVIA, the relevant comparison is the world pre-SHVIA versus post-SHVIA. It is irrelevant to compare the "sweetness" of various "deals" that Congress might have afforded to the satellite industry with the one it did afford. Congress need not have adopted SHVIA and could retract it in toto. Doing so would clearly make DBS suppliers worse off.

87. SHVIA's statutory license affords a substantial benefit to DBS suppliers by providing a low-cost *optional* means of meeting copyright liabilities associated with carriage of local broadcast signals. In the absence of SHVIA, DBS suppliers would need to negotiate and obtain licenses for use of copyrighted material from copyright holders. With SHVIA, they retain that option, but are also afforded reliance upon a statutory license which compels copyright holders to permit use of their intellectual property free of royalties (notwithstanding the DBS suppliers' ability to profit from the sale of access to broadcast channels displaying copyrighted material).

88. In passing SHVIA, Congress balanced a variety of policy considerations relevant for consumer welfare, issues of competitive parity between cable and DBS operators, effects of carriage decisions on non-subscribers and local broadcast stations as well as the rights of creators of copyrighted material. The calculus of benefits and burdens is thus much more complex than the effects upon a single set of players.

89. The claim of the DBS suppliers is simply that they would be better off if they could have the benefits of the compulsory license without having to satisfy the conditions Congress has judged reasonable to impose for enjoyment of such benefits. Perhaps they might be; Congress' judgment was that the cost of these extra benefits for DBS suppliers was not worth the sacrifice of benefits from achievement of other important public policy goals.

A. **DMAs Into Which DBS Suppliers Retransmit Local Signals**

90. The number of DMAs into which DBS suppliers can retransmit local stations, while meeting the carriage obligations of SHVIA depends, in part, on which stations in the DMA are eligible for carriage under SHVIA. In determining this number, cable-only stations, low-power stations and duplicative network stations (including satellite stations), should be deleted, as none of them are eligible for carriage under SHVIA.⁷⁵

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⁷⁵ I do not make any further adjustment for duplicative public stations, for stations that negotiate for retransmission consent, or for stations that do not deliver a signal of acceptable quality. Because I do not make these latter adjustments, my estimate of the number of eligible stations is somewhat high, and my estimate of the number of DMAs is therefore somewhat low.

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- B. Comparison of SHVIA's Carriage "Burden" With That of Cable Must-Carry

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96. The relative burden of the SHVIA carriage obligations is *much* lighter when one considers they are voluntary. They come into effect if and only if the DBS supplier elects the free ride that the compulsory license offers with respect to copyright royalties.

C. Benefits of Carriage of Local Stations

97. DBS suppliers benefit substantially from carriage of local stations. In particular, to the extent subscribers value such carriage, suppliers can charge more if their service includes local signals—irrespective of whether the charge for local stations is unbundled. Stated alternatively, carriage may increase the demand for multichannel service at any given price. These benefits more than fully offset the “burdens” of the carriage obligations.

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⁸² Most cable systems can carry all eligible local stations with less than one-third of their capacity. I have, however, identified in the top 5 DMAs over 15 cable systems that devote one-third or more of their capacity to signals received off air. See *Television & Cable Factbook 2001*, Cable Vol. No. 69, Warren Communication News, Section D.

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X. SHVIA'S LICENSING SCHEME IS APPROPRIATELY TAILORED TO ACHIEVE ITS OBJECTIVES

99. The license regime established by SHVIA is tailored to minimize any “burden” on DBS suppliers—consistent with furthering the purposes of the Act.

100. In the first place, the Act creates no obligation on DBS suppliers to carry *any* local broadcast signal. This regime is significantly less restrictive regime than that which applies to cable. Moreover, the Act in no way precludes a DBS supplier from negotiating directly with any broadcast networks and broadcasters it chooses for the rights to retransmit their signals. The carriage obligation applies *only* when the DBS supplier seeks to avail itself of the statutory license, which confers a substantial benefit on the carrier; *i.e.*, a royalty-free copyright license.

101. Only when a DBS supplier opts to proceed under Section 122 does the obligation attach to carry local signals—and even then, carriage is conditioned on the broadcaster making a request. Moreover, the broadcaster must incur the expense of delivering a good-quality signal to a local receive facility established by the DBS supplier. This requirement further minimizes the costs for the DBS supplier of meeting the carriage obligation.

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102. The obligation is also applied on a market-by-market basis, not nationally. That is, a DBS supplier can decide in which markets it wants to use the statutory license to offer local-into-local service. It can also opt to use the compulsory license in some markets, but not in others. This approach provides considerable latitude to the supplier in designing its service packages, deploying technology and apportioning capacity.

103. Finally, more limited specification of carriage obligations would frustrate Congress's goals to avoid skewing competition between cable and DBS, to avoid inflicting harm on the system of local broadcasting (and implicitly the quality of local programming); and to avoid a licensing scheme which has the effect of limiting the multiplicity of voices in each local market.

104. SHVIA extends a valuable right—indeed, a form of subsidy—to DBS suppliers, while at the same time avoiding distortion of local video markets or impairment of the interests of over-the-air viewers. Moreover, the licensing scheme accomplishes these ends with minimal burdens imposed on DBS suppliers.

XI. CONCLUSIONS

105. SHVIA effectively promotes competition in the market for multi-channel video programming in order to reduce costs to consumers. In order to achieve this goal, SHVIA confers on DBS suppliers the right to retransmit local broadcast signals royalty-free, much as cable systems have.

106. SHVIA also avoids inflicting harm on the system of television broadcasting. In particular, it avoids inflicting harm on over-the-air viewers from degradation of program quality of smaller television stations. Such degradation would be a predictable consequence of a

licensing scheme that facilitated DBS suppliers' carriage of only the largest television stations in a given area or that encouraged attempts by DBS suppliers to extract rents from smaller stations in return for carriage.

107. Finally, the licensing scheme created by SHVIA is structured to minimize any burdens on DBS suppliers. It establishes a compulsory license regime for DBS that is comparable to that established for cable so as not to confer an artificial advantage on either competitor. Additionally, the carriage provisions are significantly less onerous than those applicable to cable operators as they apply *only if* the DBS supplier elects to invoke the compulsory license.

I declare under penalty of perjury that the foregoing is true and correct.

Dated: May 24, 2001



JEFFREY H. ROHLFS

Appendix A, Curriculum Vitae

Jeffrey H. Rohlfs, Principal, Strategic Policy Research, Inc.

Received an A.B. degree from Amherst College and a Ph.D. in Economics from MIT. He has taught economics at the Stanford Graduate School of Business.

Dr. Rohlfs is a founding principal of Strategic Policy Research, Inc. ("SPR") and has been a consultant since 1983. He is an economist who specializes in the telecommunications and mass media industries. He has numerous publications, including theoretical, empirical and policy analyses.

Dr. Rohlfs has consulted on telecommunications and public policy for a variety of clients with regard to ground rules for telecommunications competition, cost estimation, interconnection pricing, regulatory reform, restructuring and privatization in many countries, and policies regarding spectrum and mobile telecommunications.

Prior to his career in consulting, Dr. Rohlfs spent 14 years at Bell Labs, rising to Department Head of Economic Modeling Research. While at Bell Labs, Dr. Rohlfs wrote a seminal paper on the theory of network externalities. This theory has been widely cited and applied to universal-service policy and technical standards. Dr. Rohlfs also wrote a seminal empirical analysis on optimal telecommunications pricing and rate rebalancing.

From 1979 to 1981, Dr. Rohlfs was Manager of Microeconomic Analysis at AT&T. He provided analytical support for AT&T's regulatory and public affairs efforts.

Dr. Rohlfs has substantial international consulting experience, including Australia, Bolivia, Canada, Cape Verde, Ecuador, European Union, Germany, Honduras, Hungary, Jamaica, Japan, Latvia, Mexico, New Zealand, Panama, Paraguay, Peru, Puerto Rico, Thailand, Venezuela and the United Kingdom.

Dr. Rohlfs has just completed a book, *Bandwagon Effects in High-Technology Industries*. To be published by MIT Press, it is forthcoming in 2001.

Appendix B

Station Characteristics by Designated Market Areas

Source: Nielsen Designated Market Areas (DMA) (Stations within DMA's) 2000-2001; Nielsen Media Research, Local Universe Estimates for the 2000-2001 Broadcast Season (Exhibit F to Plaintiffs Motion for Summary Judgment)

RANK	DMA	TVHH	% of US	Cum. %	# of TV Stations	Cum. # of TV Stations	# of S&L Stations	Cable Only Stations	Duplicate Networks in Same State	US Duplicate UPN	Foreign Independent	Cum. # of Excluded Stations	Cum. # of Stations excluding S&L, Cable, Duplicates, Foreign	Comments
1	New York	8,935,610	8.787	6.787	24	24	2					2	22	
2	Los Angeles	5,354,150	5.240	12.027	23	47	0					2	45	
3	Chicago	3,244,850	3.175	15.203	17	64	1					3	61	
4	Philadelphia	2,703,480	2.648	17.848	20	84	2					5	79	
5	San Francisco-Oakland-San Jose	2,431,720	2.380	20.228	24	108	2		1			8	100	2 WB Stations same state
6	Boston (Manchester)	2,242,240	2.194	22.422	21	129	2					10	119	2 ABC stations diff states
7	Dallas-Ft. Worth	2,069,010	2.025	24.447	18	147	0					10	137	
8	Washington, DC (Hagerstown)	2,047,340	2.004	26.451	19	166	4					14	152	2 NBC stations diff states
9	Detroit	1,873,620	1.834	28.284	10	176	0				1	15	161	
10	Atlanta	1,857,220	1.817	30.102	14	190	1					16	174	
11	Houston	1,747,350	1.710	31.812	18	208	1					17	191	
12	Seattle-Tacoma	1,905,900	1.572	33.383	18	224	1					18	209	
13	Minneapolis-St. Paul	1,510,130	1.478	34.861	19	243	6					24	219	
14	Tampa-St. Petersburg (Sarasota)	1,507,790	1.476	36.337	16	259	2		1			27	232	same state
15	Cleveland	1,488,270	1.458	37.793	15	274	1					28	248	
16	Miami-Ft. Lauderdale	1,468,630	1.437	39.230	18	290	1					29	261	
17	Phoenix	1,441,660	1.411	40.641	16	306	4					33	273	
18	Denver	1,312,300	1.284	41.926	18	324	2		1			36	288	2 CBS stations same state
19	Sacramento-Stockton-Modesto	1,187,000	1.162	43.087	16	340	5					41	299	
20	Pittsburgh	1,128,810	1.105	44.192	12	352	2					43	309	
21	Orlando-Daytona Beach-Melbourne	1,128,000	1.102	45.294	17	369	2					45	324	
22	St. Louis	1,121,410	1.097	46.391	9	378	0					45	333	
23	Portland, OR	1,017,780	0.998	47.387	10	388	0					45	343	
24	Baltimore	1,010,160	0.989	48.376	8	396	1					46	350	
25	San Diego	996,220	0.975	49.351	10	406	2					48	358	
26	Indianapolis	974,390	0.954	50.304	17	423	4					52	371	
27	Hartford & New Haven	923,740	0.904	51.208	10	433	1					53	380	
28	Charlotte	903,950	0.885	52.093	12	445	0					53	392	
29	Raleigh-Durham (Fayetteville)	873,440	0.855	52.948	13	458	1					54	404	
30	Kansas City	835,580	0.818	53.765	9	467	0					54	413	
31	Nashville	830,800	0.813	54.578	12	479	0					54	425	
32	Cincinnati	828,650	0.811	55.389	10	489	1					55	434	
33	Milwaukee	827,570	0.810	56.199	14	503	2					57	446	
34	Columbus, OH	772,160	0.758	56.955	7	510	0					57	453	
35	Greenville-Spartanburg-Asheville-Anderson	734,600	0.719	57.674	12	522	1					58	464	
36	Salt Lake City	732,380	0.717	58.391	17	539	3		1			62	477	3 PAX
37	San Antonio	693,810	0.679	59.070	15	554	1				1	64	490	
38	Grand Rapids-Kalamazoo-Battle Creek	683,120	0.668	59.738	10	564	1		1			66	498	2 ABC stations same state
39	Birmingham (Anniston and Tuscaloosa)	673,940	0.660	60.398	15	579	4			1		71	508	
40	Memphis	641,630	0.628	61.025	11	590	2					73	517	
41	Norfolk-Portsmouth-Newport News	638,190	0.625	61.650	9	599	1					74	525	
42	New Orleans	636,340	0.623	62.273	10	609	0					74	535	
43	West Palm Beach-Ft. Pierce	632,600	0.619	62.892	12	621	2					76	545	
44	Buffalo	618,660	0.605	63.497	10	631	0					76	555	
45	Oklahoma City	604,240	0.591	64.089	13	644	3					79	565	
46	Harrisburg-Lancaster-Lebanon-York	604,210	0.591	64.680	7	651	0					79	572	
47	Greensboro-High Point-Winston Salem	600,000	0.587	65.267	9	660	0					79	581	
48	Louisville	587,450	0.575	65.842	11	671	1					80	591	
49	Providence-New Bedford	572,880	0.561	66.403	9	680	1					81	599	
50	Albuquerque-Santa Fe	570,460	0.558	66.961	24	704	8			1		90	614	

Source: Nielsen Designated Market Areas (DMA) (Stations within DMA's) 2000-2001; Nielsen Media Research, Local Universe Estimates for the 2000-2001 Broadcast Season (Exhibit F to Plaintiffs Motion for Summary Judgment)

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RANK	DMA	TVHH	% of US	Cum. %	# of TV Stations	Cum. # of TV Stations	# of S&L Stations	Cable Only Stations	Duplicate Networks in Same State	US Duplicate UPN	Foreign Independent	Cum. # of Excluded Stations	Cum. # of Stations excluding S&L, Cable, Duplicates, Foreign	Comments
51	Las Vegas	559,330	0.547	87,508	12	716	3					93	623	
52	Wilkes Barre-Scranton	550,340	0.539	88,047	9	725	2					95	630	
53	Jacksonville, Brunswick	548,750	0.537	88,584	11	736	1					96	640	
54	Fresno-Visalia	519,200	0.508	89,092	12	748	0					96	652	
55	Dayton	515,160	0.504	89,596	8	756	1					97	659	
56	Albany-Schenectady-Troy	508,470	0.498	70,094	9	765	2					99	666	
57	Little Rock-Pine Bluff	491,830	0.481	70,575	14	779	3					102	677	
58	Austin	491,820	0.481	71,056	9	788	3					105	683	
59	Tulsa	490,160	0.480	71,536	14	802	2					107	695	
60	Richmond-Petersburg	489,320	0.479	72,015	8	810	1					108	702	
61	Charleston-Huntington	481,200	0.471	72,486	13	823	1					109	714	
62	Mobile-Pensacola (Fl Walton Beach)	468,880	0.459	72,944	11	834	0					109	725	
63	Knoxville	461,950	0.452	73,397	9	843	0					109	734	
64	Flint-Saginaw-Bay City	448,990	0.439	73,836	12	855	4					113	742	
65	Wichita-Hutchinson Plus	444,710	0.435	74,271	20	875	10					123	752	
66	Lexington	424,010	0.415	74,686	12	887	4		1			128	759	2 CBS Stations same state
67	Toledo	413,910	0.405	75,091	7	894	1					129	765	
68	Roanoke-Lynchburg	407,480	0.399	75,490	8	902	1					130	772	
69	Green Bay-Appleton	396,510	0.390	75,880	7	909	0					130	779	
70	Des Moines-Ames	393,980	0.386	76,265	7	916	0					130	786	
71	Tucson (Sierra Vista)	391,930	0.384	76,649	10	926	2					132	794	
72	Honolulu	382,720	0.375	77,024	25	951	13					145	806	
73	Paducah-Cape Girardeau-Hamburg-Mt Vernon	378,780	0.369	77,392	11	962	2					147	815	
74	Rochester, NY	378,740	0.369	77,761	7	969	2					149	820	
75	Omana	375,070	0.367	78,128	8	977	1					150	827	
76	Shreveport	371,020	0.363	78,491	8	985	1					151	834	
77	Spokane	370,060	0.362	78,853	10	995	1					152	843	
78	Springfield, MO	369,070	0.361	79,214	9	1004	3					155	849	
79	Portland-Auburn	362,860	0.355	79,569	9	1013	1					156	857	
80	Syracuse	361,850	0.354	79,923	7	1020	0					156	864	
81	Ft. Myers-Naples	352,240	0.345	80,268	8	1028	1					157	871	
82	Huntsville-Decatur (Flor)	351,860	0.344	80,612	8	1036	0					157	879	
83	Champaign&Springfield-Decatur	345,420	0.338	80,950	11	1047	3					160	887	
84	Madison	329,190	0.322	81,272	8	1053	0					160	893	
85	Columbia, SC	324,060	0.317	81,590	7	1060	0					160	900	
86	Chattanooga	323,170	0.316	81,908	8	1068	0					160	908	
87	South Bend-Elkhart	318,770	0.312	82,218	7	1075	2					162	913	
88	Jackson, MS	307,850	0.301	82,519	6	1081	1					163	918	
89	Cedar Rapids-Waterloo&Dubuque	307,310	0.301	82,820	9	1090	2					165	925	
90	Davenport-Rock Island-Moline	303,370	0.297	83,117	7	1097	1					166	931	
91	Burlington-Plattsburgh	300,850	0.294	83,411	14	1111	6					172	939	2 NBC stations diff states
92	Colorado Springs-Pueblo	298,800	0.292	83,703	8	1119	3					175	944	
93	Tri-Cities, TN-VA	295,260	0.289	83,992	8	1127	1					178	951	
94	Waco-Temple-Bryan	286,720	0.281	84,273	11	1138	2		1			179	959	2 CBS stations same state
95	Johnstown-Altoona	283,140	0.277	84,550	6	1144	0					179	965	
96	Baton Rouge	280,130	0.274	84,824	7	1151	2					181	970	
97	Evansville	278,070	0.270	85,094	11	1162	3					184	978	
98	El Paso	275,850	0.270	85,364	11	1173	0				1	185	988	
99	Youngstown	272,500	0.267	85,631	6	1179	2					187	992	
100	Savannah	260,340	0.255	85,886	8	1187	0	1				188	999	

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101	Lincoln & Hastings-Kearney	258,280	0.253	86.138	14	1201	7	1	1			197	1004	2 ABC stations same state
102	McAllen	256,810	0.251	86.390	15	1218	2	1			3	203	1013	
103	Charleston, SC	252,560	0.247	86.637	7	1223	0	1				204	1019	
104	Fl. Wayne	252,500	0.247	86.884	7	1230	0	1				205	1025	
105	Springfield-Holyoke	244,790	0.240	87.123	3	1233	0	1				209	1028	
106	Greenville-New Bern-Washington	242,290	0.237	87.381	11	1244	2	1				208	1036	
107	Lansing	240,570	0.235	87.596	7	1251	0	1				209	1042	
108	Tyler-Longview (Lufkin&Nacogdoches)	237,650	0.233	87.829	8	1259	4	1				214	1045	
109	Reno	232,960	0.228	88.057	11	1270	2	1	1			218	1052	
110	Tallahassee-Thomasville	232,270	0.227	88.284	9	1279	3	1				222	1057	
111	Sioux Falls (Mitchell)	231,550	0.227	88.510	19	1298	10	1				233	1065	
112	Peoria-Bloomington	231,350	0.228	88.737	7	1305	0	1				234	1071	
113	Augusta	230,420	0.225	88.962	8	1313	1	1				238	1077	
114	Florence-Myrtle Beach	230,280	0.225	89.188	8	1321	2	1				239	1082	
115	Fl. Smith-Fayetteville-Springdale-Rogers	227,670	0.223	89.410	10	1331	4	1				244	1087	
116	Montgomery (Selma)	227,410	0.223	89.633	11	1342	3	1				248	1094	
117	Santa Barbara-Santa Maria-San Luis Obispo	227,240	0.222	89.855	7	1349	2	1				250	1099	
118	Monterey-Salinas	223,850	0.219	90.074	7	1356	1	1				252	1104	
119	Traverse City-Cadillac	222,960	0.218	90.292	11	1367	5	1				258	1109	
120	Fargo-Valley City	220,770	0.216	90.509	12	1379	5	1				264	1115	
121	Macon	211,800	0.207	90.716	7	1386	0	1				265	1121	
122	Eugene	210,910	0.206	90.922	13	1399	6	1				272	1127	
123	Boise	206,820	0.202	91.125	7	1406	0	1				273	1133	
124	Lafayette, LA	206,120	0.202	91.326	7	1413	2	1				278	1137	
125	Yakima-Pasco-Richland-Kennewick	203,450	0.199	91.525	14	1427	8	1				285	1142	
126	La Crosse-Eau Claire	191,720	0.188	91.713	9	1436	3	1				289	1147	
127	Amarillo	189,880	0.186	91.899	8	1444	2	1				292	1152	
128	Columbus, GA	187,400	0.183	92.082	7	1451	0	1				293	1158	
129	Corpus Christi	185,570	0.182	92.264	9	1460	3	1				297	1163	
130	Bakersfield	185,120	0.181	92.445	7	1467	2	1				300	1167	
131	Columbus-Tupelo-West Point	177,480	0.174	92.619	6	1473	1	1				302	1171	
132	Duluth-Superior	177,080	0.173	92.792	7	1480	1	1				304	1176	
133	Chico-Redding	176,090	0.172	92.964	7	1487	1	1				306	1181	
134	Monroe-El Dorado	174,000	0.170	93.135	7	1494	0	1				307	1187	
135	Rockford	169,350	0.166	93.301	5	1499	0	1				308	1191	
136	Wausau-Rhineland	167,790	0.164	93.465	8	1507	2	1				311	1196	
137	Beaumont-Port Arthur	165,030	0.161	93.628	5	1512	0	1				312	1200	
138	Topeka	162,940	0.159	93.786	6	1518	1	1				314	1204	
139	Terre Haute	157,290	0.154	93.940	7	1525	1	1				316	1209	
140	Wheeling-Steubenville	156,150	0.153	94.092	4	1529	0	1				317	1212	
141	Medford-Klamath Falls	154,800	0.151	94.244	9	1538	2	1				320	1218	
142	Ene	153,110	0.150	94.394	6	1544	0	1				321	1223	
143	Columbia-Jefferson City	152,280	0.149	94.543	7	1551	1	1				323	1228	
144	Sioux City	149,940	0.147	94.690	7	1558	0	1				324	1234	
145	Joplin-Pittsburg	148,180	0.145	94.835	7	1565	2	1				327	1238	
146	Wichita Falls & Lawton	147,580	0.144	94.979	8	1571	1	1				329	1242	
147	Lubbock	141,960	0.139	95.118	12	1583	4	1				334	1249	
148	Wilmington, NC	139,230	0.136	95.254	6	1589	1	1				336	1253	
149	Bluefield-Beckley-Oak Hill	139,070	0.136	95.390	5	1594	0	1				337	1257	
150	Albany, GA	139,060	0.136	95.526	8	1602	1	1				339	1263	

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151	Odessa-Midland, TX	138,300	0.135	95.662	8	1810	1	1				341	1289	
152	Minor-Bismarck-Dickinson (Williston), ND	136,000	0.133	95.795	19	1629	12	1				354	1275	
153	Rochester, MN-Mason City, IA-Austin, MN	134,450	0.132	95.928	7	1636	0	1				355	1281	
154	Anchorage, AK	130,800	0.128	96.054	11	1647	3	1				359	1288	
155	Bangor, ME	129,600	0.127	96.181	7	1654	1	1				361	1293	
156	Binghamton, NY	127,210	0.124	96.308	6	1660	1	1				363	1297	
157	Biloxi-Gulfport, MS	127,210	0.124	96.430	4	1664	0	1				364	1300	
158	Panama City, FL	124,010	0.121	96.552	8	1670	0	1				365	1305	
159	Palm Springs, CA	118,330	0.116	96.667	9	1679	6	1				372	1307	
160	Abilene-Sweetwater, TX	114,350	0.112	96.779	7	1686	2	1				375	1311	
161	Sherman, TX-Ada, OK	114,330	0.112	96.891	4	1690	1	1				377	1313	
162	Salisbury, MD	111,800	0.109	97.001	5	1695	0	1				378	1317	
163	Quincy, IL-Hannibal, MO-Keokuk, IA	111,140	0.109	97.109	6	1701	1	1				380	1321	
164	Idaho Falls-Pocatello, ID	106,310	0.104	97.213	7	1708	1	1				382	1326	
165	Clarksburg-Weston, WV	106,080	0.104	97.317	5	1713	0	1				383	1330	
166	Gainesville, FL	105,810	0.103	97.421	4	1717	0	1				383	1334	
167	Hattiesburg-Laurel, MS	10,850	0.099	97.431	3	1720	0	1				384	1336	
168	Utica, NY	99,070	0.097	97.528	5	1725	1	1				386	1339	
169	Billings, MT	96,010	0.094	97.622	6	1731	1	1				388	1343	
170	Missoula, MT	93,170	0.091	97.713	8	1739	3	1				392	1347	
171	Elmira, NY	93,090	0.091	97.804	4	1743	0	1				393	1350	
172	Dothan, AL	92,070	0.090	97.894	4	1747	0	1				394	1353	
173	Lake Charles, LA	88,630	0.087	97.981	4	1751	0	1				395	1356	
174	Yuma, AZ-El Centro, CA	88,530	0.087	98.068	5	1756	0	1				396	1360	
175	Rapid City, SD	84,880	0.083	98.151	15	1771	8	1				405	1366	
176	Watertown, NY	84,200	0.082	98.233	6	1777	2	1				408	1369	
177	Marquette, MI	82,990	0.081	98.314	5	1782	0	1				409	1373	
178	Alexandria, LA	81,540	0.080	98.394	5	1787	0	1				410	1377	
179	Hamsonburg, VA	78,920	0.077	98.472	4	1791	1	1				411	1380	
180	Jonesboro, AR	77,570	0.076	98.547	4	1795	0	1				412	1383	
181	Bowling Green, KY	76,180	0.075	98.622	5	1800	0	1				413	1387	
182	Greenwood-Greenville, MS	75,600	0.074	98.696	4	1804	0	1				414	1390	
183	Mendota, MS	68,390	0.067	98.763	5	1809	0	1				415	1394	
184	Jackson, TN	65,180	0.064	98.827	4	1813	0	1				416	1397	
185	Parkersburg, WV	61,850	0.060	98.887	2	1815	0	1				417	1398	
186	Grand Junction-Montrose, CO	60,740	0.059	98.947	9	1824	3	1				421	1403	
187	Great Falls, MT	60,720	0.059	99.006	4	1826	0	1				422	1406	
188	Twin Falls, ID	57,580	0.056	99.062	8	1836	4	1				427	1409	
189	Laredo, TX	57,270	0.056	99.118	6	1842	0	1			1	429	1413	
190	Butte-Bozeman, MT	55,370	0.054	99.173	8	1848	1	1				431	1417	
191	Eureka, CA	55,320	0.054	99.227	5	1853	0	1				431	1422	
192	St. Joseph, MO	54,200	0.053	99.280	3	1856	0	1				432	1424	
193	Charlottesville, VA	54,000	0.053	99.333	3	1859	1	1				433	1426	
194	Lafayette, IN	53,620	0.052	99.385	1	1860	0	1				433	1427	
195	Mankato, MN	52,950	0.052	99.437	2	1862	0	1				434	1428	
196	San Angelo, TX	51,370	0.050	99.487	5	1867	1	1				436	1431	
197	Casper-Riverton, WY	50,640	0.050	99.537	11	1878	6	1				443	1435	
198	Cheyenne, WY-Scottsbluff, NE	50,410	0.049	99.586	6	1884	1	1				445	1439	
199	Ottumwa, IA-Kirksville, MO	48,600	0.048	99.634	3	1887	0	1				446	1441	
200	Bend, OR	43,230	0.042	99.676	4	1891	1	1				448	1443	

Source: Nielsen Designated Market Areas (DMA) (Stations within DMA's) 2000-2001; Nielsen Media Research, Local Universe Estimates for the 2000-2001 Broadcast Season (Exhibit F to Plaintiffs Motion for Summary Judgment)

Station Characteristics by Designated Market Areas

RANK	DMA	TVHH	% of US	Cum. %	# of TV Stations	Cum. # of TV Stations	# of S&L Stations	Cable Only Stations	Duplicate Networks in Same State	US Duplicate UPN	Foreign Independent	Cum. # of Excluded Stations	Cum. # of Stations excluding S&L, Cable, Duplicates, Foreign	Comments
201	Lima, OH	38,430	0.038	99.714	6	1897	2	1				451	1446	
202	Zanesville, OH	32,340	0.032	99.745	2	1899	0	1				452	1447	
203	Fairbanks, AK	30,530	0.030	99.775	8	1905	1					453	1452	
204	Victoria, TX	29,070	0.028	99.804	4	1909	1	1				455	1454	
205	Presque Isle, ME	27,380	0.027	99.830	3	1912	0	1				456	1456	
206	Juneau, AK	23,540	0.023	99.853	7	1919	3					459	1460	
207	Helena, MT	21,570	0.021	99.874	4	1923	1	1				461	1462	
208	Alpena, MI	16,810	0.016	99.891	2	1925	0					461	1464	
209	North Platte, NE	14,970	0.015	99.906	5	1930	1	1				463	1467	
210	Glendive, MT	4,880	0.005	99.910	2	1932	0	1				464	1468	
	Total	102,184,180			1932		345	101	9	2	7			