

**Before the  
Federal Communications Commission  
Washington, D.C. 20554**

|   |   |                     |
|---|---|---------------------|
| In the Matter of                                | ) |                     |
|   | ) |                     |
| Development of Nationwide Broadband Data to     | ) | WC Docket No. 07-38 |
| Evaluate Reasonable and Timely Deployment of    | ) |                     |
| Advanced Services to All Americans,             | ) |                     |
| Improvement of Wireless Broadband               | ) |                     |
| Subscribership Data, and Development of Data on | ) |                     |
| Interconnected Voice over Internet Protocol     | ) |                     |
| (VoIP) Subscribership                           | ) |                     |

**NOTICE OF PROPOSED RULEMAKING**

**Adopted: February 26, 2007**

**Released: April 16, 2007**

**Comment Date: 30 days after publication in the Federal Register**

**Reply Comment Date: 60 days after publication in the Federal Register**

By the Commission: Chairman Martin and Commissioners Copps, Adelstein, Tate, and McDowell issuing separate statements.

**I. INTRODUCTION**

1. The Commission has consistently recognized the critical importance of broadband services to the nation's present and future prosperity and is committed to adopting policies to promote the development of broadband services, including broadband Internet access services.<sup>1</sup> In this Notice of Proposed Rulemaking (Notice), we seek comment about how the Commission can continue to acquire the information it needs to develop and maintain appropriate broadband policies. First, we seek comment about how the Commission can best ensure that it receives sufficient information about the availability and deployment of broadband services nationwide, particularly in rural and other hard-to-serve areas, including tribal lands. Second, we seek comment about how the Commission can improve the data about wireless broadband Internet access services that it currently collects on FCC Form 477. Third, we ask

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<sup>1</sup> See e.g., *Appropriate Framework for Broadband, Access to the Internet over Wireline Facilities, Review of Regulatory Requirements for Incumbent LEC Broadband Telecommunications Services, Computer III Further Remand Proceedings: Bell Operating Company Provision of Enhanced Services; 1998 Biennial Regulatory Review – Review of Computer III and ONA Safeguards and Requirements, Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Internet Over Cable Declaratory Ruling, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, Policy Statement, 20 FCC Rcd 14986 (2005) (setting forth four principles intended to “encourage broadband deployment and preserve and promote the open and interconnected nature of the public Internet”).*

whether we should modify the speed tier information we currently collect. Fourth and finally, we seek comment about how the Commission can best collect information about subscribership to interconnected voice over Internet Protocol (interconnected VoIP) service. Information about broadband availability and deployment throughout the nation is essential to enable us to assess the success of our broadband policies in order to further discharge our statutory mandate, pursuant to section 706 of the Telecommunications Act of 1996, to “encourage the deployment on a reasonable and timely basis of advanced telecommunications capability to all [Americans].”<sup>2</sup> Improved information about subscribership to the new communications services that are enabled by the widespread availability, and consumer adoption, of end user broadband connections would enable us to better understand how subscriber choice among communications services is affecting the federal universal service fund, and will thereby assist us in discharging our statutory mandate to secure the viability of universal service.<sup>3</sup> More generally, improved VoIP subscribership information would enable us to continue monitoring evolving competition for local telephone service customers. One of the major goals of Congress in enacting the Telecommunications Act of 1996 was encouraging local telephone service competition.<sup>4</sup>

2. Since 2000, broadband data collected pursuant to the FCC Form 477 data collection program have significantly helped the Commission and the public understand the extent of broadband deployment nationwide.<sup>5</sup> The proposals discussed in this Notice would allow us to deepen and refine our current understanding of broadband availability and deployment, and would improve our understanding of the role of advanced wireless technologies in making broadband Internet access service available to all Americans. They also would provide us with improved data about subscribership to interconnected VoIP services. Although we recognize that additional data collection could impose an increased burden on reporting entities, in the event we decide to adopt additional data collection requirements, those requirements would be tailored to minimize costs imposed on the subject providers.<sup>6</sup> We specifically solicit public comment about this balance between the burden of additional data collection and the benefits such information provides.

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<sup>2</sup> 47 U.S.C. § 157 nt. We use the term “broadband services” to refer to those services that deliver an information carrying capacity in excess of 200 kbps in at least one direction. These services are also described as “high-speed services” in Commission reports issued pursuant to section 706. *Id.* We have used the term “advanced services” to refer to the subset of broadband or high-speed services that deliver an information carrying capacity in excess of 200 kbps in *both directions*.

<sup>3</sup> 47 U.S.C. § 151 (A primary purpose of Congress in establishing the Federal Communications Commission was “to make available . . . to all the people of the United States . . . a rapid, efficient, Nation-wide . . . communication service with adequate facilities at reasonable charges. . .”)

<sup>4</sup> Telecommunications Act of 1996, Pub. Law No. 104-104, 110 Stat. 56, codified 47 U.S.C. § 151 *et seq.*

<sup>5</sup> See *Local Telephone Competition and Broadband Reporting*, Report and Order, WC Docket No. 04-141, 19 FCC Rcd 22340 (2004) (*2004 Data Gathering Order*). The Form 477 program collects information about two critical areas of the communications industry: the deployment of broadband services and the development of local telephone service competition.

<sup>6</sup> Not all of the proposals discussed here require additional data collection.

## II. BACKGROUND

3. To date, the Commission has based its analysis of nationwide broadband deployment on three sources of information: data submitted on FCC Form 477; public comment submitted in response to section 706(b) inquiries;<sup>7</sup> and ancillary information gathered by Commission staff from publicly available sources. The Form 477 data have proven to be particularly valuable. The Commission adopted the Form 477 program after concluding that the collected information would materially improve its ability to develop, evaluate, and revise policy regarding broadband deployment and local telephone service competition, and provide valuable benchmarks for Congress, the Commission, other policy makers, and consumers.<sup>8</sup> Since the Form 477 was adopted in 2000, broadband service providers and local telephone service providers have reported data fourteen times,<sup>9</sup> and we have issued regular reports based in significant part on this information.<sup>10</sup> Pursuant to the broadband portions of the Form 477, facilities-based providers of broadband connections list, by state, those Zip Codes in which they have at least one broadband subscriber.<sup>11</sup> Reporting entities include incumbent and competitive LECs, cable companies, operators of terrestrial and satellite wireless facilities, municipalities, and any other facilities-based provider of broadband connections to end users.<sup>12</sup>

4. The Commission significantly improved the Form 477 in the *2004 Data Gathering Order* by extending the data collection program for five years beyond its original sunset; eliminating reporting thresholds which effectively exempted small entities from reporting requirements; requiring more granular reporting of broadband data, e.g., about services offered at speeds in excess of 200 kbps, about symmetric xDSL connections as distinguished from T-1/DS1 and other “traditional wireline” connections, and about power line connections; requiring technology-specific lists of Zip Codes;

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<sup>7</sup> Pursuant to section 706(b), the Commission must “regularly” notice inquiries concerning whether advanced services are being deployed on a “reasonable and timely” basis. See 47 U.S.C. § 157(b) nt.

<sup>8</sup> See *Local Competition and Broadband Reporting*, Report and Order, CC Docket No. 99-301, 15 FCC Rcd 7717, 7724, paras. 11 *et seq.*, (2000) (*2000 Data Gathering Order*).

<sup>9</sup> Broadband and local telephone service providers filed Form 477 data for the first time on May 15, 2000, reporting connections in service as of December 31, 1999; they filed the second set of data, reporting connections in service as of June 30, 2000, on September 1, 2000. Thereafter, providers have filed year-end data each March 1 and mid-year data each September 1.

<sup>10</sup> The Wireline Competition Bureau summarizes broadband information from the Form 477 program in its *High-Speed Services for Internet Access* reports, and it summarizes information on local telephone services in its *Local Telephone Competition* reports. The reports are available at <http://www.fcc.gov/wcb/iatd/comp.html>.

<sup>11</sup> Initially, broadband providers reported a single list of Zip Codes per state. The Commission modified this requirement in the *2004 Data Gathering Order*. For data as of June 30, 2005, and later, broadband providers report technology-specific lists of Zip Codes. The technology-specific lists enable the Commission to identify, for example, those Zip Codes that are listed *only* by satellite broadband providers.

<sup>12</sup> See 47 C.F.R. §§ 1.7001(b), 43.11(a). On the Form 477, the facilities-based provider of the broadband line (or wireless channel) that connects to the end-user premises reports that connection regardless whether the end user of the retail services delivered over that connection is billed by the filer (including affiliates), by an agent of the filer, or by an unaffiliated entity. An entity is considered to be a facilities-based broadband provider if it provides broadband services over facilities that it owns or obtains from another entity and provisions/equips as broadband.

requiring cable companies to report, by state, the extent to which cable modem service is available to the households to whom they can provide cable TV service, and requiring incumbent LECs to report comparable information about their DSL connections; and adopting various other modifications.<sup>13</sup> The Commission acknowledged that mobile broadband services differ in particular respects from fixed broadband services – noting that the end user of a mobile wireless broadband service must be within a mobile wireless broadband service coverage area to make use of the service, but may move around within and among coverage areas – and made provisions for such differences in the data collection.<sup>14</sup> The Commission rejected suggestions to add to the Form 477 questions specifically about VoIP service, noting that only a very small portion of local telephone service was being provided by entities exclusively utilizing VoIP and that LECs may already include information about VoIP subscribers in their Form 477 filings.<sup>15</sup>

5. Based in large part on analysis of Form 477 data, the Commission's various reports have demonstrated significant and steady progress in broadband deployment and availability nationwide. For example, the Form 477 data for June 2006 reflect broadband connections in every state in the nation.<sup>16</sup> Fully 99% of all U.S. Zip Codes report the presence of subscribers who utilize *high-speed lines* (which include advanced service lines and lines that deliver speeds exceeding 200 kbps in one but not both directions).<sup>17</sup> Broadband providers report that 64.6 million high-speed lines were in service nationwide, of which 50.3 million primarily served residential end users.<sup>18</sup> During the twelve months ending June 30, 2006, high-speed lines increased by 52% (or 22.2 million lines).<sup>19</sup> Moreover, we estimate that high-speed DSL connections were available to 79% of households to whom incumbent LECs could provide local telephone service in June 2006, and that high-speed cable modem service was available to 93% of the households to whom cable companies could provide cable TV service.<sup>20</sup> Reflecting such robust

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<sup>13</sup> *2004 Data Gathering Order, supra*. The first report to reflect these changes was released last April. See Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of June 30, 2005* (rel. Apr. 3, 2006). Available at <http://www.fcc.gov/wcb/iatd/comp.html>.

<sup>14</sup> *2004 Data Gathering Order*, 19 FCC Rcd 22349-50, para. 18.

<sup>15</sup> *Id.*, 19 FCC Rcd 22351-52, para. 23 n.54.

<sup>16</sup> In addition to each of the 50 states and the District of Columbia, broadband connections were reported for American Samoa, Guam, Northern Mariana Islands, Puerto Rico, and Virgin Islands. See, generally, Federal Communications Commission, Wireline Competition Bureau, Industry Analysis and Technology Division, *High-Speed Services for Internet Access: Status as of June 30, 2006* (rel. Jan. 31, 2007) (*June 2006 High-Speed Services Report*). Available at <http://www.fcc.gov/wcb/iatd/comp.html>.

<sup>17</sup> *Id.*, at Tbl. 15.

<sup>18</sup> *Id.*, at Tbls. 1, 3.

<sup>19</sup> *Id.*, at Tbl. 1.

<sup>20</sup> *Id.*, at Tbl. 14. Starting with the Form 477 filing due September 1, 2005 (reporting data as of June 30, 2005), incumbent LECs are required to report how extensively their DSL connections are *available* to the households to whom they can provide local telephone service, in a particular state, over distribution facilities that they own, and cable system operators are required to report how extensively their cable modem service is *available* to the households to whom they can provide cable TV service, in a particular state, over cable plant that they own. Our (continued....)

deployment statistics, the Commission's section 706 reports have consistently concluded that broadband is being deployed nationwide in a reasonable and timely fashion.<sup>21</sup>

6. A report issued by the United States Government Accountability Office (GAO) reviews the strengths and weaknesses of available data about broadband availability, including FCC Form 477 data.<sup>22</sup> The report concludes that, while broadband deployment is extensive nationwide, it remains very difficult to assess the extent of deployment gaps in rural areas.<sup>23</sup> It recommends that, in order to develop a better understanding of the dynamics of broadband deployment and availability in rural areas particularly, the Commission should "develop information regarding the degree of cost and burden that would be associated with various options for improving the information about broadband deployment."<sup>24</sup>

7. Mobile wireless services have developed rapidly since the Commission adopted the *2004 Data Gathering Order*, as nationwide mobile telephone operators Verizon Wireless, Sprint Nextel, and Cingular, and some regional wireless carriers such as Alltel, have expanded or initiated their deployment of Third Generation (or "3G") wireless networks based on the EV-DO and WCDMA/HSDPA standards.<sup>25</sup> The number of mobile wireless broadband connections in service, as reported on FCC Form 477, has increased rapidly, from 380,000 in June 2005, to 3.1 million in December 2005, and to 11 million in June 2006.<sup>26</sup>

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(Continued from previous page)

estimates are weighted averages of this reported information. We use incumbent LEC end-user switched access lines as the weights for our DSL availability estimate. We use cable TV subscribers as the weights for our cable modem availability estimate. The weighted averages that we develop include incumbent LECs and cable system operators that report no availability.

<sup>21</sup> See *Availability of Advanced Telecommunications Capability in the United States*, GN Docket No. 04-54, Fourth Report to Congress, FCC 04-208 (rel Sept. 9, 2004) (*Fourth 706 Report*); *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*, CC Docket No. 98-146, Report, 17 FCC Rcd 2844 (2002) (*Third 706 Report*); *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*, CC Docket No. 98-146, Second Report, 15 FCC Rcd 20913 (2000) (*Second 706 Report*).

<sup>22</sup> United States Government Accountability Office, *Broadband Deployment Is Extensive throughout the United States, but It Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, GAO-06-426 (May 2006) (*GAO Broadband Deployment Report*).

<sup>23</sup> *Id.*, at 38-39.

<sup>24</sup> *Id.* GAO conducted its work from April 2005 through February 2006, before Commission staff finished reviewing and compiling the first data submitted to the Commission (on September 1, 2005) pursuant to the modified Form 477 adopted in the *2004 Data Gathering Order*, and the report discusses those modifications as well as GAO conversations with Commission staff. GAO's discussion assumes that the modified data would be available for Commission use.

<sup>25</sup> See, generally, *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions With Respect to Commercial Mobile Services*, WT Docket No. 06-17, Eleventh Report, 21 FCC Rcd 10947 (2006) (*Eleventh CMRS Competition Report*).

<sup>26</sup> *June 2006 High-Speed Services Report*, at Tbl. 1.

8. Interconnected VoIP subscribership in the United States also appears to have grown rapidly since the *2004 Data Collection Order* was adopted, reportedly increasing from 1.2 million subscribers in 2004 to 4.2 million subscribers at the end of 2005,<sup>27</sup> and to over 8 million subscribers by September 2006.<sup>28</sup> In a separate proceeding, we have explained that the growth of interconnected VoIP services is one of the changing market conditions that are placing under significant strain the existing system to preserve and advance universal service, which is a fundamental goal of communications policy in the United States.<sup>29</sup>

### III. DISCUSSION

#### A. Sufficiency of Currently-Available Broadband and Interconnected VoIP Data

9. Notwithstanding the robust statistics and the more granular broadband data that have been reported on FCC Form 477 beginning September 1, 2005, the Commission continues to consider the need to improve its data collection, particularly regarding data reflecting broadband deployment and availability in rural and other hard-to-serve areas, and also regarding subscribership to new broadband-enabled services such as interconnected VoIP service.

##### 1. Broadband Deployment Data

10. In rural and other hard-to-serve areas, we question whether submission of simple Zip Code information such as that currently required by the Form 477 is sufficient to provide a truly accurate picture of the state of broadband deployment. We currently require wireline broadband service providers filing Form 477 to list those Zip Codes where they have at least one broadband subscriber.<sup>30</sup> In sparsely populated rural Zip Codes this could mean that a given provider has just one broadband subscriber who is

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<sup>27</sup> Telecommunications Industry Association, *TIA's Telecommunications Market Review and Forecast*, 71 (2006).

<sup>28</sup> U.S. cable operators had over 5.1 million VoIP subscribers at the end of the third quarter of 2006 according to Cable Digital News ([http://www.lightreading.com/document.asp?doc\\_id=112804&site=cdn](http://www.lightreading.com/document.asp?doc_id=112804&site=cdn), at Tbl. 1, visited 2/12/07) while Telephia estimated 2.9 million households subscribed to “pure play” VoIP service providers (e.g., Vonage, Verizon Voicewing, AT&T CallVantage, Sunrocket, etc.) at the end of the second quarter ([http://www.telephia.com/html/insights\\_072106.html](http://www.telephia.com/html/insights_072106.html), visited 2/12/07).

<sup>29</sup> See, generally, *Universal Service Contribution Methodology, Federal-State Joint Board on Universal Service, 1998 Biennial Regulatory Review – Streamlined Contributor Reporting Requirements Associated with Administration of Telecommunications Relay Service, North American Numbering Plan, Local Number Portability, and Universal Service Support Mechanisms, Telecommunications Services for Individuals with Hearing and Speech Disabilities, and the Americans with Disabilities Act of 1990, Administration of the North American Numbering Plan and North American Numbering Plan Cost Recovery Contribution Factor and Fund Size, Number Resource Optimization, Telephone Number Portability, Truth-in-Billing and Billing Format, IP-Enabled Services*, WC Docket No. 06-122, CC Docket Nos. 96-45, 98-171, 90-571, 92-237, 99-200, 95-116, 98-1790, WC Docket No. 04-36, Report and Order and Notice of Proposed Rulemaking, 21 FCC Rcd 7518 (2006).

<sup>30</sup> We require terrestrial mobile wireless broadband service providers to list Zip Codes that “best represent” their broadband coverage areas. See *2004 Data Gathering Order*, 19 FCC Rcd at 22349-50, 22393, para. 18 & App. D (instructing such providers to report the Zip Codes in which the mobile wireless broadband service is “advertised and available to actual and potential subscribers”).

located in a small town or at some other location convenient to telephone or cable facilities. Broadband “availability” could be non-existent for that carrier’s other customers located a few blocks or many miles away from that single customer. In other words, and notwithstanding the value of data currently submitted on the Form 477, there is more precise information that we could gather to give us a more accurate picture of current broadband deployment. Ideally, we would have information about the choices that a customer faces on a house-by-house and business-by-business basis. We discuss several options in a later section of this Notice that might move us closer to that ideal.<sup>31</sup>

## 2. Wireless Broadband Data

11. We believe we should modify the Form 477 reporting instructions for wireless broadband providers in certain respects, and we seek comment on how best to do so.

12. First, we believe that we should modify the reporting instructions for terrestrial mobile wireless providers to solicit data that will enable us to distinguish among the numbers of subscribers to month-to-month or longer term broadband Internet access packages and casual users. In the current Form 477, which was adopted in the *2004 Data Gathering Order*, information about numbers and types of broadband connections is collected in Part I.A, where filers are directed to “[c]omplete Part I.A if you provide one or more lines or wireless channels in the state that connect end users to the Internet [at broadband speed].”<sup>32</sup> However, the detailed reporting instructions for terrestrial mobile wireless providers are to “[r]eport the number of subscribers to broadband services provided over terrestrial mobile wireless facilities . . . .”<sup>33</sup> More specifically, the instructions are to “report the number of end users whose mobile device, such as wireless modem laptop cards, smartphones, or handsets, are capable of sending or receiving data at speeds in excess of 200 kbps . . . .”<sup>34</sup> We find that we are currently unable to determine from the reported data the number of subscribers who make regular use of a broadband Internet access service as part of their mobile service package. Moreover, we believe the current instructions make it likely that more and more mobile voice service subscribers will be reported as mobile broadband subscribers merely by virtue of purchasing a broadband-capable handset, rather than a specific Internet plan.

13. The Commission has observed that many mobile data services are marketed primarily as an add-on to mobile voice service.<sup>35</sup> These services include mobile data services that enable subscribers to send text and multimedia messages, download ringtones and games, and access other content on handsets, as well as mobile data services that enable subscribers to browse web sites customized for handsets.<sup>36</sup> We have discussed how mobile service subscribers who wish to browse web sites customized for handsets generally may choose a month-to-month plan that includes such browsing, and that some

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<sup>31</sup> Section III.B., *infra*.

<sup>32</sup> *2004 Data Gathering Order*, 19 FCC Rcd at 22378.

<sup>33</sup> *2004 Data Gathering Order*, 19 FCC Rcd at 22387 (instructions for Line A.I-8).

<sup>34</sup> *Id.*

<sup>35</sup> See, e.g., *Eleventh CMRS Competition Report*, at para. 95.

<sup>36</sup> *Id.*

carriers also offer a casual usage plan.<sup>37</sup> And we have observed that, aside from handset-based applications, mobile wireless carriers offer month-to-month Internet access packages for data users who access the Internet through laptop computers or certain Personal Digital Assistants (“PDAs”), including mobile wireless Internet access packages for wireless broadband networks.<sup>38</sup>

14. Based on these observations about various mobile wireless data services, we seek comment on whether we should revise the Form 477 instructions to require mobile wireless providers to report, separately, the number of month-to-month (or longer term) subscriptions to broadband Internet access service designed for wireless devices that have their own browsers (“full Internet browsing” for purposes of this Notice), such as laptop computers and PDAs. We also ask whether we should require mobile wireless providers to report, separately, the number of month-to-month (or longer term) subscriptions for broadband-speed browsing of customized-for-mobile web sites (“mobile web browsing” for purposes of this Notice). Further, we seek comment on whether we should require mobile wireless providers to report, separately, the number of *unique* mobile voice service subscribers who are not month-to-month (or longer term) subscribers to an Internet access service, as discussed above, but who nevertheless made *any* news, music, video, or other entertainment downloads to the subscriber’s handset *at broadband speed* during the month preceding the Form 477 reporting date (*i.e.*, during June, or during December). We seek specific comment on whether the above-described delineations among types and levels of service are appropriate in light of market and technological factors. Commenters should explain how an alternative approach would ensure that mobile voice service subscribers will not be reported as mobile broadband subscribers merely by virtue of purchasing a broadband-capable handset, rather than a specific Internet plan.<sup>39</sup>

15. We also seek comment about whether we should modify any other parts of the Form 477 instructions for mobile wireless broadband providers. We note that the current instructions direct these providers to include in their subscriber counts those end users “whose billing addresses are within the areas of terrestrial mobile wireless broadband availability. . . .”<sup>40</sup> The idea behind this instruction is that end users should not be reported as broadband subscribers if they are not generally present in an area where mobile broadband service is available. While this may become less likely as wireless broadband networks are more extensively deployed, it appears that some voice service subscribers are reported as mobile broadband subscribers only because they have broadband-capable handsets and that this may include persons who do not reside (or work) where mobile broadband is available. However, we also recognize that the billing address for some business end users may not indicate where the broadband

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<sup>37</sup> *Eleventh CMRS Competition Report*, at para. 96.

<sup>38</sup> *See, e.g., Eleventh CMRS Competition Report*, at para. 100 (noting Verizon Wireless’s EV-DO-based Broadband Access service, Sprint’s EV-DO service, and Cingular’s WCDMA/HSDPA-based BroadbandConnect service). We observe that Verizon Wireless and Cingular appear to restrict the ability of data service subscribers to download audio, video, and games to their laptops or browser-equipped PDAs, which may suggest that the carriers perceive these customers to be a different group, with different needs, than their voice service subscribers who also subscribe to entertainment services for mobile handsets. *See* R. Pegoraro, “Fast Forward: Hookups That Let You Violate Service Terms Anywhere”, *The Washington Post*, 12/17/06, F4. Also available at <http://www.washingtonpost.com/wp-dyn/content/article/2006/12/16/AR2006121600034.html> (visited 12/19/06).

<sup>39</sup> *See* para. 12, *supra*.

<sup>40</sup> *2004 Data Gathering Order*, 19 FCC Rcd at 22387 (instructions for Line A.I-8).



Internet access service is primarily used, *i.e.*, if a single corporate address is the billing address for subscriptions used by employees working in various areas. Therefore, we invite comments on how this particular instruction might be improved, while keeping in mind that we do not want to count, as broadband subscribers, mobile voice service subscribers who have purchased a broadband-capable handset but not an Internet plan.

16. We also seek comment about how we could improve the Form 477 instructions for reporting the percentage of mobile wireless broadband subscribers who are residential end users.<sup>41</sup> Experience with the current Form 477 suggests to us that mobile wireless broadband providers are not using comparable methodologies to estimate the residential percentage. In the latest aggregated Form 477 data, about 11 percent of mobile wireless broadband subscribers are reported as residential. This percentage may be low, since broadband-capable handsets are widely available and appear to be an increasingly popular consumer product. Therefore, we seek comment on whether we should modify the instructions for mobile wireless broadband providers to require that they report, as residential subscribers, all subscriptions that are not billed to a corporate customer account, to a non-corporate business customer account, or to a government or institutional account. Would this modification result in more accurate estimates of residential end users than we receive now? Are there different modifications to the current reporting instructions that would yield even better estimates? Or, instead, should we explicitly require providers to undertake special studies for this purpose?

17. Regarding wireless broadband Internet-access services more generally, we invite comment in three areas. First, we ask whether, and how, we could modify our Form 477 instructions to collect useful information about households and businesses who subscribe to commercially deployed community Wi-Fi broadband Internet access service, for primary use at the subscriber's residence or business location.<sup>42</sup> Second, we specifically invite comment on whether we should add a terrestrial portable (or nomadic) wireless broadband technology category to the Form 477.<sup>43</sup> Adding this technology category could provide the Commission with an improved ability to monitor the development

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<sup>41</sup> *2004 Data Gathering Order*, 19 FCC Rcd at 22388 (instructions for Part I.A, Column (b)). Instructions are the same for all broadband technologies, *i.e.*, to report the percentage of connections that "are used to deliver Internet-access services that are *primarily* purchased for, designed for, and/or marketed to residential end users." Filers who do not routinely distinguish residential customers from other customers may use existing information, such as price, service speed, and other service features to make a good faith estimate of the residential percentage. In the absence of any of this information, a filer "should rely on studies done for other purposes such as marketing and business plan information, demographic data, etc. [and] should conduct limited special studies only in the event that it cannot provide estimates of percentage breakouts that it reasonably expects to be accurate within plus or minus five percentage points." *Id.* (general note about reporting percentage breakouts).

<sup>42</sup> Form 477 excludes from the broadband data collection those Wi-Fi and other wireless ethernet, or wireless local area network, applications that only enable the shared use of a broadband connection to a single premises, such as a restaurant, airport, or government building. Such "nomadic" users of broadband services typically would have a broadband Internet-access connection at their home or principal business location. (Wi-Fi generally refers to equipment that conforms to the Institute for Electrical and Electronics Engineers (IEEE) 802.11 standard; *see, e.g.*, <http://www.ieee.org/portal/pages/about/802std>.)

<sup>43</sup> With this addition, Form 477 would collect information about four types of wireless broadband connections: satellite; terrestrial fixed wireless (licensed or unlicensed); terrestrial portable wireless (licensed or unlicensed); and terrestrial mobile wireless (licensed or unlicensed).

of terrestrial wireless broadband services, including services over WiMax infrastructures,<sup>44</sup> which need not be used on a fixed basis but cannot be used while traveling at high speeds with signal handoff.<sup>45</sup> Third, we seek comment on whether we need to clarify how the Form 477 instructions apply to satellite broadband capabilities provided by carriers to enterprise customers who operate their own corporate networks.

### 3. Speed Tiers

18. We seek comment on whether we should refine the speed tier information we currently collect on Form 477 by splitting into two tiers the speed tier defined by information transfer rates greater than 200 kbps and less than 2.5 mbps.<sup>46</sup> We specifically ask whether it would be appropriate to define the lower of the resulting two tiers by information transfer rates greater than 200 kbps and less than 1.0 mbps.<sup>47</sup>

19. We ask whether the Commission should develop a higher or more varied measurement of broadband speed in the Form 477 program. Do our current speed tier definitions enable us to understand the evolving dynamics of the broadband marketplace as providers offer faster and faster connections? Would our understanding of the rapidly evolving broadband marketplace be enhanced if we raised the current minimum threshold for reporting the speed tier information specified on Form 477 (*i.e.*, greater than 200 kbps in both directions)? More generally, should the Commission's definition of broadband allow different upstream and downstream speeds? We also ask if we should raise the current minimum threshold for reporting *any* connections on the Form 477 (*i.e.*, greater than 200 kbps in at least one direction, which is generally "downstream" to the end user)? Do services with downstream connection speeds only slightly greater than 200 kbps continue to be an important stepping stone for broadband adoption by households, including households in rural and other hard-to-serve areas?

20. We seek comment on whether and how the Commission could establish a system whereby the Form 477 speed tiers would be automatically adjusted upwards over time to reflect technological advances. What information would we need to design a meaningful system? Would the bandwidth requirements of particular services and applications provide useful guidance? We specifically

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<sup>44</sup> WiMAX is an industry term for equipment that conforms to the IEEE 802.16 WirelessMAN® Standard for Wireless Metropolitan Area Networks; *see, e.g.*, <http://grouper.ieee.org/groups/802/16/>; <http://www.wimaxforum.org/technology/faq/>.

<sup>45</sup> At present, a Form 477 filer might report a nomadic wireless broadband connection (such as to a broadband-equipped police patrol vehicle) as a terrestrial fixed wireless connection or as a terrestrial mobile wireless connection.

<sup>46</sup> In all five current Form 477 speed tiers, all connections are faster than 200 kbps in both directions. The speed tiers are distinguished by the information transfer rate in the faster direction: (1) greater than 200 kbps and less than 2.5 mbps; (2) greater than or equal to 2.5 mbps and less than 10 mbps; (3) greater than or equal to 10 mbps and less than 25 mbps; (4) greater than or equal to 25 mbps and less than 100 mbps; and (5) greater than or equal to 100 mbps. Within any speed tier, reported connections may be asymmetric or symmetric.

<sup>47</sup> The upper of the resulting two tiers would be defined by information transfer rates greater than or equal to 1.0 mbps and less than 2.5 mbps, and filers would report information for a total of six speed tiers compared to the current five.

invite comment on the extent to which there is general industry agreement on the bandwidth requirements of such regularly cited applications as distance learning, telemedicine, downloading of movies, latency-sensitive video services, and high definition TV. How should we account for differences in the bandwidth requirements of particular applications across different delivery platforms (*e.g.*, high definition TV requires about half of a 6 MHz channel on a cable system using 264 QAM modulation and MPEG-2 compression encoding, but about half that bandwidth when MPEG-4 encoding is used)?

21. We ask whether broadband providers are placing their reported broadband connections into speed tiers in a consistent manner. We seek comment on industry practices for matching advertised “up to” speeds with probable customer experience. We also wish to refresh the record on whether we effectively could modify the Form 477 reporting instructions to require filers to categorize broadband connection by the download and upload speeds experienced by actual customers rather than the theoretical maximum that a given network can support or the particular service configuration allow. Are there existing, administratively workable industry standards or practices for measuring typical or actual speeds delivered to end users?

#### 4. Interconnected VoIP Subscribership Data

22. At present, only some LECs include interconnected VoIP subscribers in the local telephone service information they report on Form 477. Interconnected VoIP service providers who are not LECs are not required to file Form 477. Therefore, we invite comment on how we could modify the Form 477 to collect useful information about the number of interconnected VoIP service subscribers in service in the least burdensome manner.<sup>48</sup> We specifically invite comment on whether collecting the following state-level information, from all retail and wholesale providers of interconnected VoIP service, would yield sufficient information for us to track deployment and adoption of VoIP service across the nation. We propose requiring all retailers of interconnected VoIP service to report: (1) the number of interconnected VoIP subscribers in service for whom the filer is the service retailer, (2) the percentage of retail interconnected VoIP subscribers who are residential, as opposed to business, end users, and (3) the percentage of retail interconnected VoIP subscribers who receive that service over a broadband connection provided by the filer (or by the filer’s affiliate).<sup>49</sup> Also, we propose requiring wholesalers of interconnected service to report the number of interconnected VoIP service subscribers the filer serves on a wholesale basis.<sup>50</sup>

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<sup>48</sup> “Interconnected VoIP service” means an interconnected voice over Internet Protocol service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user’s location; (3) requires Internet protocol-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network. *See* 47 C.F.R. § 0.3.

<sup>49</sup> The Commission’s jurisdiction over interconnected VoIP providers is well established regardless of the Commission’s ultimate classification of that service. *E911 Requirements for IP-Enabled Service Providers*, First Report and Order and Notice of Proposed Rulemaking, WC Docket No. 05-196, 20 FCC Rcd 10245, 10246, para. 1 (2005) (*VoIP 911 Order*).

<sup>50</sup> When a provider of interconnected VoIP service operates as a wholesaler, an unaffiliated party resells (“retails”) the wholesaler’s service to the end user of that service. Some entities may operate as a retailer and wholesaler.

## B. Proposals for Refining Commission Analysis of Broadband Deployment and Availability

23. In this section, we discuss several possible methods for increasing our understanding of broadband deployment and availability. We begin with approaches for increasing our understanding of broadband deployment that place little or no additional burdens on data filers but that may yield commensurately modest analytic benefits. We proceed to describe other approaches that could in fact yield a more detailed and dynamic understanding of broadband deployment, some of which could prove to be costly to data reporters or impractical. We seek comment about whether, and how, data filers should be required to report information about the prices at which they offer broadband services. We seek comment about the technical feasibility, costs and benefits of each of the approaches we discuss below. In order to appropriately analyze the costs and benefits of each approach/proposal, the Commission seeks evidence that quantifies the costs of each alternative, including initial set up costs, recurring direct costs and reasonably attributable indirect costs. Commenters should identify all costs with as much precision as they can and should identify and analyze the potential benefits that each approach yields. We also invite commenters to suggest and to explain in detail alternative methods of data collection beyond those identified herein.

24. In the *2004 Data Collection Order* the Commission concluded that the benefits to the policy making process that derive from requiring all filers – including smaller entities that serve sparse populations over wide geographical areas – to report the same data outweigh the reporting burdens on new Form 477 filers (*i.e.*, entities required to file Form 477 once mandatory reporting thresholds were eliminated.)<sup>51</sup> The Commission recognized, however, the particular concerns about reporting burden of some smaller carriers, and consequently decided not to pursue at that time certain options similar to options about which we seek comment in this Notice. Therefore, we seek comment whether, if we require the submission of additional information, we should require *all* filers to report those data. We also invite comment on ways to mitigate the burden on smaller filers short of implementing reporting thresholds or other exemptions.

### 1. Additional Analysis of Current Broadband Subscribership Data

25. We begin by asking whether the Commission could more closely analyze the broadband subscribership data it currently collects to identify more precisely the areas where broadband is not available, particularly to households.<sup>52</sup> For example, currently available data suggest that about 12% of

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<sup>51</sup> *2004 Data Gathering Order*, 19 FCC Rcd at 22346-47, para. 12.

<sup>52</sup> The GAO report finds that the Form 477 Zip Code information “may not provide a highly accurate depiction of local deployment of broadband infrastructures for *residential* service, especially in rural areas” and concludes that the data “are not structured in a way that accurately illustrates the extent of deployment to *residential* users” (*GAO Broadband Deployment Report*, at 1, 38 (emphasis supplied)). Form 477 requires facilities-based broadband providers to report state-level information about the percentage of their broadband connections that are residential in the sense that the connection is of a type (as indicated by, *e.g.*, price, “speed,” or other features) that is primarily purchased by, designed for, and/or marketed to residential end users. Starting with the September 1, 2005 filing, Form 477 filers are required to report technology-specific Zip Codes lists. Some of these technologies – including, in particular, asymmetric DSL and cable modem – are primarily used for residential connections at this time. Within any technology-specific list of Zip Codes, filers do not identify those Zip Codes with residential broadband connections, as opposed to those Zip Codes with any broadband connections.

5-digit geographical Zip Codes have no providers of primarily residential, wired high-speed Internet access services delivered over “last mile” facilities the provider primarily owns. These Zip Codes contain about 2% of the U.S. population.<sup>53</sup> Should we simply identify such areas for further, individual study? For these identified areas, should we analyze the full range of competitive choices including deployed broadband infrastructure, service offerings in the marketplace, and service offering prices? How should we conduct such studies? Do existing data sources available to the Commission, including the Form 477 data, allow us to study the needs of discrete communities of users, for example, Native Americans on tribal lands?<sup>54</sup> Are there better and more fruitful ways to frame questions about Form 477 data in the context of particular technologies utilized by broadband providers, for example, providers using satellite technology?

26. As we consider the possible need for additional data, we remain vigilant for ways to use the data we have currently as effectively as possible. GAO worked with a state broadband alliance (ConnectKentucky) to use their data to troubleshoot Form 477 data regarding broadband availability in Kentucky.<sup>55</sup> Based on its comparison analysis, GAO concluded that the Form 477 data “may overstate the availability and competitive deployment of nonsatellite broadband.”<sup>56</sup> Should the Commission explore collaborations, such as the one between GAO and ConnectKentucky, to troubleshoot its own data or to prepare discrete state or region-specific reports? How feasible is this given related costs and company concerns about sharing confidential information with private/commercial third parties? Would information developed by collaboration with various third parties be consistent? Which states have

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<sup>53</sup> Starting with the Form 477 filing due September 1, 2005 (reporting data as of June 30, 2005), entities that report broadband connections must provide technology-specific lists of the Zip Codes in which the filer has at least one broadband connection *in service* to an end user. Our 12% estimate is derived as 100% minus 88%, where 88% is our estimate of the percentage of 5-digit geographical Zip Codes that are reported on Form 477 by *at least one* broadband provider whose reported broadband connections are primarily residential, and are primarily deployed over wired “last mile” facilities owned by the provider. To develop the 88% estimate, we first determine which Zip Codes are reported in the lists for asymmetric DSL, symmetric DSL, cable modem, optical carrier (fiber to the end user), or electric power line technologies. Then we exclude any Zip Codes that were listed by a Form 477 filer who reported that 50% or fewer of its high-speed lines – for that specific technology, in that particular state – were residential *or* who reported that fewer than 50% of its high-speed lines – for that specific technology, in that particular state – were deployed over “last mile” facilities that the filer owns.

<sup>54</sup> *GAO Broadband Deployment Report*, at 15 n. 14.

<sup>55</sup> ConnectKentucky is a public-private alliance whose mission is to support technology-based economic development. Kentucky has undertaken a broadband deployment and adoption plan, which has produced detailed broadband inventory maps using Geographic Information System (GIS) mapping technology and grassroots data collection via community technology leadership teams and cooperating broadband providers. The community teams also work to develop community-specific plans to increase demand for broadband technology, and thereby make the community more attractive to potential broadband providers. *See, generally, www.connectkentucky.org. See also GAO Broadband Deployment Report*, at 25, 28 (leadership from state government, in particular from the governor’s office, the key element cited as crucial to ConnectKentucky’s success). (According to the U.S. Geological Survey, a GIS is a computer system capable of capturing, storing, analyzing, and displaying geographically referenced information; that is, data identified according to location. Practitioners also define a GIS as including the procedures, operating personnel, and spatial data that go into the system. *See* [http://erg.usgs.gov/isb/pubs/gis\\_poster/#what](http://erg.usgs.gov/isb/pubs/gis_poster/#what).)

<sup>56</sup> *GAO Broadband Deployment Report*, at 17.

public-private economic development or other initiatives that have developed comprehensive localized information about broadband availability?<sup>57</sup> Where such information exists, can it be shared with the Commission? Where such information does not exist, are there plans to develop it? For example, might the ConnectKentucky approach be readily adaptable in other states? In sum, we invite comment regarding methods of analyzing currently available data that could provide better or more focused insights into the dynamics of broadband deployment and availability nationwide or in particular geographic regions, in connection with specific technologies, or with regards to the needs of discrete communities of users.

27. We seek comment on ways to better utilize Zip Code data currently submitted by Form 477 filers. Would requiring filers to submit customer counts along with Zip Code lists facilitate better analysis of broadband availability/deployment in specific Zip Codes? We are skeptical that analysis of customer totals submitted at the 5-digit level of aggregation could significantly increase our understanding of the dynamics of broadband availability and deployment, *i.e.*, because any methodology based on a 5-digit Zip Code aggregation will continue to yield results that do not accurately depict broadband availability in particular, localized areas within a Zip Code. Nevertheless, we seek comment whether such an approach could be fruitful. In particular, we seek detailed comment regarding the costs as well as the benefits of such an approach. We ask commenting providers to provide projected costs and related analysis at a level of detail sufficient to support their assertions, as well as other relevant information. For example, what steps would providers have to implement to furnish this information per available network/system technology and personnel and other resources? Do the characteristics of particular technologies make counting subscribers by Zip Code problematic and, if so, are there useful substitute approaches for those technologies?<sup>58</sup> We ask commenters to estimate separately the cost for an initial collection, which would presumably entail certain start-up costs, and the cost of subsequent collections, which might be able to realize certain efficiencies.

28. We invite comment on whether we should require all broadband providers to report the number of residential customers served (in place of the current requirement to report the percentage of total broadband connections in service that are residential connections) and also the number of homes “passed” by their broadband-enabled infrastructure. Collecting both the number of residential customers served and the number of homes passed by each Form 477 filer’s broadband-enabled infrastructure could enable us to calculate and compare consumer broadband uptake figures (*i.e.*, the ratio between adoption and availability).<sup>59</sup> We seek specific comment on how “passing” should be defined for this purpose, for each of the broadband technologies specified in the current Form 477, to enable us meaningfully to compare consumer uptake figures.<sup>60</sup>

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<sup>57</sup> See, *e.g.*, Iowa Utilities Board, *Assessing High-Speed Internet Access in the State of Iowa: Fifth Assessment* (May 2006). Available at [http://www.state.ia.us/government/com/util/Misc/Reports/InternetAccess\\_2006Revised.pdf](http://www.state.ia.us/government/com/util/Misc/Reports/InternetAccess_2006Revised.pdf).

<sup>58</sup> For example, while wireline broadband service providers currently are required to report the Zip Codes where they have at least one broadband subscriber, providers of terrestrial mobile wireless broadband services are required to report the Zip Codes that best represent the carrier’s mobile wireless broadband coverage areas. See *2004 Data Gathering Order*, 19 FCC Rcd at 22349-50, para. 18.

<sup>59</sup> See also para. 47, *infra*.

<sup>60</sup> See *2004 Data Gathering Order*, 19 FCC Rcd at 22387 (instructions for Lines A.I-1 through A.I-9).

29. We ask generally whether there are other ways in which we could make better use of the broadband data we currently collect on Form 477. For example, the semiannual report based on the Form 477 data include tables showing how broadband Internet subscribership varies among 5-digit geographical Zip Codes based on population density and household incomes. We are able to develop these tables because a commercial vendor has translated Census Bureau data (which is not collected by Zip Code) into Zip Code-level data for those particular variables (*i.e.*, population density and income). We invite commenters to identify, with specificity, comparable commercial products that translate, to the Zip Code-level, Census Bureau information about household education, race (including tribal lands), or disability status, so that we might include in our semiannual report tables showing how broadband Internet subscribership varies among Zip Codes based on these demographic variables.

30. We also invite comment on whether the Commission's semiannual report should include figures about international broadband adoption, prices, or other measures that are developed by the Organization for Economic Cooperation and Development (OECD) or the International Telecommunications Union (ITU). We ask for comment about which such figures we should include. Ideally, any such figure will be published regularly and will be based on comparable definitions, measurement standards, and reporting practices. We ask, in particular, if a regularly published, reliably comparable figure is available on the cost per bit in leading industrial nations (for both residential and business customers). More generally, how could the Commission conduct a regular analysis of broadband policies in other nations and how their regulatory policies have played out? We seek specific comment on whether and how we should present such analysis, *e.g.*, either in our semiannual report or the less frequent section 706 report.

## **2. Subscribers per 9-digit Zip Code**

31. We seek comment about whether we should require Form 477 data filers to submit 9-digit Zip Codes and associated customer counts. A 9-digit level of geographic aggregation coupled with such customer information could provide more granular information about deployment than 5-digit information. Nevertheless, we recognize that associated costs could be greater. We ask, specifically, whether current Form 477 filers, including any of their affiliates, or their marketing partners or agents maintain information about the end-user termination locations (*e.g.*, service addresses) of wired and fixed wireless broadband connections that includes the 9-digit Zip Code of that location – particularly information about *residential* end-user termination locations. If not, do Form 477 filers maintain billing address information at the 9-digit Zip Code level, and would such data be a sufficiently accurate proxy for service location? Do Form 477 filers typically maintain any other types of information that could be used to identify the 9-digit Zip Codes of end-user termination locations? We ask commenters to undertake the same kind of cost/benefit analysis regarding 9-digit Zip Code data as discussed in the previous paragraphs, *i.e.*, by discussing costs associated with implementation and associated potential benefits. We also seek comment about whether there is significant value associated with simply requiring data filers to report lists of 9-digit Zip Codes where they have at least one customer, but without requiring associated customer counts by Zip Code.

## **3. Purchase of Commercial Databases or Services**

32. We seek specific comment regarding the availability of commercial sources of broadband deployment data or data-processing programs that could augment or otherwise add value to our use of Form 477 data, or reduce the associated costs and other burdens imposed on reporting providers. What existing databases could we combine productively with the current Form 477 data? Are

such databases accurate, current, and national in scope? We ask, specifically, whether the online-search software, and associated databases, that many broadband providers have developed to allow households to check whether broadband service is available at their home telephone number, street address, or Zip Code can readily be adapted to provide localized broadband deployment information. Do data-processing or consulting companies exist whose operations or services could add value, or diminish associated collection burdens? For example, if (as discussed below) we decide to require additional Zip Code information (9-digit codes) or subscriber information per Zip Code in connection with the current Form 477 program, would it be feasible and/or desirable for a data-processing company, rather than the provider itself, to add 5-digit or 9-digit Zip Codes to subscriber lists, and to identify the number of subscribers per Zip Code? Would there be economies of scope and scale to a region- or nationwide contract that would make such private assistance affordable to providers? Would such an approach raise special concerns about confidentially-submitted company information or consumer privacy, and how could such concerns be addressed? As we seek to understand more clearly the cost to providers of gathering and reporting additional broadband data, should we also explore engaging commercial data processors to conduct sample surveys and report sample information? We encourage commenters to carefully consider such approaches to current data augmentation as well as ways to reduce associated burdens.

#### **4. Geocoded Information about Subscriber Locations**

33. We also seek comment about non-Zip Code based approaches to using subscriber-based information to more precisely identify the geographic areas where broadband is deployed, such as requiring providers to report geocoded information (*e.g.*, latitude and longitude) for the premises of their subscribers.<sup>61</sup> Requiring subscriber counts by Zip Code could prove to be the least costly and most feasible change to our Form 477 data collection, *i.e.*, to most efficiently produce additional information that would materially advance our understanding of broadband availability. Are there other, more exact and accurate means of attaining that goal? How would such a method of data collection operate? We encourage suggestions from commenters that envision a non-Zip Code based approach to data collection, particularly alternatives that would yield data that is at least as granular as 9-digit Zip Code data augmented with customer counts by Zip Code.

#### **5. Develop Automated System of Voluntary Reporting by Non-served Households**

34. We also seek comment about the feasibility and value of implementing a voluntary self-reporting system by non-served households, patterned after the National Do-Not-Call Registry. Under this proposal, non-served households could identify themselves at a Commission-maintained electronic bulletin board (web page address) and/or telephone number call-in address where they would provide the limited information, *e.g.*, home address with (preferably 9-digit) Zip Code, and the wired or fixed wireless telephone number at that particular location, that is needed to identify the particular non-served location. Would such a system be an effective and efficient way to identify localized areas where broadband services are not available? Would the reported information be accurate or, for example, might

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<sup>61</sup> Geocoding is the process of assigning geographic identifiers, such as latitude-longitude coordinates, to data records, such as street addresses. *See, e.g.*, [http://fgdc.er.usgs.gov/framework/frameworkintroguide/append\\_a.html](http://fgdc.er.usgs.gov/framework/frameworkintroguide/append_a.html) (defining “geocode”). With geographic coordinates, the features can then be mapped and entered into a Geographic Information System (GIS).



potential subscribers not be aware of all broadband options available to them? Would such a system in fact enable the Commission and other governmental entities to focus (limited) government resources to encourage broadband availability more efficiently, *i.e.*, by targeting areas where there is evidence of actual demand for broadband services? We seek comment on the costs and potential benefits of such a proposal.

## 6. Broadband-enabled Service Territory Report by Provider

35. In each of the previously discussed approaches we rely on *broadband subscription* as a proxy for broadband availability. We assume that in Zip Codes where none or very few of the residents subscribe to broadband services, such services are unavailable, and vice versa. As GAO has found, while broadband infrastructure deployment is extensive, information about where subscribers are served may not depict with a high degree of accuracy the local deployment of broadband, especially in rural areas.<sup>62</sup> Alternatively, we could require data filers to report information about their customers and the *broadband-enabled service territory* – *i.e.*, the specific geographic area, which might include only parts of particular Zip Codes – where they offer and/or currently deploy broadband services, particularly residential services. By collecting and studying such data comparatively, we could arrive at a far clearer understanding of the actual dynamics of broadband availability in discrete geographic areas and to different communities of users. We seek comment about the need for and feasibility of requiring broadband providers to report information that delineates in detail the boundaries of their broadband-enabled service territories. What methodologies are available for developing such information? What requirements would we need to specify to ensure that providers apply a methodology with enough uniformity to yield useful information? Terrestrial mobile wireless broadband service providers are currently required to report Zip Codes that best represent their coverage areas. Does this standard yield a sufficient level of detail about the deployment of those services? Are there alternate or additional reporting requirements that would provide more useful data on mobile wireless broadband deployment without imposing an undue burden on the providers? We ask commenters to undertake the same kind of cost/benefit analysis that we discussed earlier with respect to 5-digit and/or 9-digit Zip Code information, *i.e.*, by discussing costs associated with implementation and associated potential benefits.<sup>63</sup>

36. While we are aware that, at present, precise information about the boundaries of the localized areas where broadband is generally available might be difficult for certain broadband providers to gauge, results achieved by broadband mapping initiatives such as those in Kentucky and Wyoming suggest that the difficulties are not insurmountable.<sup>64</sup> We understand, for example, that municipal cable systems and the Kentucky Cable Telecommunications Association (KCTA) are working with ConnectKentucky to map in fine detail (*e.g.*, street-by-street, and sometimes block-by-block) the

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<sup>62</sup> *GAO Broadband Deployment Report*, at GAO Highlights (unnumbered page following report cover).

<sup>63</sup> See paras. 27, 31, *supra*.

<sup>64</sup> See para. 26, *supra*. See also CostQuest Associates, Inc. and the State of Wyoming, *Wyoming Broadband Gap Analysis* (Revised Apr. 23, 2006), at 6-10 (outlining how geospatial information provided by carriers, and other information, was used to approximate the areas where DSL, cable modem, and/or terrestrial fixed wireless broadband is available to households in Wyoming; noting that such approximations may include areas of non-coverage due to plant deficiencies or local topography within urban areas, or lightly populated land areas not served by any broadband provider). Available at [http://www.costquest.com/costquest/docs/Wyoming%20Broadband%20Gap%20Whitepaper-4\\_23\\_06.pdf](http://www.costquest.com/costquest/docs/Wyoming%20Broadband%20Gap%20Whitepaper-4_23_06.pdf).

boundaries of the areas where cable modem broadband is available.<sup>65</sup> We also understand that the Kentucky mapping initiative has identified localized areas of DSL broadband availability by obtaining, from at least some carriers, detailed location information (*i.e.*, latitude and longitude) for the carrier's DSL-enabled wire centers *and remote terminals*, and assuming that DSL service is available within a 13,200-foot (2.5-mile) radius around the DSL-enabled equipment.<sup>66</sup> The Kentucky initiative has also collected detailed facilities information (*e.g.*, latitude and longitude of towers, type of antenna technology, whether coverage is omni-directional or partial) from at least some commercial providers of wireless broadband service.<sup>67</sup> Therefore, the Kentucky experience suggests that providers can delineate their areas of broadband deployment at much finer levels of detail than the Zip Code based data we now collect on Form 477. We are also aware that, in localized areas where broadband is generally available, site-specific factors may impede availability to individual households.<sup>68</sup> What steps, if any, should we take to enable providers to report broadband availability, not by subscriber proxy but by actual territory served (*e.g.*, a data collection or mapping system)?

37. We invite comment on whether this approach is feasible for tribal lands and how it could most effectively be implemented on tribal lands. As GAO has found, subscribership to Internet-access services (of any speed) by Native American households on tribal lands is unknown because no federal survey has been designed to track this information.<sup>69</sup> As GAO also found, the Commission's Form 477 data cannot be used to determine the number of residential Internet subscribers on tribal lands.<sup>70</sup> We seek specific comment on how the Commission can best measure broadband deployment/availability and adoption on tribal lands.

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<sup>65</sup> See information in the Cable Broadband Service and the Municipal Cable Broadband Service layers of the Kentucky Infrastructure Authority broadband deployment map at <http://kygeonet.ky.gov/kybroadband/viewer.htm>.

<sup>66</sup> *Id.* See also information in the LEC Broadband Service layer of the Kentucky Infrastructure Authority broadband deployment map at <http://kygeonet.ky.gov/kybroadband/viewer.htm>, which appears to incorporate information for Alltel, Cincinnati Bell, and the BellSouth operations now owned by AT&T. Regarding the service territories of smaller incumbent LECs, see information in the ILEC Broadband Service layer of the Kentucky map.

<sup>67</sup> See information in the WISP Broadband Service and the Municipal Wireless Broadband Service layers of the Kentucky Infrastructure Authority broadband deployment map at <http://kygeonet.ky.gov/kybroadband/viewer.htm>.

<sup>68</sup> For example, the presence of load coils and/or bridge taps on some copper wire may require carriers to make case-by-case tests for DSL requests. Similar constraints affect cable operators. Site-specific topology, landscaping, and climate conditions can determine whether a wireless broadband service is available at a particular location.

<sup>69</sup> United States Government Accountability Office, *Challenges to Assessing and Improving Telecommunications for Native Americans on Tribal Lands*, GAO-06-189 (Jan. 2006) (*GAO Tribal Lands Report*), at 16 (the Census Bureau's new American Community Survey will provide data on tribal lands but does not include a question on Internet access; the monthly survey of households conducted by the Census Bureau for the Bureau of Labor Statistics contains too few tribal lands households to provide reliable estimates).

<sup>70</sup> *Id.*, at 17 (providers are not required to report the number of residential broadband Internet-access subscribers in each Zip Code; tribal lands so not necessarily correspond to Zip Codes).

## 7. Other Alternatives

38. We ask whether there are other alternatives we can explore to better identify the extent of broadband deployment in rural areas and tribal lands across the nation.

## 8. Extrapolating Nationwide Competitive Conditions from Conditions in Representative Areas

39. We invite comment on whether, even if more granular data cannot reasonably be collected across the entire country, it would be appropriate and feasible for the Commission to develop more accurate estimates of the competitive choices in representative urban, metropolitan, exurban, low-income, tribal, and rural areas and then use weighted extrapolation techniques to get a picture of nationwide competitive conditions. We ask whether detailed infrastructure deployment maps for representative areas could be developed, based on the location of municipal cable system facilities and local exchange carrier DSLAMs, which would give a house-by-house picture of where those broadband infrastructures are deployed.

40. We seek comment on whether we should collect key demographic information (*e.g.*, income, education, race (including tribal status), and disability status) about households located in those parts of the representative areas in which cable modem or DSL infrastructures have been deployed, to illustrate the relationship between these factors and broadband adoption.<sup>71</sup> Which demographic variables should we measure? Does conducting meaningful analysis require demographic information about individual households? If it does, could the cable system and/or DSL service provider in the representative area provide that information? Alternatively, could we effectively use publicly available Census Bureau detailed demographic information (which would not identify individual households)? In general, are there public sources of detailed demographic information for representative areas? Commenters who are aware of such sources should identify them with specificity and explain why they are appropriate to use.

41. Should the Commission also collect income, education, and other demographic information about households located in the parts of the representative areas where broadband infrastructures have not been deployed, to illustrate the relationship between these factors and broadband deployment?<sup>72</sup> Which demographic variables should we measure? Could the cable system and DSL service provider (or the local exchange carrier, if DSL infrastructure has not been deployed) provide that information? Would it be more cost effective or appropriate to use demographic information that is publicly available from the Census Bureau (which does not identify individual households)? Are there publicly available commercial sources of geographically detailed demographic data that we could use? We ask commenters to identify such sources with specificity and to explain why they are appropriate to use.

42. We ask whether collecting detailed information about deployment of two broadband technologies (*i.e.*, cable modem and DSL) would be sufficient to inform broadband policy making. Are there any other broadband technologies for which it is feasible to develop a house-by-house picture of

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<sup>71</sup> See, *e.g.*, *GAO Broadband Deployment Report*, at 55-58 (estimation results from broadband adoption model).

<sup>72</sup> See, *e.g.*, *GAO Broadband Deployment Report*, at 46-47 (estimation results from broadband deployment model)

infrastructure deployment and key household demographic variables (e.g., income, education, race (including tribal status), and disability status) in representative areas?

43. We invite specific comment on how we should identify particular areas as representative areas, to ensure that weighted extrapolation techniques will provide a statistically accurate picture of nationwide competitive conditions. Is there at this time a known set of such representative areas? If not, what is the Census Bureau or other source of data that can be used to select specific areas to represent urban, metropolitan, exurban, low-income, tribal, and rural areas, respectively? We ask commenters to identify that data source, or sources, with specificity and to explain why the source is appropriate to use. Should the extent of broadband deployment in an area be taken into account in selecting the representative areas? If so, how should it be taken into account? As we have noted, there is a detailed broadband deployment mapping initiative underway in Kentucky.<sup>73</sup> While there are no tribal lands in Kentucky, we ask for comment on whether it would be appropriate to select Kentucky areas to represent each of the other types of areas (*i.e.*, urban, metropolitan, exurban, low-income, and rural).

44. We ask for comment about how to select a representative area for tribal lands, in particular. As GAO has found, tribal lands vary dramatically in size, demographics, and location.<sup>74</sup> GAO conducted interviews with 26 tribes and 12 Alaska regional native nonprofit organizations and visited 6 of the tribes that have taken action to improve their telecommunications.<sup>75</sup> We seek comment on whether, and why, a particular one of the 6 tribes would be an appropriate choice for the representative tribal lands area.

## 9. Price, Broadband Availability, and Consumer Uptake

45. We seek comment on whether and how we could collect price information that depicts competitive choice in representative areas. Would it be sufficient to collect price information only for cable modem and DSL service options? If so, should we collect price information for the full range of cable modem and DSL service options in the representative areas? How should we treat the prices of introductory offers and bundled services? Should we calculate separate representative prices for residential and non-residential service offerings? How should we treat service offerings that appear both in advertisements for residential services and in advertisements for business services?

46. We also ask whether we should modify Form 477 to collect price information from all entities that report broadband connections. What price information should we collect? Should we collect the price information at the Zip Code, state, regional, or national level? What would be an appropriate way to define a region for this purpose? Should we require filers to estimate and report the cost of residential broadband services measured as price per bit?

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<sup>73</sup> See paras. 26, 36, *supra*.

<sup>74</sup> *GAO Tribal Lands Report*, at 3 (ranging in size from 24,000 square miles with over 176,000 Native American residents to less than 1 square mile with fewer than 50 Native American residents; while mostly located in rural or remote locations, some are near metropolitan areas).

<sup>75</sup> *Id.*, at 60-61 (GAO visited the Coeur D'Alene Tribe of the Coeur D'Alene Reservation, Idaho; Confederated Tribes and Bands of the Yakama Nation, Washington; Eastern Band of Cherokee Indians of North Carolina; Oglala Sioux Tribe of the Pine Ridge Reservation, South Dakota; Mescalero Apache Tribe of the Mescalero Reservation, New Mexico; and Navajo Nation in Arizona, New Mexico, and Utah.)

47. We seek specific comment on whether and how the Commission could provide a deeper understanding of the market for broadband services by collecting price information and comparing it to consumer uptake of broadband (*i.e.*, the ratio between adoption and deployment).<sup>76</sup> Commenters should address how non-price variables found to be correlated with consumer broadband uptake (*e.g.*, income, education, race (including tribal lands), and disability status) should be incorporated into the comparison.

#### IV. PROCEDURAL MATTERS

##### A. Initial Paperwork Reduction Act Analysis

48. This document does not contain proposed information collection(s) subject to the Paperwork Reduction Act of 1995 (PRA), Public Law 104-13. In addition, therefore, it does not contain any new or modified “information collection burden for small business concerns with fewer than 25 employees,” pursuant to the Small Business Paperwork Relief Act of 2002, Public Law 107-198, *see* 44 U.S.C. 3506(c)(4).

##### B. Initial Regulatory Flexibility Analysis

49. As required by the Regulatory Flexibility Act (RFA),<sup>77</sup> the Commission has prepared an Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities of the policies and rules proposed in this Notice. The IRFA is set forth in the Appendix to this Notice.

##### C. Comment Filing Procedures

50. Pursuant to sections 1.415 and 1.419 of the Commission's rules, 47 C.F.R. §§ 1.415, 1.419, interested parties may file comments and reply comments on or before the dates indicated on the first page of this document. Comments may be filed using: (1) the Commission's Electronic Comment Filing System (ECFS), (2) the Federal Government's eRulemaking Portal, or (3) by filing paper copies. *See Electronic Filing of Documents in Rulemaking Proceedings*, 63 FR 24121 (1998).

- Electronic Filers: Comments may be filed electronically using the Internet by accessing the ECFS: <http://www.fcc.gov/cgb/ecfs/> or the Federal eRulemaking Portal: <http://www.regulations.gov>. Filers should follow the instructions provided on the website for submitting comments.
  - For ECFS filers, if multiple docket or rulemaking numbers appear in the caption of this proceeding, filers must transmit one electronic copy of the comments for each docket or rulemaking number referenced in the caption. In completing the transmittal screen, filers should include their full name, U.S. Postal Service mailing address, and the applicable docket or rulemaking number. Parties may also submit an electronic comment by

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<sup>76</sup> *See* para. 28, *supra*.

<sup>77</sup> *See* 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-612, has been amended by the Contract With America Advancement Act of 1996, Pub. L. No. 104-121, 110 Stat. 847 (1996) (CWAAA). Title II of the CWAAA is the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA).

Internet e-mail. To get filing instructions, filers should send an e-mail to [ecfs@fcc.gov](mailto:ecfs@fcc.gov), and include the following words in the body of the message, "get form." A sample form and directions will be sent in response.

- Paper Filers: Parties who choose to file by paper must file an original and four copies of each filing. If more than one docket or rulemaking number appears in the caption of this proceeding, filers must submit two additional copies for each additional docket or rulemaking number.

Filings can be sent by hand or messenger delivery, by commercial overnight courier, or by first-class or overnight U.S. Postal Service mail (although we continue to experience delays in receiving U.S. Postal Service mail). All filings must be addressed to the Commission's Secretary, Office of the Secretary, Federal Communications Commission.

- The Commission's contractor will receive hand-delivered or messenger-delivered paper filings for the Commission's Secretary at 236 Massachusetts Avenue, NE., Suite 110, Washington, DC 20002. The filing hours at this location are 8:00 a.m. to 7:00 p.m. All hand deliveries must be held together with rubber bands or fasteners. Any envelopes must be disposed of before entering the building.
- Commercial overnight mail (other than U.S. Postal Service Express Mail and Priority Mail) must be sent to 9300 East Hampton Drive, Capitol Heights, MD 20743.
- U.S. Postal Service first-class, Express, and Priority mail must be addressed to 445 12<sup>th</sup> Street, SW, Washington, DC 20554.

People with Disabilities: To request materials in accessible formats for people with disabilities (braille, large print, electronic files, audio format), send an e-mail to [fcc504@fcc.gov](mailto:fcc504@fcc.gov) or call the Consumer & Governmental Affairs Bureau at 202-418-0530 (voice), 202-418-0432 (tty).

51. This matter shall be treated as a "permit-but-disclose" proceeding in accordance with the Commission's ex parte rules. *See* 47 C.F.R. §§ 1.1200 and 1.1206. Persons making oral ex parte presentations are reminded that memoranda summarizing the presentations must contain summaries of the substance of the presentations and not merely a listing of the subjects discussed. *See* 47 C.F.R. § 1.1206(b). Other rules pertaining to oral and written ex parte presentations in permit-but-disclose proceedings are set forth in section 1.1206(b) of the Commission's rules, 47 C.F.R. § 1.1206(b).

## V. ORDERING CLAUSES

52. Accordingly, IT IS ORDERED that, pursuant to sections 1-5, 10, 11, 201-205, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-155, 160, 161, 201-205, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503, and section 706 of the Telecommunications Act of 1996, 47 U.S.C. § 157 nt, this NOTICE, with all attachments, IS ADOPTED.

53. IT IS FURTHER ORDERED that the Commission's Consumer and Governmental Affairs Bureau, Reference Information Center, SHALL SEND a copy of this Notice of Proposed Rulemaking, including the Initial Regulatory Flexibility Analysis, to the Chief Counsel for Advocacy of the Small Business Administration.

FEDERAL COMMUNICATIONS COMMISSION

Marlene H. Dortch  
Secretary

**APPENDIX****Initial Regulatory Flexibility Analysis**

1. As required by the Regulatory Flexibility Act of 1980, as amended (RFA),<sup>1</sup> the Commission has prepared the present Initial Regulatory Flexibility Analysis (IRFA) of the possible significant economic impact on small entities that might result from today's Notice. Written public comments are requested on this IRFA. Comments must be identified as responses to the IRFA and must be filed by the deadlines for comments on the Notice provided above. The Commission will send a copy of the Notice, including this IRFA, to the Chief Counsel for Advocacy of the Small Business Administration.<sup>2</sup> In addition, the Notice and IRFA (or summaries thereof) will be published in the Federal Register.<sup>3</sup>

**A. Need for, and Objectives of, the Proposed Rules**

2. In the Notice, we seek comment on various proposals that would deepen and refine our current understanding of broadband availability and deployment and our understanding of end user adoption of relatively new broadband-enabled services such as interconnected VoIP service.<sup>4</sup> Although we have recently refined the Form 477 data collection program, we seek comment on whether Form 477 is sufficient to provide a truly accurate picture of broadband deployment – particularly in rural and hard-to-serve areas – or whether there are alternative methods for collecting and/or analyzing data to obtain more precise information.<sup>5</sup> Recognizing the critical importance of broadband services to the nation's present and future prosperity, we believe that a better understanding would assist us in our commitment to adopt policies to promote the deployment of broadband services.<sup>6</sup> At the same time, we recognize that certain methods of collecting more precise data might impose burdens on small entities, and invite comment on ways to mitigate burdens on smaller entities.<sup>7</sup> In this regard, the Notice proposes many methods for collecting further data and analyzing current data that would impose little or no burden on small entities whatsoever.

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<sup>1</sup> See 5 U.S.C. § 603. The RFA, *see* 5 U.S.C. §§ 601-12, has been amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), Pub. L. No. 104-121, 110 Stat. 857 (1996).

<sup>2</sup> See 5 U.S.C. § 603(a).

<sup>3</sup> See 5 U.S.C. § 603(a).

<sup>4</sup> “Interconnected VoIP service” means an interconnected voice over Internet Protocol service that: (1) enables real-time, two-way voice communications; (2) requires a broadband connection from the user's location; (3) requires Internet protocol-compatible customer premises equipment (CPE); and (4) permits users generally to receive calls that originate on the public switched telephone network and to terminate calls to the public switched telephone network. See 47 C.F.R. § 9.3.

<sup>5</sup> See Notice at para. 9.

<sup>6</sup> See Notice at para. 1.

<sup>7</sup> See Notice at para. 24.



## B. Legal Basis

3. The legal basis for any action that may be taken pursuant to the Notice is contained in sections 1-5, 10, 11, 201-205, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503 of the Communications Act of 1934, as amended, 47 U.S.C. §§ 151-155, 160, 161, 201-205, 215, 218-220, 251-271, 303(r), 332, 403, 502, and 503, and section 706 of the Telecommunications Act of 1996, 47 U.S.C. § 157 nt.

## C. Description and Estimate of the Number of Small Entities to Which the Proposed Rules May Apply

4. The RFA directs agencies to provide a description of, and, where feasible, an estimate of, the number of small entities that may be affected by the proposed rules.<sup>8</sup> The RFA generally defines the term “small entity” as having the same meaning as the terms “small business,” “small organization,” and “small governmental jurisdiction.”<sup>9</sup> In addition, the term “small business” has the same meaning as the term “small business concern” under the Small Business Act.<sup>10</sup> A “small business concern” is one which: (1) is independently owned and operated; (2) is not dominant in its field of operation; and (3) satisfies any additional criteria established by the Small Business Administration (SBA).<sup>11</sup> As discussed in sections D and E below, many of the proposals contained in the Notice would not impose any burden whatsoever on small entities. However, to the extent that other proposals contained in the Notice might impact small entities, we list those possible entities below. We have perhaps been overbroad in our list of entities directly affected, below, in an effort to encourage comment.

5. As noted above, in addition to covering small businesses, the RFA covers small organizations. A “small organization” is generally “any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.”<sup>12</sup> Nationwide, as of 2002, there were approximately 1.6 million small organizations.<sup>13</sup> The term “small governmental jurisdiction” is defined generally as “governments of cities, towns, townships, villages, school districts, or special districts, with a population of less than fifty thousand.”<sup>14</sup> Census Bureau data for 2002 indicate that

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<sup>8</sup> 5 U.S.C. §§ 603(b)(3), 604(a)(3).

<sup>9</sup> 5 U.S.C. § 601(6).

<sup>10</sup> 5 U.S.C. § 601(3) (incorporating by reference the definition of “small-business concern” in the Small Business Act, 15 U.S.C. § 632). Pursuant to 5 U.S.C. § 601(3), the statutory definition of a small business applies “unless an agency, after consultation with the Office of Advocacy of the Small Business Administration and after opportunity for public comment, establishes one or more definitions of such term which are appropriate to the activities of the agency and publishes such definition(s) in the Federal Register.” According to SBA data, there are approximately 22.4 million small businesses nationwide. *See* SBA, Programs and Services, SBA Pamphlet No. CO-0028, at page 40 (July 2002).

<sup>11</sup> 15 U.S.C. § 632.

<sup>12</sup> 5 U.S.C. § 601(4).

<sup>13</sup> Independent Sector, *The New Nonprofit Almanac & Desk Reference* (2002).

<sup>14</sup> 5 U.S.C. § 601(5).

there were 87,525 local governmental jurisdictions in the United States.<sup>15</sup> We estimate that, of this total, 84,377 entities were “small governmental jurisdictions.”<sup>16</sup> Thus, we estimate that most governmental jurisdictions are small.

6. The most reliable source of information regarding the total numbers of certain common carrier and related providers nationwide, as well as the number of commercial wireless entities, is the data that the Commission publishes in its *Trends in Telephone Service* report.<sup>17</sup> The SBA has developed small business size standards for wireline and wireless small businesses within the three commercial census categories of Wired Telecommunications Carriers,<sup>18</sup> Paging,<sup>19</sup> and Cellular and Other Wireless Telecommunications.<sup>20</sup> Under these categories, a business is small if it has 1,500 or fewer employees. Below, using the above size standards and others, we discuss the total estimated numbers of small businesses that might be affected by our actions.

7. We have included small incumbent local exchange carriers (LECs) in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent small business size standard (*e.g.*, a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”<sup>21</sup> The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent LECs are not dominant in their field of operation because any such dominance is not “national” in scope.<sup>22</sup> We have therefore included small incumbent LECs in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

### 1. Wireline Carriers and Service Providers

8. We have included small incumbent local exchange carriers in this present RFA analysis. As noted above, a “small business” under the RFA is one that, *inter alia*, meets the pertinent

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<sup>15</sup> U.S. Census Bureau, Statistical Abstract of the United States: 2006, Section 8, page 272, Table 415.

<sup>16</sup> We assume that the villages, school districts, and special districts are small, and total 48,558. See U.S. Census Bureau, Statistical Abstract of the United States: 2006, section 8, page 273, Table 417. For 2002, Census Bureau data indicate that the total number of county, municipal, and township governments nationwide was 38,967, of which 35,819 were small. *Id.*

<sup>17</sup> FCC, Wireline Competition Bureau, Industry Analysis and Technology Division, Trends in Telephone Service, Table 5.3, page 5-5 (February 2007) (*Trends in Telephone Service*). This source uses data collected as of October 20, 2005.

<sup>18</sup> 13 C.F.R. § 121.201, North American Industry Classification System (NAICS) code 517110.

<sup>19</sup> *Id.* § 121.201, NAICS code 517211 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>20</sup> *Id.* § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>21</sup> 5 U.S.C. § 601(3).

<sup>22</sup> Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to William E. Kennard, Chairman, FCC (May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” See 15 U.S.C. § 632(a); 5 U.S.C. § 601(3). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b).

small business size standard (e.g., a telephone communications business having 1,500 or fewer employees), and “is not dominant in its field of operation.”<sup>23</sup> The SBA’s Office of Advocacy contends that, for RFA purposes, small incumbent local exchange carriers are not dominant in their field of operation because any such dominance is not “national” in scope.<sup>24</sup> We have therefore included small incumbent local exchange carriers in this RFA analysis, although we emphasize that this RFA action has no effect on Commission analyses and determinations in other, non-RFA contexts.

9. *Incumbent Local Exchange Carriers (ILECs).* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to incumbent local exchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>25</sup> According to Commission data,<sup>26</sup> 1,307 carriers reported that they were engaged in the provision of local exchange services. Of these 1,307 carriers, an estimated 1,019 have 1,500 or fewer employees and 288 have more than 1,500 employees. Consequently, the Commission estimates that most providers of incumbent local exchange service are small businesses that may be affected by our action.

10. *Competitive Local Exchange Carriers (CLECs), Competitive Access Providers (CAPs), “Shared-Tenant Service Providers,” and “Other Local Service Providers.”* Neither the Commission nor the SBA has developed a small business size standard specifically for these service providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>27</sup> According to Commission data,<sup>28</sup> 859 carriers reported that they were engaged in the provision of either competitive local exchange carrier or competitive access provider services. Of these 859 carriers, an estimated 741 have 1,500 or fewer employees and 118 have more than 1,500 employees.<sup>29</sup> In addition, 16 carriers have reported that they are “Shared-Tenant Service Providers,” and all 16 are estimated to have 1,500 or fewer employees. In addition, 44 carriers have reported that they are “Other Local Service Providers.” Of the 44, an estimated 43 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that most providers of competitive local exchange service, competitive access providers, “Shared-Tenant Service Providers,” and “Other Local Service Providers” are small entities that may be affected by our action.

11. *Local Resellers.* The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has

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<sup>23</sup> 15 U.S.C. § 632.

<sup>24</sup> See Letter from Jere W. Glover, Chief Counsel for Advocacy, SBA, to Chairman William E. Kennard, Federal Communications Commission (May 27, 1999). The Small Business Act contains a definition of “small business concern,” which the RFA incorporates into its own definition of “small business.” See 15 U.S.C. § 632(a) (Small Business Act); 5 U.S.C. § 601(3) (RFA). SBA regulations interpret “small business concern” to include the concept of dominance on a national basis. 13 C.F.R. § 121.102(b).

<sup>25</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>26</sup> *Trends in Telephone Service* at Table 5.3.

<sup>27</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>28</sup> *Trends in Telephone Service* at Table 5.3.

<sup>29</sup> *Id.*

1,500 or fewer employees.<sup>30</sup> According to Commission data,<sup>31</sup> 184 carriers have reported that they are engaged in the provision of local resale services. Of these, an estimated 181 have 1,500 or fewer employees and three have more than 1,500 employees. Consequently, the Commission estimates that the majority of local resellers are small entities that may be affected by our action.

12. *Toll Resellers.* The SBA has developed a small business size standard for the category of Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>32</sup> According to Commission data,<sup>33</sup> 881 carriers have reported that they are engaged in the provision of toll resale services. Of these, an estimated 853 have 1,500 or fewer employees and 28 have more than 1,500 employees. Consequently, the Commission estimates that the majority of toll resellers are small entities that may be affected by our action.

13. *Payphone Service Providers (PSPs).* Neither the Commission nor the SBA has developed a small business size standard specifically for payphone services providers. The appropriate size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>34</sup> According to Commission data,<sup>35</sup> 657 carriers have reported that they are engaged in the provision of payphone services. Of these, an estimated 653 have 1,500 or fewer employees and four have more than 1,500 employees. Consequently, the Commission estimates that the majority of payphone service providers are small entities that may be affected by our action.

14. *Interexchange Carriers (IXCs).* Neither the Commission nor the SBA has developed a size standard for small businesses specifically applicable to interexchange services. The closest applicable size standard under SBA rules is for Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>36</sup> According to Commission data,<sup>37</sup> 330 companies reported that their primary telecommunications service activity was the provision of interexchange services. Of these 330 companies, an estimated 309 have 1,500 or fewer employees and 21 have more than 1,500 employees.<sup>38</sup> Consequently, the Commission estimates that the majority of interexchange service providers are small entities that may be affected by our action.

15. *Operator Service Providers (OSPs).* Neither the Commission nor the SBA has developed a small business size standard specifically for operator service providers. The appropriate

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<sup>30</sup> 13 C.F.R. § 121.201, NAICS code 517310 (This category will be changed for purposes of the 2007 Census to NAICS code 517911.).

<sup>31</sup> *Trends in Telephone Service* at Table 5.3.

<sup>32</sup> 13 C.F.R. § 121.201, NAICS code 517310 (This category will be changed for purposes of the 2007 Census to NAICS code 517911.).

<sup>33</sup> *Trends in Telephone Service* at Table 5.3.

<sup>34</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>35</sup> *Trends in Telephone Service* at Table 5.3.

<sup>36</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>37</sup> *Trends in Telephone Service* at Table 5.3.

<sup>38</sup> *Id.*

size standard under SBA rules is for the category Wired Telecommunications Carriers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>39</sup> According to Commission data,<sup>40</sup> 23 carriers have reported that they are engaged in the provision of operator services. Of these, an estimated 22 have 1,500 or fewer employees and one has more than 1,500 employees. Consequently, the Commission estimates that the majority of OSPs are small entities that may be affected by our action.

16. *Prepaid Calling Card Providers.* Neither the Commission nor the SBA has developed a small business size standard specifically for prepaid calling card providers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>41</sup> According to Commission data,<sup>42</sup> 104 carriers have reported that they are engaged in the provision of prepaid calling cards. Of these, an estimated 102 have 1,500 or fewer employees and two have more than 1,500 employees. Consequently, the Commission estimates that the majority of prepaid calling card providers are small entities that may be affected by our action.

17. *800 and 800-Like Service Subscribers.*<sup>43</sup> Neither the Commission nor the SBA has developed a small business size standard specifically for 800 and 800-like service (“toll free”) subscribers. The appropriate size standard under SBA rules is for the category Telecommunications Resellers. Under that size standard, such a business is small if it has 1,500 or fewer employees.<sup>44</sup> The most reliable source of information regarding the number of these service subscribers appears to be data the Commission collects on the 800, 888, 877, and 866 numbers in use.<sup>45</sup> According to our data, at the beginning of July 2006, the number of 800 numbers assigned was 7,647,941; the number of 888 numbers assigned was 5,318,667; the number of 877 numbers assigned was 4,431,162; and the number of 866 numbers assigned was 6,008,976. We do not have data specifying the number of these subscribers that are not independently owned and operated or have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of toll free subscribers that would qualify as small businesses under the SBA size standard. Consequently, we estimate that there are 7,647,941 or fewer small entity 800 subscribers; 5,318,667 or fewer small entity 888 subscribers; 4,431,162 or fewer small entity 877 subscribers; and 5,318,667 or fewer small entity 866 subscribers.

## 2. Wireless Carriers and Service Providers

18. Below, for those services subject to auctions, we note that, as a general matter, the number of winning bidders that qualify as small businesses at the close of an auction does not necessarily

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<sup>39</sup> 13 C.F.R. § 121.201, NAICS code 517110.

<sup>40</sup> *Trends in Telephone Service* at Table 5.3.

<sup>41</sup> 13 C.F.R. § 121.201, NAICS code 517310 (This category will be changed for purposes of the 2007 Census to NAICS code 517911.).

<sup>42</sup> *Trends in Telephone Service* at Table 5.3.

<sup>43</sup> We include all toll-free number subscribers in this category, including those for 888 numbers.

<sup>44</sup> 13 C.F.R. § 121.201, NAICS code 517310 (This category will be changed for purposes of the 2007 Census to NAICS code 517911.).

<sup>45</sup> *Trends in Telephone Service* at Tables 18.4, 18.5, 18.6, 18.7.

represent the number of small businesses currently in service. Also, the Commission does not generally track subsequent business size unless, in the context of assignments or transfers, unjust enrichment issues are implicated.

19. *Wireless Service Providers.* The SBA has developed a small business size standard for wireless firms within the two broad economic census categories of “Paging”<sup>46</sup> Cellular and Other Wireless Telecommunications.<sup>47</sup> Under both categories, the SBA deems a wireless business to be small if it has 1,500 or fewer employees. For the census category of Paging, Census Bureau data for 2002 show that there were 807 firms in this category that operated for the entire year.<sup>48</sup> Of this total, 804 firms had employment of 999 or fewer employees, and three firms had employment of 1,000 employees or more.<sup>49</sup> Thus, under this category and associated small business size standard, the majority of firms can be considered small. For the census category of Cellular and Other Wireless Telecommunications, Census Bureau data for 2002 show that there were 1,397 firms in this category that operated for the entire year.<sup>50</sup> Of this total, 1,378 firms had employment of 999 or fewer employees, and 19 firms had employment of 1,000 employees or more.<sup>51</sup> Thus, under this second category and size standard, the majority of firms can, again, be considered small.

20. *Cellular Licensees.* The SBA has developed a small business size standard for wireless firms within the broad economic census category “Cellular and Other Wireless Telecommunications.”<sup>52</sup> Under this SBA category, a wireless business is small if it has 1,500 or fewer employees. According to Commission data, 432 carriers reported that they were engaged in the provision of cellular service, Personal Communications Service (PCS), or Specialized Mobile Radio (SMR) Telephony services, which are placed together in the data.<sup>53</sup> We have estimated that 221 of these are small, under the SBA small business size standard.<sup>54</sup> Thus, under this category and size standard, about half of firms can be considered small. This information is also included in paragraph 23.

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<sup>46</sup> 13 C.F.R. § 121.201, NAICS code 517211 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>47</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>48</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: “Information,” Table 5, Employment Size of Firms for the United States: 2002, NAICS code 517211 (issued Nov. 2005).

<sup>49</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

<sup>50</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: “Information,” Table 5, Employment Size of Firms for the United States: 2002, NAICS code 517212 (issued Nov. 2005).

<sup>51</sup> *Id.* The census data do not provide a more precise estimate of the number of firms that have employment of 1,500 or fewer employees; the largest category provided is for firms with “1000 employees or more.”

<sup>52</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>53</sup> *Trends in Telephone Service* at Table 5.3.

<sup>54</sup> *Id.*

21. *Common Carrier Paging.* The SBA has developed a small business size standard for Paging, under which a business is small if it has 1,500 or fewer employees.<sup>55</sup> According to Commission data,<sup>56</sup> 365 carriers have reported that they are engaged in Paging or Messaging Service. Of these, an estimated 360 have 1,500 or fewer employees, and 5 have more than 1,500 employees. Consequently, the Commission estimates that the majority of paging providers are small entities that may be affected by our action. In addition, in the Paging *Third Report and Order*, we developed a small business size standard for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>57</sup> A “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years.<sup>58</sup> The SBA has approved these small business size standards.<sup>59</sup> An auction of Metropolitan Economic Area licenses commenced on February 24, 2000, and closed on March 2, 2000.<sup>60</sup> Of the 985 licenses auctioned, 440 were sold. Fifty-seven companies claiming small business status won.

22. *Wireless Communications Services.* This service can be used for fixed, mobile, radiolocation, and digital audio broadcasting satellite uses. The Commission established small business size standards for the wireless communications services (WCS) auction. A “small business” is an entity with average gross revenues of \$40 million for each of the three preceding years, and a “very small business” is an entity with average gross revenues of \$15 million for each of the three preceding years. The SBA has approved these small business size standards.<sup>61</sup> The Commission auctioned geographic area licenses in the WCS service. In the auction, held in April 1997, there were seven winning bidders that qualified as “very small business” entities, and one that qualified as a “small business” entity.

23. *Wireless Telephony.* Wireless telephony includes cellular, personal communications services (PCS), and specialized mobile radio (SMR) telephony carriers. As noted earlier, the SBA has developed a small business size standard for “Cellular and Other Wireless Telecommunications”

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<sup>55</sup> 13 C.F.R. § 121.201, NAICS code 517211 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>56</sup> *Trends in Telephone Service* at Table 5.3.

<sup>57</sup> *Amendment of Part 90 of the Commission’s Rules to Provide for the Use of the 220-222 MHz Band by the Private Land Mobile Radio Service*, PR Docket No. 89-552, GN Docket No. 93-252, PP Docket No. 93-253, Third Report and Order and Fifth Notice of Proposed Rulemaking, 12 FCC Rcd 10943, 11068-70, paras. 291-295 (1997) (*220 MHz Third Report and Order*).

<sup>58</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from A. Alvarez, Administrator, SBA (Dec. 2, 1998).

<sup>59</sup> *Revision of Part 22 and Part 90 of the Commission’s Rules to Facilitate Future Development of Paging Systems*, WT Docket No. 96-18, PR Docket No. 93-253, Memorandum Opinion and Order on Reconsideration and Third Report and Order, 14 FCC Rcd 10030, paras. 98-107 (1999).

<sup>60</sup> *Id.* at 10085, para. 98.

<sup>61</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

services.<sup>62</sup> Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.<sup>63</sup> According to Commission data, 432 carriers reported that they were engaged in the provision of wireless telephony.<sup>64</sup> We have estimated that 221 of these are small under the SBA small business size standard.

24. *Broadband Personal Communications Service.* The broadband Personal Communications Service (PCS) spectrum is divided into six frequency blocks designated A through F, and the Commission has held auctions for each block. The Commission defined “small entity” for Blocks C and F as an entity that has average gross revenues of \$40 million or less in the three previous calendar years.<sup>65</sup> For Block F, an additional classification for “very small business” was added and is defined as an entity that, together with its affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>66</sup> These standards defining “small entity” in the context of broadband PCS auctions have been approved by the SBA.<sup>67</sup> No small businesses, within the SBA-approved small business size standards bid successfully for licenses in Blocks A and B. There were 90 winning bidders that qualified as small entities in the Block C auctions. A total of 93 small and very small business bidders won approximately 40 percent of the 1,479 licenses for Blocks D, E, and F.<sup>68</sup> On March 23, 1999, the Commission re-auctioned 347 C, D, E, and F Block licenses. There were 48 small business winning bidders. On January 26, 2001, the Commission completed the auction of 422 C and F Broadband PCS licenses in Auction No. 35. Of the 35 winning bidders in this auction, 29 qualified as “small” or “very small” businesses. Subsequent events, concerning Auction 35, including judicial and agency determinations, resulted in a total of 163 C and F Block licenses being available for grant.

25. *Narrowband Personal Communications Services.* To date, two auctions of narrowband personal communications services (PCS) licenses have been conducted. For purposes of the two auctions that have already been held, “small businesses” were entities with average gross revenues for the prior three calendar years of \$40 million or less. Through these auctions, the Commission has awarded a total of 41 licenses, out of which 11 were obtained by small businesses. To ensure meaningful participation of small business entities in future auctions, the Commission has

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<sup>62</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>63</sup> *Id.*

<sup>64</sup> *Trends in Telephone Service* at Table 5.3.

<sup>65</sup> *See Amendment of Parts 20 and 24 of the Commission’s Rules – Broadband PCS Competitive Bidding and the Commercial Mobile Radio Service Spectrum Cap*, WT Docket No. 96-59, GN Docket No. 90-314, Report and Order, 61 FR 33859 (July 1, 1996); *see also* 47 C.F.R. § 24.720(b).

<sup>66</sup> *Id.*

<sup>67</sup> *See, e.g., Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fifth Report and Order, 9 FCC Rcd 5532 (1994).

<sup>68</sup> FCC News, *Broadband PCS, D, E and F Block Auction Closes*, No. 71744 (released January 14, 1997). *See also Amendment of the Commission’s Rules Regarding Installment Payment Financing for Personal Communications Services (PCS) Licenses*, WT Docket No. 97-82, Second Report and Order, 12 FCC Rcd 16436 (1997).



adopted a two-tiered small business size standard in the *Narrowband PCS Second Report and Order*.<sup>69</sup> A “small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$40 million. A “very small business” is an entity that, together with affiliates and controlling interests, has average gross revenues for the three preceding years of not more than \$15 million. The SBA has approved these small business size standards.<sup>70</sup> In the future, the Commission will auction 459 licenses to serve Metropolitan Trading Areas (MTAs) and 408 response channel licenses. There is also one megahertz of narrowband PCS spectrum that has been held in reserve and that the Commission has not yet decided to release for licensing. The Commission cannot predict accurately the number of licenses that will be awarded to small entities in future actions. However, four of the 16 winning bidders in the two previous narrowband PCS auctions were small businesses, as that term was defined under the Commission’s Rules. The Commission assumes, for purposes of this analysis, that a large portion of the remaining narrowband PCS licenses will be awarded to small entities. The Commission also assumes that at least some small businesses will acquire narrowband PCS licenses by means of the Commission’s partitioning and disaggregation rules.

26. *220 MHz Radio Service – Phase I Licensees.* The 220 MHz service has both Phase I and Phase II licenses. Phase I licensing was conducted by lotteries in 1992 and 1993. There are approximately 1,515 such non-nationwide licensees and four nationwide licensees currently authorized to operate in the 220 MHz band. The Commission has not developed a small business size standard for small entities specifically applicable to such incumbent 220 MHz Phase I licensees. To estimate the number of such licensees that are small businesses, we apply the small business size standard under the SBA rules applicable to “Cellular and Other Wireless Telecommunications” companies. Under this category, the SBA deems a wireless business to be small if it has 1,500 or fewer employees.<sup>71</sup> The Commission estimates that nearly all such licensees are small businesses under the SBA’s small business size standard.

27. *220 MHz Radio Service – Phase II Licensees.* The 220 MHz service has both Phase I and Phase II licenses. The Phase II 220 MHz service is a new service, and is subject to spectrum auctions. In the *220 MHz Third Report and Order*, we adopted a small business size standard for “small” and “very small” businesses for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>72</sup> This small business size standard indicates that a “small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years.<sup>73</sup> A “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that do not exceed \$3 million for the preceding three years. The SBA has approved these small business size

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<sup>69</sup> *Amendment of the Commission’s Rules to Establish New Personal Communications Services, Narrowband PCS*, GEN Docket No. 90-314, ET Docket No. 92-100, PP Docket No. 93-253, Second Report and Order and Second Further Notice of Proposed Rulemaking, 15 FCC Rcd 10456 (2000).

<sup>70</sup> See Letter to Amy Zoslov, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Dec. 2, 1998).

<sup>71</sup> 13 C.F.R. § 121.201, NAICS code 517212.

<sup>72</sup> *220 MHz Third Report and Order*, 12 FCC Rcd at 11068-70, at paras. 291-95.

<sup>73</sup> *Id.* at 11068-70, para. 291.

standards.<sup>74</sup> Auctions of Phase II licenses commenced on September 15, 1998, and closed on October 22, 1998.<sup>75</sup> In the first auction, 908 licenses were auctioned in three different-sized geographic areas: three nationwide licenses, 30 Regional Economic Area Group (EAG) Licenses, and 875 Economic Area (EA) Licenses. Of the 908 licenses auctioned, 693 were sold. Thirty-nine small businesses won licenses in the first 220 MHz auction. The second auction included 225 licenses: 216 EA licenses and 9 EAG licenses. Fourteen companies claiming small business status won 158 licenses.<sup>76</sup>

28. *800 MHz and 900 MHz Specialized Mobile Radio Licenses.* The Commission awards “small entity” and “very small entity” bidding credits in auctions for Specialized Mobile Radio (SMR) geographic area licenses in the 800 MHz and 900 MHz bands to firms that had revenues of no more than \$15 million in each of the three previous calendar years, or that had revenues of no more than \$3 million in each of the previous calendar years, respectively.<sup>77</sup> These bidding credits apply to SMR providers in the 800 MHz and 900 MHz bands that either hold geographic area licenses or have obtained extended implementation authorizations. The Commission does not know how many firms provide 800 MHz or 900 MHz geographic area SMR service pursuant to extended implementation authorizations, nor how many of these providers have annual revenues of no more than \$15 million. One firm has over \$15 million in revenues. The Commission assumes, for purposes here, that all of the remaining existing extended implementation authorizations are held by small entities, as that term is defined by the SBA. The Commission has held auctions for geographic area licenses in the 800 MHz and 900 MHz SMR bands. There were 60 winning bidders that qualified as small or very small entities in the 900 MHz SMR auctions. Of the 1,020 licenses won in the 900 MHz auction, bidders qualifying as small or very small entities won 263 licenses. In the 800 MHz auction, 38 of the 524 licenses won were won by small and very small entities.

29. *700 MHz Guard Band Licensees.* In the *700 MHz Guard Band Order*, we adopted a small business size standard for “small businesses” and “very small businesses” for purposes of determining their eligibility for special provisions such as bidding credits and installment payments.<sup>78</sup> A “small business” as an entity that, together with its affiliates and controlling principals, has average gross revenues not exceeding \$15 million for the preceding three years. Additionally, a “very small business” is an entity that, together with its affiliates and controlling principals, has average gross revenues that are not more than \$3 million for the preceding three years. An auction of 52 Major Economic Area (MEA) licenses commenced on September 6, 2000, and closed on September 21, 2000.<sup>79</sup> Of the 104 licenses auctioned, 96 licenses were sold to nine bidders. Five of these bidders were small businesses that won a total of 26 licenses. A second auction of 700 MHz Guard Band licenses commenced on February 13,

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<sup>74</sup> See letter to D. Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

<sup>75</sup> See generally *220 MHz Service Auction Closes*, Public Notice, 14 FCC Rcd 605 (1998).

<sup>76</sup> *Phase II 220 MHz Service Spectrum Auction Closes*, Public Notice, 14 FCC Rcd 11218 (1999).

<sup>77</sup> 47 C.F.R. § 90.814(b)(1).

<sup>78</sup> See *Service Rules for the 746-764 and 776-794 MHz Bands, and Revisions to part 27 of the Commission’s Rules*, WT Docket No. 99-168, Second Report and Order, 15 FCC Rcd 5299 (2000).

<sup>79</sup> See generally *220 MHz Service Auction Closes*, Public Notice, 14 FCC Rcd 605 (1998).

2001 and closed on February 21, 2001. All eight of the licenses auctioned were sold to three bidders. One of these bidders was a small business that won a total of two licenses.<sup>80</sup>

30. *Rural Radiotelephone Service.* The Commission has not adopted a size standard for small businesses specific to the Rural Radiotelephone Service.<sup>81</sup> A significant subset of the Rural Radiotelephone Service is the Basic Exchange Telephone Radio System (BETRS).<sup>82</sup> The Commission uses the SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.<sup>83</sup> There are approximately 1,000 licensees in the Rural Radiotelephone Service, and the Commission estimates that there are 1,000 or fewer small entity licensees in the Rural Radiotelephone Service that may be affected by the rules and policies adopted herein.

31. *Air-Ground Radiotelephone Service.* The Commission has not adopted a small business size standard specific to the Air-Ground Radiotelephone Service.<sup>84</sup> We will use SBA's small business size standard applicable to "Cellular and Other Wireless Telecommunications," *i.e.*, an entity employing no more than 1,500 persons.<sup>85</sup> There are approximately 100 licensees in the Air-Ground Radiotelephone Service, and we estimate that almost all of them qualify as small under the SBA small business size standard.

32. *Aviation and Marine Radio Services.* Small businesses in the aviation and marine radio services use a very high frequency (VHF) marine or aircraft radio and, as appropriate, an emergency position-indicating radio beacon (and/or radar) or an emergency locator transmitter. The Commission has not developed a small business size standard specifically applicable to these small businesses. For purposes of this analysis, the Commission uses the SBA small business size standard for the category "Cellular and Other Telecommunications," which is 1,500 or fewer employees.<sup>86</sup> Most applicants for recreational licenses are individuals. Approximately 581,000 ship station licensees and 131,000 aircraft station licensees operate domestically and are not subject to the radio carriage requirements of any statute or treaty. For purposes of our evaluations in this analysis, we estimate that there are up to approximately 712,000 licensees that are small businesses (or individuals) under the SBA standard. In addition, between December 3, 1998 and December 14, 1998, the Commission held an auction of 42 VHF Public Coast licenses in the 157.1875-157.4500 MHz (ship transmit) and 161.775-162.0125 MHz (coast transmit) bands. For purposes of the auction, the Commission defined a "small" business as an entity that, together with controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$15 million dollars. In addition, a "very small" business is one that, together with

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<sup>80</sup> 700 MHz Guard Band Auction Closes, Public Notice, 16 FCC Rcd 4590 (2001).

<sup>81</sup> The service is defined in section 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

<sup>82</sup> BETRS is defined in sections 22.757 and 22.759 of the Commission's Rules, 47 C.F.R. §§ 22.757 and 22.759.

<sup>83</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to "Wireless Telecommunications Carriers (except Satellite)," NAICS code 517210.).

<sup>84</sup> The service is defined in section 22.99 of the Commission's Rules, 47 C.F.R. § 22.99.

<sup>85</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to "Wireless Telecommunications Carriers (except Satellite)," NAICS code 517210.).

<sup>86</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to "Wireless Telecommunications Carriers (except Satellite)," NAICS code 517210.).

controlling interests and affiliates, has average gross revenues for the preceding three years not to exceed \$3 million dollars.<sup>87</sup> There are approximately 10,672 licensees in the Marine Coast Service, and the Commission estimates that almost all of them qualify as “small” businesses under the above special small business size standards.

33. *Fixed Microwave Services.* Fixed microwave services include common carrier,<sup>88</sup> private operational-fixed,<sup>89</sup> and broadcast auxiliary radio services.<sup>90</sup> At present, there are approximately 22,015 common carrier fixed licensees and 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services. The Commission has not created a size standard for a small business specifically with respect to fixed microwave services. For purposes of this analysis, the Commission uses the SBA small business size standard for the category “Cellular and Other Telecommunications,” which is 1,500 or fewer employees.<sup>91</sup> The Commission does not have data specifying the number of these licensees that have more than 1,500 employees, and thus are unable at this time to estimate with greater precision the number of fixed microwave service licensees that would qualify as small business concerns under the SBA’s small business size standard. Consequently, the Commission estimates that there are up to 22,015 common carrier fixed licensees and up to 61,670 private operational-fixed licensees and broadcast auxiliary radio licensees in the microwave services that may be small and may be affected by the rules and policies adopted herein. We noted, however, that the common carrier microwave fixed licensee category includes some large entities.

34. *Offshore Radiotelephone Service.* This service operates on several UHF television broadcast channels that are not used for television broadcasting in the coastal areas of states bordering the Gulf of Mexico.<sup>92</sup> There are presently approximately 55 licensees in this service. We are unable to estimate at this time the number of licensees that would qualify as small under the SBA’s small

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<sup>87</sup> *Amendment of the Commission’s Rules Concerning Maritime Communications*, PR Docket No. 92-257, Third Report and Order and Memorandum Opinion and Order, 13 FCC Rcd 19853 (1998).

<sup>88</sup> See 47 C.F.R. §§ 101 *et seq.* (formerly, Part 21 of the Commission’s Rules) for common carrier fixed microwave services (except Multipoint Distribution Service).

<sup>89</sup> Persons eligible under parts 80 and 90 of the Commission’s Rules can use Private Operational-Fixed Microwave services. See 47 C.F.R. Parts 80 and 90. Stations in this service are called operational-fixed to distinguish them from common carrier and public fixed stations. Only the licensee may use the operational-fixed station, and only for communications related to the licensee’s commercial, industrial, or safety operations.

<sup>90</sup> Auxiliary Microwave Service is governed by Part 74 of Title 47 of the Commission’s Rules. See 47 C.F.R. Part 74. This service is available to licensees of broadcast stations and to broadcast and cable network entities. Broadcast auxiliary microwave stations are used for relaying broadcast television signals from the studio to the transmitter, or between two points such as a main studio and an auxiliary studio. The service also includes mobile television pickups, which relay signals from a remote location back to the studio.

<sup>91</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>92</sup> This service is governed by Subpart I of Part 22 of the Commission’s Rules. See 47 C.F.R. §§ 22.1001-22.1037.

business size standard for “Cellular and Other Wireless Telecommunications” services.<sup>93</sup> Under that SBA small business size standard, a business is small if it has 1,500 or fewer employees.<sup>94</sup>

35. *39 GHz Service.* The Commission created a special small business size standard for 39 GHz licenses – an entity that has average gross revenues of \$40 million or less in the three previous calendar years.<sup>95</sup> An additional size standard for “very small business” is: an entity that, together with affiliates, has average gross revenues of not more than \$15 million for the preceding three calendar years.<sup>96</sup> The SBA has approved these small business size standards.<sup>97</sup> The auction of the 2,173 39 GHz licenses began on April 12, 2000 and closed on May 8, 2000. The 18 bidders who claimed small business status won 849 licenses. Consequently, the Commission estimates that 18 or fewer 39 GHz licensees are small entities that may be affected by our action.

36. *Multipoint Distribution Service, Multichannel Multipoint Distribution Service, and ITFS.* Multichannel Multipoint Distribution Service (MMDS) systems, often referred to as “wireless cable,” transmit video programming to subscribers using the microwave frequencies of the Multipoint Distribution Service (MDS) and Instructional Television Fixed Service (ITFS).<sup>98</sup> In connection with the 1996 MDS auction, the Commission established a small business size standard as an entity that had annual average gross revenues of less than \$40 million in the previous three calendar years.<sup>99</sup> The MDS auctions resulted in 67 successful bidders obtaining licensing opportunities for 493 Basic Trading Areas (BTAs). Of the 67 auction winners, 61 met the definition of a small business. MDS also includes licensees of stations authorized prior to the auction. In addition, the SBA has developed a small business size standard for Cable and Other Program Distribution, which includes all such companies generating \$13.5 million or less in annual receipts.<sup>100</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.<sup>101</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>102</sup> Consequently, we estimate that the majority of providers in this service

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<sup>93</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>94</sup> *Id.*

<sup>95</sup> See *Amendment of the Commission’s Rules Regarding the 37.0-38.6 GHz and 38.6-40.0 GHz Bands*, ET Docket No. 95-183, PP Docket No. 93-253, Report and Order, 12 FCC Rcd 18600 (1998).

<sup>96</sup> *Id.*

<sup>97</sup> See Letter to Kathleen O’Brien Ham, Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Feb. 4, 1998).

<sup>98</sup> *Amendment of Parts 21 and 74 of the Commission’s Rules with Regard to Filing Procedures in the Multipoint Distribution Service and in the Instructional Television Fixed Service and Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, MM Docket No. 94-131 and PP Docket No. 93-253, Report and Order, 10 FCC Rcd 9589, 9593 at para. 7 (1995).

<sup>99</sup> 47 C.F.R. § 21.961(b)(1).

<sup>100</sup> 13 C.F.R. § 121.201, NAICS code 517510.

<sup>101</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>102</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

category are small businesses that may be affected by the rules and policies adopted herein. This SBA small business size standard also appears applicable to ITFS. There are presently 2,032 ITFS licensees. All but 100 of these licenses are held by educational institutions. Educational institutions are included in this analysis as small entities.<sup>103</sup> Thus, we tentatively conclude that at least 1,932 licensees are small businesses.

37. *Local Multipoint Distribution Service.* Local Multipoint Distribution Service (LMDS) is a fixed broadband point-to-multipoint microwave service that provides for two-way video telecommunications.<sup>104</sup> The auction of the 1,030 Local Multipoint Distribution Service (LMDS) licenses began on February 18, 1998 and closed on March 25, 1998. The Commission established a small business size standard for LMDS licenses as an entity that has average gross revenues of less than \$40 million in the three previous calendar years.<sup>105</sup> An additional small business size standard for “very small business” was added as an entity that, together with its affiliates, has average gross revenues of not more than \$13.5 million for the preceding three calendar years.<sup>106</sup> The SBA has approved these small business size standards in the context of LMDS auctions.<sup>107</sup> There were 93 winning bidders that qualified as small entities in the LMDS auctions. A total of 93 small and very small business bidders won approximately 277 A Block licenses and 387 B Block licenses. On March 27, 1999, the Commission re-auctioned 161 licenses; there were 40 winning bidders. Based on this information, we conclude that the number of small LMDS licenses consists of the 93 winning bidders in the first auction and the 40 winning bidders in the re-auction, for a total of 133 small entity LMDS providers. The license terms require the licensees to build their wireless facilities within ten years of the grant. As a result, more information on the licensees will become available in the year 2008, when the licensees are required to show the Commission that they have achieved substantial service as part of the application renewal process.

38. *218-219 MHz Service.* The first auction of 218-219 MHz spectrum resulted in 170 entities winning licenses for 594 Metropolitan Statistical Area (MSA) licenses. Of the 594 licenses, 557 were won by entities qualifying as a small business. For that auction, the small business size standard was an entity that, together with its affiliates, has no more than a \$6 million net worth and, after federal income taxes (excluding any carry over losses), has no more than \$2 million in annual profits each year for the previous two years.<sup>108</sup> In the *218-219 MHz Report and Order and Memorandum Opinion and*

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<sup>103</sup> In addition, the term “small entity” within SBREFA applies to small organizations (nonprofits) and to small governmental jurisdictions (cities, counties, towns, townships, villages, school districts, and special districts with populations of less than 50,000). 5 U.S.C. §§ 601(4)-(6). We do not collect annual revenue data on ITFS licensees.

<sup>104</sup> See *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*, CC Docket No. 92-297, Second Report and Order, 12 FCC Rcd 12545 (1997).

<sup>105</sup> *Id.*

<sup>106</sup> *Id.*

<sup>107</sup> See Letter to Dan Phythyon, Chief, Wireless Telecommunications Bureau, FCC, from Aida Alvarez, Administrator, SBA (Jan. 6, 1998).

<sup>108</sup> *Implementation of Section 309(j) of the Communications Act – Competitive Bidding*, PP Docket No. 93-253, Fourth Report and Order, 9 FCC Rcd 2330 (1994).

*Order*, we established a small business size standard for a “small business” as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and their affiliates, has average annual gross revenues not to exceed \$15 million for the preceding three years.<sup>109</sup> A “very small business” is defined as an entity that, together with its affiliates and persons or entities that hold interests in such an entity and its affiliates, has average annual gross revenues not to exceed \$3 million for the preceding three years.<sup>110</sup> These size standards will be used in future auctions of 218-219 MHz spectrum.

39. *24 GHz – Incumbent Licensees.* This analysis may affect incumbent licensees who were relocated to the 24 GHz band from the 18 GHz band, and applicants who wish to provide services in the 24 GHz band. The applicable SBA small business size standard is that of “Cellular and Other Wireless Telecommunications” companies. This category provides that such a company is small if it employs no more than 1,500 persons.<sup>111</sup> We believe that there are only two licensees in the 24 GHz band that were relocated from the 18 GHz band, Teligent<sup>112</sup> and TRW, Inc. It is our understanding that Teligent and its related companies have less than 1,500 employees, though this may change in the future. TRW is not a small entity. Thus, only one incumbent licensee in the 24 GHz band is a small business entity.

40. *24 GHz – Future Licensees.* With respect to new applicants in the 24 GHz band, the small business size standard for “small business” is an entity that, together with controlling interests and affiliates, has average annual gross revenues for the three preceding years not in excess of \$15 million.<sup>113</sup> “Very small business” in the 24 GHz band is an entity that, together with controlling interests and affiliates, has average gross revenues not exceeding \$3 million for the preceding three years.<sup>114</sup> The SBA has approved these small business size standards.<sup>115</sup> These size standards will apply to the future auction, if held.

### 3. Satellite Service Providers

41. *Satellite Telecommunications and Other Telecommunications.* There is no small business size standard developed specifically for providers of international service. The appropriate size standards under SBA rules are for the two broad census categories of “Satellite

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<sup>109</sup> *Amendment of Part 95 of the Commission’s Rules to Provide Regulatory Flexibility in the 218-219 MHz Service*, WT Docket No. 98-169, Report and Order and Memorandum Opinion and Order, 15 FCC Rcd 1497 (1999).

<sup>110</sup> *Id.*

<sup>111</sup> 13 C.F.R. § 121.201, NAICS code 517212 (This category will be changed for purposes of the 2007 Census to “Wireless Telecommunications Carriers (except Satellite),” NAICS code 517210.).

<sup>112</sup> Teligent acquired the DEMS licenses of FirstMark, the only licensee other than TRW in the 24 GHz band whose license has been modified to require relocation to the 24 GHz band.

<sup>113</sup> *Amendments to Parts 1, 2, 87 and 101 of the Commission’s Rules to License Fixed Services at 24 GHz*, WT Docket No. 99-327, Report and Order, 15 FCC Rcd 16934, 16967 at para. 77 (2000); *see also* 47 C.F.R. § 101.538(a)(2).

<sup>114</sup> *Amendments to Parts 1, 2, 87 and 101 of the Commission’s Rules to License Fixed Services at 24 GHz*, WT Docket No. 99-327, Report and Order, 15 FCC Rcd 16934, 16967 at para. 77 (2000); *see also* 47 C.F.R. § 101.538(a)(1).

<sup>115</sup> *See* Letter to Margaret W. Wiener, Deputy Chief, Auctions and Industry Analysis Division, Wireless Telecommunications Bureau, FCC, from Gary M. Jackson, Assistant Administrator, SBA (July 28, 2000).

Telecommunications” and “Other Telecommunications.” Under both categories, such a business is small if it has \$13.5 million or less in average annual receipts.<sup>116</sup>

42. The first category of Satellite Telecommunications “comprises establishments primarily engaged in providing point-to-point telecommunications services to other establishments in the telecommunications and broadcasting industries by forwarding and receiving communications signals via a system of satellites or reselling satellite telecommunications.”<sup>117</sup> For this category, Census Bureau data for 2002 show that there were a total of 371 firms that operated for the entire year.<sup>118</sup> Of this total, 307 firms had annual receipts of under \$10 million, and 26 firms had receipts of \$10 million to \$24,999,999.<sup>119</sup> Consequently, we estimate that the majority of Satellite Telecommunications firms are small entities that might be affected by our action.

43. The second category of Other Telecommunications “comprises establishments primarily engaged in (1) providing specialized telecommunications applications, such as satellite tracking, communications telemetry, and radar station operations; or (2) providing satellite terminal stations and associated facilities operationally connected with one or more terrestrial communications systems and capable of transmitting telecommunications to or receiving telecommunications from satellite systems.”<sup>120</sup> For this category, Census Bureau data for 2002 show that there were a total of 332 firms that operated for the entire year.<sup>121</sup> Of this total, 259 firms had annual receipts of under \$10 million and 15 firms had annual receipts of \$10 million to \$24,999,999.<sup>122</sup> Consequently, we estimate that the majority of Other Telecommunications firms are small entities that might be affected by our action.

#### 4. Cable and OVS Operators

44. In addition to the estimates provided above, we consider certain additional entities that may be affected by the data collection from broadband service providers. Because section 706 requires us to monitor the deployment of broadband regardless of technology or transmission media employed, we anticipate that some broadband service providers will not provide telephone service. Accordingly, we describe below other types of firms that may provide broadband services, including cable companies, MDS providers, and utilities, among others.

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<sup>116</sup> 13 C.F.R. § 121.201, NAICS codes 517410 and 517910.

<sup>117</sup> U.S. Census Bureau, 2002 NAICS Definitions, “517410 Satellite Telecommunications”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

<sup>118</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 517410 (issued Nov. 2005).

<sup>119</sup> *Id.* An additional 38 firms had annual receipts of \$25 million or more.

<sup>120</sup> U.S. Census Bureau, 2002 NAICS Definitions, “517910 Other Telecommunications”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

<sup>121</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 517910 (issued Nov. 2005).

<sup>122</sup> *Id.* An additional 14 firms had annual receipts of \$25 million or more.



45. *Cable and Other Program Distribution.* The Census Bureau defines this category as follows: “This industry comprises establishments primarily engaged as third-party distribution systems for broadcast programming. The establishments of this industry deliver visual, aural, or textual programming received from cable networks, local television stations, or radio networks to consumers via cable or direct-to-home satellite systems on a subscription or fee basis. These establishments do not generally originate programming material.”<sup>123</sup> The SBA has developed a small business size standard for Cable and Other Program Distribution, which is: all such firms having \$13.5 million or less in annual receipts.<sup>124</sup> According to Census Bureau data for 2002, there were a total of 1,191 firms in this category that operated for the entire year.<sup>125</sup> Of this total, 1,087 firms had annual receipts of under \$10 million, and 43 firms had receipts of \$10 million or more but less than \$25 million.<sup>126</sup> Thus, under this size standard, the majority of firms can be considered small.

46. *Cable Companies and Systems.* The Commission has also developed its own small business size standards, for the purpose of cable rate regulation. Under the Commission’s rules, a “small cable company” is one serving 400,000 or fewer subscribers, nationwide.<sup>127</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but eleven are small under this size standard.<sup>128</sup> In addition, under the Commission’s rules, a “small system” is a cable system serving 15,000 or fewer subscribers.<sup>129</sup> Industry data indicate that, of 7,208 systems nationwide, 6,139 systems have under 10,000 subscribers, and an additional 379 systems have 10,000-19,999 subscribers.<sup>130</sup> Thus, under this second size standard, most cable systems are small.

47. *Cable System Operators.* The Communications Act of 1934, as amended, also contains a size standard for small cable system operators, which is “a cable operator that, directly or through an affiliate, serves in the aggregate fewer than 1 percent of all subscribers in the United States and is not affiliated with any entity or entities whose gross annual revenues in the aggregate exceed \$250,000,000.”<sup>131</sup> The Commission has determined that an operator serving fewer than 677,000

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<sup>123</sup> U.S. Census Bureau, 2002 NAICS Definitions, “517510 Cable and Other Program Distribution”; <http://www.census.gov/epcd/naics02/def/NDEF517.HTM>.

<sup>124</sup> 13 C.F.R. § 121.201, NAICS code 517510 (This category will be changed for purposes of the 2007 Census to “Wired Telecommunications Carriers,” NAICS code 517110.).

<sup>125</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, Table 4, Receipts Size of Firms for the United States: 2002, NAICS code 517510 (issued November 2005).

<sup>126</sup> *Id.* An additional 61 firms had annual receipts of \$25 million or more.

<sup>127</sup> 47 C.F.R. § 76.901(e). The Commission determined that this size standard equates approximately to a size standard of \$100 million or less in annual revenues. *Implementation of Sections of the 1992 Cable Act: Rate Regulation*, Sixth Report and Order and Eleventh Order on Reconsideration, 10 FCC Rcd 7393, 7408 (1995).

<sup>128</sup> These data are derived from R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D-1805 to D-1857.

<sup>129</sup> 47 C.F.R. § 76.901(c).

<sup>130</sup> Warren Communications News, *Television & Cable Factbook 2006*, “U.S. Cable Systems by Subscriber Size,” page F-2 (data current as of Oct. 2005). The data do not include 718 systems for which classifying data were not available.

<sup>131</sup> 47 U.S.C. § 543(m)(2); see 47 C.F.R. § 76.901(f) & nn. 1-3.

subscribers shall be deemed a small operator, if its annual revenues, when combined with the total annual revenues of all its affiliates, do not exceed \$250 million in the aggregate.<sup>132</sup> Industry data indicate that, of 1,076 cable operators nationwide, all but ten are small under this size standard.<sup>133</sup> We note that the Commission neither requests nor collects information on whether cable system operators are affiliated with entities whose gross annual revenues exceed \$250 million,<sup>134</sup> and therefore we are unable to estimate more accurately the number of cable system operators that would qualify as small under this size standard.

48. *Open Video Services.* Open Video Service (OVS) systems provide subscription services.<sup>135</sup> As noted above, the SBA has created a small business size standard for Cable and Other Program Distribution.<sup>136</sup> This standard provides that a small entity is one with \$13.5 million or less in annual receipts. The Commission has certified approximately 45 OVS operators to serve 75 areas, and some of these are currently providing service.<sup>137</sup> Affiliates of Residential Communications Network, Inc. (RCN) received approval to operate OVS systems in New York City, Boston, Washington, D.C., and other areas. RCN has sufficient revenues to assure that they do not qualify as a small business entity. Little financial information is available for the other entities that are authorized to provide OVS and are not yet operational. Given that some entities authorized to provide OVS service have not yet begun to generate revenues, the Commission concludes that up to 44 OVS operators (those remaining) might qualify as small businesses that may be affected by the rules and policies adopted herein.

## 5. Electric Power Generation, Transmission and Distribution

49. *Electric Power Generation, Transmission and Distribution.* The Census Bureau defines this category as follows: “This industry group comprises establishments primarily engaged in generating, transmitting, and/or distributing electric power. Establishments in this industry group may perform one or more of the following activities: (1) operate generation facilities that produce electric energy; (2) operate transmission systems that convey the electricity from the generation facility to the distribution system; and (3) operate distribution systems that convey electric power received from the generation facility or the transmission system to the final consumer.”<sup>138</sup> The SBA has developed a small business size standard for firms in this category: “A firm is small if, including its affiliates, it is

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<sup>132</sup> 47 C.F.R. § 76.901(f); see *FCC Announces New Subscriber Count for the Definition of Small Cable Operator*, Public Notice, 16 FCC Rcd 2225 (Cable Services Bureau 2001).

<sup>133</sup> These data are derived from: R.R. Bowker, *Broadcasting & Cable Yearbook 2006*, “Top 25 Cable/Satellite Operators,” pages A-8 & C-2 (data current as of June 30, 2005); Warren Communications News, *Television & Cable Factbook 2006*, “Ownership of Cable Systems in the United States,” pages D-1805 to D-1857.

<sup>134</sup> The Commission does receive such information on a case-by-case basis if a cable operator appeals a local franchise authority’s finding that the operator does not qualify as a small cable operator pursuant to § 76.901(f) of the Commission’s rules. See 47 C.F.R. § 76.909(b).

<sup>135</sup> See 47 U.S.C. § 573.

<sup>136</sup> 13 C.F.R. § 121.201, NAICS code 517510 (This category will be changed for purposes of the 2007 Census to “Wired Telecommunications Carriers,” NAICS code 517110.).

<sup>137</sup> See <http://www.fcc.gov/mb/ovs/csovscer.html> (current as of February 2007).

<sup>138</sup> U.S. Census Bureau, 2002 NAICS Definitions, “2211 Electric Power Generation, Transmission and Distribution”; <http://www.census.gov/epcd/naics02/def/NDEF221.HTM>.

primarily engaged in the generation, transmission, and/or distribution of electric energy for sale and its total electric output for the preceding fiscal year did not exceed 4 million megawatt hours.”<sup>139</sup>

According to Census Bureau data for 2002, there were 1,644 firms in this category that operated for the entire year.<sup>140</sup> Census data do not track electric output and we have not determined how many of these firms fit the SBA size standard for small, with no more than 4 million megawatt hours of electric output. Consequently, we estimate that 1,644 or fewer firms may be considered small under the SBA small business size standard.

## 6. Internet Service Providers

50. *Internet Service Providers.* The SBA has developed a small business size standard for Internet Service Providers (ISPs). ISPs “provide clients access to the Internet and generally provide related services such as web hosting, web page designing, and hardware or software consulting related to Internet connectivity.”<sup>141</sup> Under the SBA size standard, such a business is small if it has average annual receipts of \$23 million or less.<sup>142</sup> According to Census Bureau data for 2002, there were 2,529 firms in this category that operated for the entire year.<sup>143</sup> Of these, 2,437 firms had annual receipts of under \$10 million, and an additional 47 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

## 7. Other Internet-Related Entities

51. *Web Search Portals.* Our action pertains to VoIP services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The Commission has not adopted a size standard for entities that create or provide these types of services or applications. However, the Census Bureau has identified firms that “operate web sites that use a search engine to generate and maintain extensive databases of Internet addresses and content in an easily searchable format. Web search portals often provide additional Internet services, such as e-mail, connections to other web sites, auctions, news, and other limited content, and serve as a home base for Internet users.”<sup>144</sup> The SBA has developed a small business size standard for this category; that size standard is \$6.5 million or less in

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<sup>139</sup> 13 C.F.R. § 121.201, NAICS codes 221111, 221112, 221113, 221119, 221121, 221122, footnote 1.

<sup>140</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Utilities, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS codes 221111, 221112, 221113, 221119, 221121, 221122 (issued Nov. 2005).

<sup>141</sup> U.S. Census Bureau, “2002 NAICS Definitions: 518111 Internet Service Providers”; <http://www.census.gov/epcd/naics02/def/NDEF518.HTM>.

<sup>142</sup> 13 C.F.R. § 121.201, NAICS code 518111. This category will be changed, for purposes of the 2007 Census, to “Wired Telecommunications Carriers,” NAICS code 517110, for broadband Internet service providers (e.g., cable, DSL), and to “All Other Telecommunications,” NAICS code 517919, for Internet service providers providing services via client-supplied telecommunications connections.

<sup>143</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 518111 (issued Nov. 2005).

<sup>144</sup> U.S. Census Bureau, “2002 NAICS Definitions: 518112 Web Search Portals”; <http://www.census.gov/epcd/naics02/def/NDEF518.HTM>.

average annual receipts.<sup>145</sup> According to Census Bureau data for 2002, there were 342 firms in this category that operated for the entire year.<sup>146</sup> Of these, 303 had annual receipts of under \$5 million, and an additional 15 firms had receipts of between \$5 million and \$9,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

52. *Data Processing, Hosting, and Related Services.* Entities in this category “primarily ... provid[e] infrastructure for hosting or data processing services.”<sup>147</sup> The SBA has developed a small business size standard for this category; that size standard is \$23 million or less in average annual receipts.<sup>148</sup> According to Census Bureau data for 2002, there were 6,877 firms in this category that operated for the entire year.<sup>149</sup> Of these, 6,418 had annual receipts of under \$10 million, and an additional 251 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

53. *All Other Information Services.* “This industry comprises establishments primarily engaged in providing other information services (except new syndicates and libraries and archives).”<sup>150</sup> Our action pertains to VoIP services, which could be provided by entities that provide other services such as email, online gaming, web browsing, video conferencing, instant messaging, and other, similar IP-enabled services. The SBA has developed a small business size standard for this category; that size standard is \$6.5 million or less in average annual receipts.<sup>151</sup> According to Census Bureau data for 2002, there were 155 firms in this category that operated for the entire year.<sup>152</sup> Of these, 138 had annual receipts of under \$5 million, and an additional four firms had receipts of between \$5 million and \$9,999,999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

54. *Internet Publishing and Broadcasting.* “This industry comprises establishments engaged in publishing and/or broadcasting content on the Internet exclusively. These establishments do not provide traditional (non-Internet) versions of the content that they publish or broadcast.”<sup>153</sup> The

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<sup>145</sup> 13 C.F.R. § 121.201, NAICS code 518112 (This category will be changed for purposes of the 2007 Census to “Internet Publishing and Broadcasting and Web Search Portals,” NAICS code 519130.).

<sup>146</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 518112 (issued Nov. 2005).

<sup>147</sup> U.S. Census Bureau, “2002 NAICS Definitions: 518210 Data Processing, Hosting, and Related Services”; <http://www.census.gov/epcd/naics02/def/NDEF518.HTM>.

<sup>148</sup> 13 C.F.R. § 121.201, NAICS code 518210.

<sup>149</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 518210 (issued Nov. 2005).

<sup>150</sup> U.S. Census Bureau, “2002 NAICS Definitions: 519190 All Other Information Services”; <http://www.census.gov/epcd/naics02/def/NDEF519.HTM>.

<sup>151</sup> 13 C.F.R. § 121.201, NAICS code 519190.

<sup>152</sup> U.S. Census Bureau, 1997 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 519190 (issued Nov. 2005).

<sup>153</sup> U.S. Census Bureau, “2002 NAICS Definitions: 516110 Internet Publishing and Broadcasting”; <http://www.census.gov/epcd/naics02/def/NDEF516.HTM>.

SBA has developed a small business size standard for this census category; that size standard is 500 or fewer employees.<sup>154</sup> According to Census Bureau data for 2002, there were 1,362 firms in this category that operated for the entire year.<sup>155</sup> Of these, 1,351 had employment of 499 or fewer employees, and six firms had employment of between 500 and 999. Consequently, we estimate that the majority of these firms are small entities that may be affected by our action.

55. *Software Publishers.* These companies may design, develop or publish software and may provide other support services to software purchasers, such as providing documentation or assisting in installation. The companies may also design software to meet the needs of specific users.<sup>156</sup> The SBA has developed a small business size standard of \$23 million or less in average annual receipts for all of the following pertinent categories: Software Publishers, Custom Computer Programming Services, and Other Computer Related Services.<sup>157</sup> For Software Publishers, Census Bureau data for 2002 indicate that there were 6,155 firms in the category that operated for the entire year.<sup>158</sup> Of these, 7,633 had annual receipts of under \$10 million, and an additional 403 firms had receipts of between \$10 million and \$24,999,999. For providers of Custom Computer Programming Services, the Census Bureau data indicate that there were 32,269 firms that operated for the entire year.<sup>159</sup> Of these, 31,416 had annual receipts of under \$10 million, and an additional 565 firms had receipts of between \$10 million and \$24,999,999. For providers of Other Computer Related Services, the Census Bureau data indicate that there were 6,357 firms that operated for the entire year.<sup>160</sup> Of these, 6,187 had annual receipts of under \$10 million, and an additional 101 firms had receipts of between \$10 million and \$24,999,999. Consequently, we estimate that the majority of the firms in each of these three categories are small entities that may be affected by our action.

#### **D. Description of Projected Reporting, Recordkeeping, and Other Compliance Requirements**

56. In the Notice, many of the proposals to increase our understanding of broadband availability would impose no reporting, recordkeeping or other compliance requirements on small entities. However, we invite comment on several other proposals that would impose further reporting

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<sup>154</sup> 13 C.F.R. § 121.201, NAICS code 516110. (This category will be changed for purposes of the 2007 Census to “Internet Publishing and Broadcasting and Web Search Portals,” NAICS code 519130.)

<sup>155</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 5, NAICS code 516110 (issued Nov. 2005).

<sup>156</sup> See U.S. Census Bureau, “2002 NAICS Definitions: 511210 Software Publishers”; <http://www.census.gov/epcd/naics02/def/NDEF511.HTM>.

<sup>157</sup> 13 C.F.R. § 121.201, NAICS codes 511210, 541511, and 541519.

<sup>158</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Information, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 511210 (issued Nov. 2005).

<sup>159</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Professional, Scientific, and Technical Services, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 541511 (issued Nov. 2005).

<sup>160</sup> U.S. Census Bureau, 2002 Economic Census, Subject Series: Professional, Scientific, and Technical Services, “Establishment and Firm Size (Including Legal Form of Organization),” Table 4, NAICS code 541519 (issued Nov. 2005).

and recordkeeping requirements on current Form 477 filers. Specifically, the Notice invites comment on whether current Form 477 filers should (1) report numbers of subscribers per 5-digit Zip Code, (2) report 9-digit Zip Codes where there is at least one subscriber or report numbers of subscribers per 9-digit Zip Code, (3) report geocoded information about subscriber locations, or (4) report information that delineates in detail the boundaries of their broadband-enabled service territories.<sup>161</sup> The Notice also seeks comment on whether the Commission should (1) refine the speed tier information the Commission currently collects by splitting an existing speed tier into two;<sup>162</sup> (2) require all broadband filers to report the number of residential customers served and also the number of homes “passed” by their broadband enabled infrastructure;<sup>163</sup> (3) collect demographic information about households from filers located in representative areas;<sup>164</sup> and (4) collect price information from filers in representative areas or from filers more generally.<sup>165</sup> In addition, we invite comment whether there are any alternatives not discussed in the Notice that would also serve the objectives of the Notice.<sup>166</sup> We invite comment on ways to mitigate the burden that might be imposed on small entities by proposals discussed in the Notice.<sup>167</sup> We also invite comment on alternatives to these proposals that would meet the objectives of the Notice but would impose lesser burdens on small entities.

#### **E. Steps Taken to Minimize Significant Economic Impact on Small Entities, and Significant Alternatives Considered**

57. The RFA requires an agency to describe any significant alternatives that it has considered in reaching its proposed approach, which may include (among others) the following four alternatives: (1) the establishment of differing compliance or reporting requirements or timetables that take into account the resources available to small entities; (2) the clarification, consolidation, or simplification of compliance or reporting requirements under the rule for small entities; (3) the use of performance, rather than design, standards; and (4) an exemption from coverage of the rule, or any part thereof, for small entities.<sup>168</sup>

58. From the outset, the Notice invites comments on significant alternatives to improving data about broadband availability throughout the nation – particularly availability in rural and other hard-to-serve areas – that would impose no burden on small entities whatsoever. These alternatives ask whether the Commission would be able to meet its objectives by conducting further analysis of current data, conducting its own studies, or purchasing databases from other entities to supplement Commission data. The Notice asks whether the Commission should simply identify for further,

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<sup>161</sup> See Notice at section III.B.

<sup>162</sup> See Notice at para. 18.

<sup>163</sup> See Notice at para. 28.

<sup>164</sup> See Notice at para. 40-41.

<sup>165</sup> See Notice at para. 45-46.

<sup>166</sup> See Notice at para. 38.

<sup>167</sup> See Notice at para. 24; *see id.* at section III.

<sup>168</sup> 5 U.S.C. § 603(c).

individual study those Zip Code areas where deployment appears to be particularly limited.<sup>169</sup> The Notice invites comment on whether the Commission might collaborate with state public-private economic development or other initiatives to supplement and refine Commission data.<sup>170</sup> Furthermore, the Notice invites comment whether it might purchase commercial databases or services that would provide data without imposing additional burdens on filers.<sup>171</sup> Finally, the Commission inquires whether it might rely on a voluntary self-reporting system by non-served households, patterned after the National Do-Not-Call Registry, to identify localized areas where broadband services are not available.<sup>172</sup> None of these alternatives would impose burdens on small entities, but commenters are invited to comment on whether these alternatives would provide sufficient information for the Commission to assess whether it should institute new policies to encourage deployment of broadband services to rural and hard-to-serve areas.

59. With regard to proposals that would increase the reporting requirements of small entities, the Notice invites comments on how these proposals might be tailored to mitigate the burden on smaller entities but nevertheless obtain data that would enable the Commission to determine whether subscribers in those territories have access to broadband services.<sup>173</sup> As noted above, the Notice invites comment on whether current Form 477 filers should (1) report numbers of subscribers per 5-digit Zip Code, (2) report 9-digit Zip Codes where there is at least one subscriber or report numbers of subscribers per 9-digit Zip Code, (3) report geocoded information about subscriber locations, or (4) report information that delineates in detail the boundaries of their broadband-enabled service territories.<sup>174</sup> The Notice also seeks comment on whether the Commission should (1) refine the speed tier information the Commission currently collects by splitting an existing speed tier into two;<sup>175</sup> (2) require all broadband filers to report the number of residential customers served and also the number of homes “passed” by their broadband enabled infrastructure;<sup>176</sup> (3) collect demographic information about households from filers located in representative areas;<sup>177</sup> and (4) collect price information from filers in representative areas or from filers more generally.<sup>178</sup> To analyze the impact on small entities, the Notice specifically asks whether entities maintain these types of information in billing or marketing databases and asks commenters to demonstrate the burden for the entities to collect and report this type

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<sup>169</sup> See Notice at para. 25.

<sup>170</sup> See Notice at para. 26.

<sup>171</sup> See Notice at para. 32.

<sup>172</sup> See Notice at para. 34. We note that some of these subscribers might be small entities, and we also note that it would be impossible to define the universe of small entities that might use broadband services. However, because these subscribers would benefit from a self-reporting process and because such a process would be voluntary, we believe that any burden in reporting on an FCC website would be minimal at best.

<sup>173</sup> See Notice at para. 24.

<sup>174</sup> See Notice at section III.B.

<sup>175</sup> See Notice at para. 18.

<sup>176</sup> See Notice at para. 28.

<sup>177</sup> See Notice at para. 40-41.

<sup>178</sup> See Notice at para. 45-46.

of information. This information will assist the Commission in determining whether these various proposals would impose a significant economic impact on small entities. Commenters are invited to comment on whether there are alternative methods that would obtain the same information while lessening the economic impact on small entities.

60. The Notice also invites comment on how we should modify the reporting requirements for wireless broadband providers and interconnected VoIP providers. Specifically, the Notice invites comment on whether mobile wireless providers should (1) report the number of month-to-month (or longer term) subscriptions to broadband Internet access service designed for full Internet browsing; (2) report the number of month-to-month (or longer term) subscriptions for broadband-speed browsing of customized-for-mobile web sites; and (3) report the number of unique mobile voice service subscribers who are not month-to-month subscribers to an Internet access service, but who nevertheless made any news, video, or other entertainment downloads to the subscriber's handset at broadband speed during the month preceding the Form 477 reporting date.<sup>179</sup> The Notice also seeks comment on how to improve the reporting estimate of the percentage of mobile wireless broadband subscribers who are residential end users.<sup>180</sup> In doing so, the Notice specifically suggests and seeks comment on alternative methods for arriving at the best estimates of residential end users. Finally, the Notice specifically invites comment on how to collect useful information about the number of interconnected VoIP subscribers in the least burdensome manner.<sup>181</sup> This information will assist the Commission in determining whether these various proposals would impose a significant economic impact on small entities. Commenters are invited to comment on whether there are alternative methods that would obtain the same information while lessening the economic impact on small entities.

61. Based on these questions, and the alternatives we have discussed, we anticipate that the record will be developed concerning alternative ways in which the Commission could lessen the burden on small entities of obtaining improved data about broadband availability throughout the nation.

**F. Federal Rules that May Duplicate, Overlap, or Conflict with the Proposed Rules**

62. None.

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<sup>179</sup> See Notice at para. 22.

<sup>180</sup> See Notice at section III.A.2.

<sup>181</sup> See Notice at para. 22.



**STATEMENT OF  
CHAIRMAN KEVIN J. MARTIN**

*Re: In the Matter of Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriberhip Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriberhip (WC Docket No. 07-38)*

*Re: 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 (GN Docket No. 07-45)*

The United States is the largest broadband market in the world with over 56 million broadband subscribers according to the Organization for Economic Cooperation and Development (OECD). Encouraging the deployment of affordable broadband services to all Americans is a top priority of mine and of the Commission. I am proud of the progress we have made in broadband deployment by creating an environment that better facilitates infrastructure investment.

Since I arrived at the Commission in July 2001, high speed lines in the U.S. have gone from 9 million to nearly 65 million. According to the Commission's most recent data, high-speed connections increased by 26% in the first half of 2006 and by 52% from June 2005 to June 2006.

A recent independent study by Pew confirmed this trend, finding that from March 2005 to March 2006, overall broadband adoption increased by 40% – from 60 to 84 million – twice the growth rate of the year before. The study found that, although overall penetration rates in rural areas still lags behind urban areas, broadband adoption in rural America also grew at approximately the same rate (39%). Perhaps most importantly, the Pew study found that the significant increase in broadband adoption was widespread and cut across all demographics. For example, broadband adoption grew by more than 120% among African Americans and grew by almost 70% among middle-income households (those with incomes between \$40,000 and \$50,000 per year).

The Pew data also confirms that the price of broadband service has dropped in the past two years. Specifically, the Pew Report found that between February 2004 and December 2005, the average price for high-speed service declined from \$39 per month to \$36 per month. Currently, Verizon and Comcast each offer promotional broadband packages for \$19.99 per month, for example, and AT&T has committed to providing new retail broadband customers a \$10 a month broadband Internet access service throughout the combined region.

While we have made progress recently, as I have said before, there is more we can do. For example, the Commission is committed to obtaining the best information possible about the deployment, access, and affordability of broadband services nationwide. Last year for instance, for the first time we began reporting information regarding different speeds of broadband connections (e.g., about services offered at speeds in excess of 200 kbps).

The Broadband Data NPRM we adopt today will allow the Commission to gain an even better picture of broadband deployment in this country. The Notice asks questions about how we can obtain more specific information about broadband deployment and consumer acceptance in specific geographic areas and how we can combine our data with those collected at the state level or by other public sources.

By improving our data collection, we will be able to identify more precisely those areas of the country where additional broadband deployment is needed.

We also launch today our fifth inquiry into “whether advanced telecommunications capability is being deployed to all Americans in a reasonable and timely fashion.” 47 U.S.C. §157 nt. In this Notice, we seek comment on all aspects of broadband availability, including price and bandwidth speeds. In particular, we seek comment on whether, given the evolution of technology and the marketplace, we should redefine the term “advanced services” to require higher minimum speeds.

Between these two proceedings, it is my hope that the Commission will solicit the information necessary to better assess the competitive progress in the broadband market. We have already taken some steps to improve the information we collect and report, but the items we adopt today will provide additional important progress towards our goal of universal affordable broadband access for Americans.

**STATEMENT OF  
COMMISSIONER MICHAEL J. COPPS**

*Re: Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriberhip Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriberhip*

For several years now, I have been greatly disappointed by the Commission's broadband data-gathering and presentation. As scholars, industry and the Government Accountability Office (GAO) have documented, our semi-annual statistical reports currently fail to measure even basic concepts such as the extent of broadband deployment across the country (including in rural and tribal areas) and the degree of competition among broadband providers and modalities. Our statistical methodology seems almost calculated to obscure just how far our country is falling behind many other industrialized nations in broadband availability, adoption, speed and price. Indeed, the lack of reliable government data on the present state of our broadband market is a fundamental obstacle to developing a national strategy to reverse our inexcusable broadband performance. Until we know where we stand today, how can we possibly build the broadband future that our nation deserves? And if the FCC doesn't gather this data, who will?

Today's NPRM asks a number of important questions that will allow the FCC to begin reforming its broadband data-gathering. An item like this should have been voted ten years ago. But we take what we can get, and I appreciate Chairman Martin's willingness to work with us to develop a series of questions that will allow the Commission to develop a far more nuanced and reliable picture of our nation's broadband market. I look forward to working with him and my fellow Commissioners to synthesize the comments we receive over the coming months so we can develop rules that will improve our semi-annual broadband statistical reports as well as our section 706 broadband analysis.

Though today's item asks a multitude of important questions—too many to mention here—I would like to focus on certain issues that I believe are of particular importance. First, today's item seeks comment on how the agency should measure broadband speed. For too long, we have defined broadband as 200 kbps in one direction—a measure that was outdated even when it was introduced years ago and that has become increasingly untenable today, especially when one considers what consumers in other countries routinely expect and receive. I look forward to receiving comments on how we can develop more useful measures of speed and also how we can ensure that broadband providers are using comparable methodologies for calculating speed.

Second, today's item states that competitive choice should, ideally, be calculated on a house-by-house and business-by-business basis. It also forthrightly acknowledges the limitations of the Commission's existing methodology, which assumes if one home or business in a ZIP code has broadband, then every home or business in that ZIP code has broadband. No business in its right mind would base decisions on such misleading data—surely the American government should not do so either. I am especially pleased that we seek comment on the feasibility of developing a sampling methodology to develop estimates of competition and broadband deployment in representative urban, suburban, rural, and tribal areas and on using statistical extrapolation to develop a national picture. The groundbreaking mapping and analysis conducted by private-public partnerships like ConnectKentucky—not to mention the example of countries like Japan, which gathers detailed data at the prefecture level—certainly demonstrate that it is possible, with a little elbow grease, to gather far more granular broadband data than we presently do at the FCC. A pretty good idea of what's going on in representative parts of the country strikes me as a far better basis for policy than a largely misleading idea of what's happening everywhere.

Third, today's item seeks information on broadband price—a crucially important piece of information in understanding broadband deployment and in assessing whether consumers are being well served by our current broadband market. After all, it is surely *value*—meaning the relationship between price and measures of quality such as speed and ease of use—that matters most to consumers and ought to matter most to the Commission. I am especially interested in learning how price and value are affected by the degree of competition in an area. We should be able to report the price per bit in representative parts of the country, and to compare these statistics to what consumers receive in other nations. The Commission has for many years considered such factors in its annual analyses of, for instance, video and wireless services—it is well past time that we do so for broadband as well.

Fourth, building upon the point just made, today's item distinguishes between two distinct concepts—whether broadband is *available* and whether consumers have chosen to *adopt* broadband—that the Commission has conflated for far too long.<sup>1</sup> Gathering statistics on both concepts—as well as how the two are correlated with price, speed, value and demographic factors such as age, gender, education, race, income, rural and tribal residence, disability status, and so forth—will allow the Commission, other policymakers, academics, and industry to understand why certain populations have benefited far less than others from the digital revolution. Only when we understand the many factors driving broadband adoption can we ensure that the benefits of this exciting technology become a part of *every* American's life—as they surely should be.

Finally, today's item seeks comment on how we can use international statistics on broadband deployment to better understand and assess our own country's broadband marketplace. Even though our country is undeniably unique in many ways, lessons from abroad may well be relevant to our own situation and we should always have the humility to learn from others.

Despite our late start, today's item nevertheless represents an important step in the right direction. I hope that it represents an ongoing commitment on the part of this agency to improve our data-gathering and presentation. I also hope it isn't too late.

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<sup>1</sup> See, e.g., United States GAO, *Broadband Deployment Is Extensive Throughout the United States, but it Is Difficult to Assess the Extent of Deployment Gaps in Rural Areas*, GAO-06-426 (May 2006).

**STATEMENT OF  
COMMISSIONER JONATHAN S. ADELSTEIN**

*Re: Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriber Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriberhip, Notice of Proposed Rulemaking (2007)*

The Commission must collect accurate and reliable data concerning the status of broadband deployment, availability, affordability, and competition, if we are to adopt effective policies that promote access to broadband services, our charge under the Telecommunications Act of 1996. Too often, I hear complaints about the lack of accurate, comprehensive, and granular broadband data and the quality of the FCC's data gathering efforts. It is the FCC's job to fill in the many blanks. With this *Notice*, the Commission has the opportunity to correct well documented short-comings in our data gathering program that have hamstrung our ability to collect the data necessary for sound policymaking. While it has been a long time coming, we will now have the opportunity to make some welcome improvements after years of foot-dragging.

Given the increasing importance of broadband to our economy and quality of life, we must engage in a concerted and coordinated effort to restore our place as the world leader in telecommunications by making affordable broadband available to all our citizens. To accomplish this task, we must be willing to take a hard look at our successes and failures, and improve our data collection. Having a comprehensive, reliable, and accurate understanding about the state of broadband deployment is the critical first step in a comprehensive effort to promote the availability of broadband services to all Americans.

Yet, the Commission's current efforts to gauge broadband deployment, access, and affordability fall far short. In its May 2006 report, the Government Accountability Office (GAO) took the FCC to task for the quality of its broadband data. GAO criticized the Commission's ability to analyze who is getting broadband and where it is deployed, observing that the FCC's data "may not provide a highly accurate depiction of deployment of broadband infrastructures for residential service, especially in rural areas." GAO's report makes clear that the FCC has much work to do to improve the quality and scope of its broadband data, as well as its analysis of the availability of affordable broadband services, if it is to satisfy the Congressional mandate in Section 706.

Through this *Notice*, the Commission takes a first step toward a better data gathering and analytical process. The *Notice* seeks comment on whether to alter the Commission's existing definition of broadband, how to collect additional demographic information about broadband subscribers, and how to collect and analyze data on the cost of residential broadband services. To maintain our productivity edge, we must give our citizens communications tools that are equal or greater than those available to our global competitors. We should start by updating our current definition of high-speed of just 200 kbps in one direction to something more akin to what consumers receive in countries with which we compete, speeds that are magnitudes higher than our current definitions. We need to set ambitious goals, shooting for real high-bandwidth broadband deployment, rather than being content to hit targets set almost eight years ago. Particularly given the growing evidence that citizens of other countries are getting a much greater broadband value, in terms of cost per megabit, the Commission must also explore ways to monitor the actual speeds and prices available to American consumers who are capable of obtaining

broadband services. Similarly, the *Notice* seeks comment on how to collect data on broadband availability and affordability in other nations.

Particularly important, the *Notice* also seeks comment on how to better assess broadband availability. As GAO has made clear, the Commission's current practice of basing conclusions about availability on providers' lists of Zip Codes in which they serve at least one customer does not provide sufficient information about the actual deployment of broadband networks, its practical availability for consumers, or the state of competition in given areas. In this regard, I am pleased that the *Notice* seeks comment on how to gather data about broadband deployment, availability, and adoption among Native Americans living on tribal lands. The Commission must explore ways to develop greater granularity in its assessment and analysis of broadband availability, whether through statistical sampling, Census Bureau surveys, or other means. If we are to make sure that all Americans benefit from broadband services, the Commission must do more to assess broadband availability and affordability across our many diverse populations. So, I appreciate my colleagues' willingness to expand the scope of questions raised in this *Notice* and am hopeful that it will provide a record that will allow us to significantly enhance the Commission's data gathering efforts into the status of broadband deployment, availability, and affordability.

Given that the most glaring weaknesses in our data gathering efforts have been well-known for some time, it is disappointing that the Commission only seeks comment on these changes, even as we simultaneously launch an inquiry which will form the basis of our next Section 706 Report to Congress. Our timing suggests that the Commission may not have a revised data gathering program in place in time to better inform our next report. I hope that prediction is wrong because these efforts would enhance the ability of the Commission and Congress to understand the availability of affordable broadband and to target policy efforts accordingly. We should do whatever we can to make sure that we have all the facts before we are required to make the next round of conclusions.

**STATEMENT OF  
COMMISSIONER DEBORAH TAYLOR TATE**

*Re: 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*

*Re: Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscribership Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscribership*

As a state official, I witnessed first-hand the incredible impact broadband networks and services have on real communities and families across Tennessee. From watching our state become the first to connect every school to the Internet, to celebrating the 10<sup>th</sup> anniversary of the E-rate program, I've seen how millions of children all across this country are benefiting in ways we never dreamed possible before. From Appalachia to Alaska, I have also seen the impact of broadband services to improve the quality and availability of health care services to more Americans, particularly those in the most rural and isolated communities. Pockets of incredible stories, uses, and innovative projects abound, but we need to do more in order to ensure that *all* Americans enjoy the benefits that broadband can bring.

While a state member of the Federal-State Joint Conference on Advanced Telecommunications Services, I encouraged the Commission to do more, and am now pleased that we are doing just that. Congress charged us with regularly inquiring into the availability of advanced telecommunications capability to all Americans and, through this proceeding, we are fulfilling our obligation. But, more importantly, we will be providing information to CEOs deciding where to locate a new business, to consumers seeking e-learning, and to healthcare providers sharing medical records to better coordinate patient care. I also hope this will enable us to showcase some of the most innovative and exciting public-private initiatives across the country and serve as a clearinghouse for local officials, businesses, providers, and consumers seeking to bring all the opportunities and promise that broadband provides to their communities.

Meeting the goal of providing broadband to this vast and geographically challenging country will not be easy. It cannot and should not be up to government alone. But with American ingenuity, corporate commitment, the promise of new jobs to economically depressed areas, and reduced healthcare costs, we all can be part of the solution. We must be in order to continue our role of global leadership and to ensure that we prepare, educate, and provide the tools necessary for tomorrow's innovators.

**STATEMENT OF  
COMMISSIONER ROBERT M. McDOWELL**

*Re: Development of Nationwide Broadband Data to Evaluate Reasonable and Timely Deployment of Advanced Services to All Americans, Improvement of Wireless Broadband Subscriberhip Data, and Development of Data on Interconnected Voice over Internet Protocol (VoIP) Subscriberhip, WC Docket No. 07-38*

*Re: 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, GN Docket No. 07-45*

By adopting these two items, we are taking important steps to update and refine the Commission's efforts to determine the current state of broadband deployment in the U.S., including the market, investment and technological trends of advanced telecommunications capabilities. In the *Data Collection Notice of Proposed Rulemaking*, we seek comment on how we can further refine our information collection on broadband deployment to more accurately reflect service to rural areas and to include advanced wireless technologies. In the *Section 706 Notice of Inquiry*, we expect to receive comments that will focus our understanding of how to define advanced telecommunications capability, the status of deployment of broadband capability to all Americans, the reasonableness and timeliness of the current level of deployment, and what actions can or should be taken to accelerate deployment. I look forward to receiving the comments in both of these proceedings as part of the Commission's ongoing effort to continue to increase the rate of broadband penetration and foster more choices for all types of consumers. We should continue to seize every opportunity to move America forward in this important area.