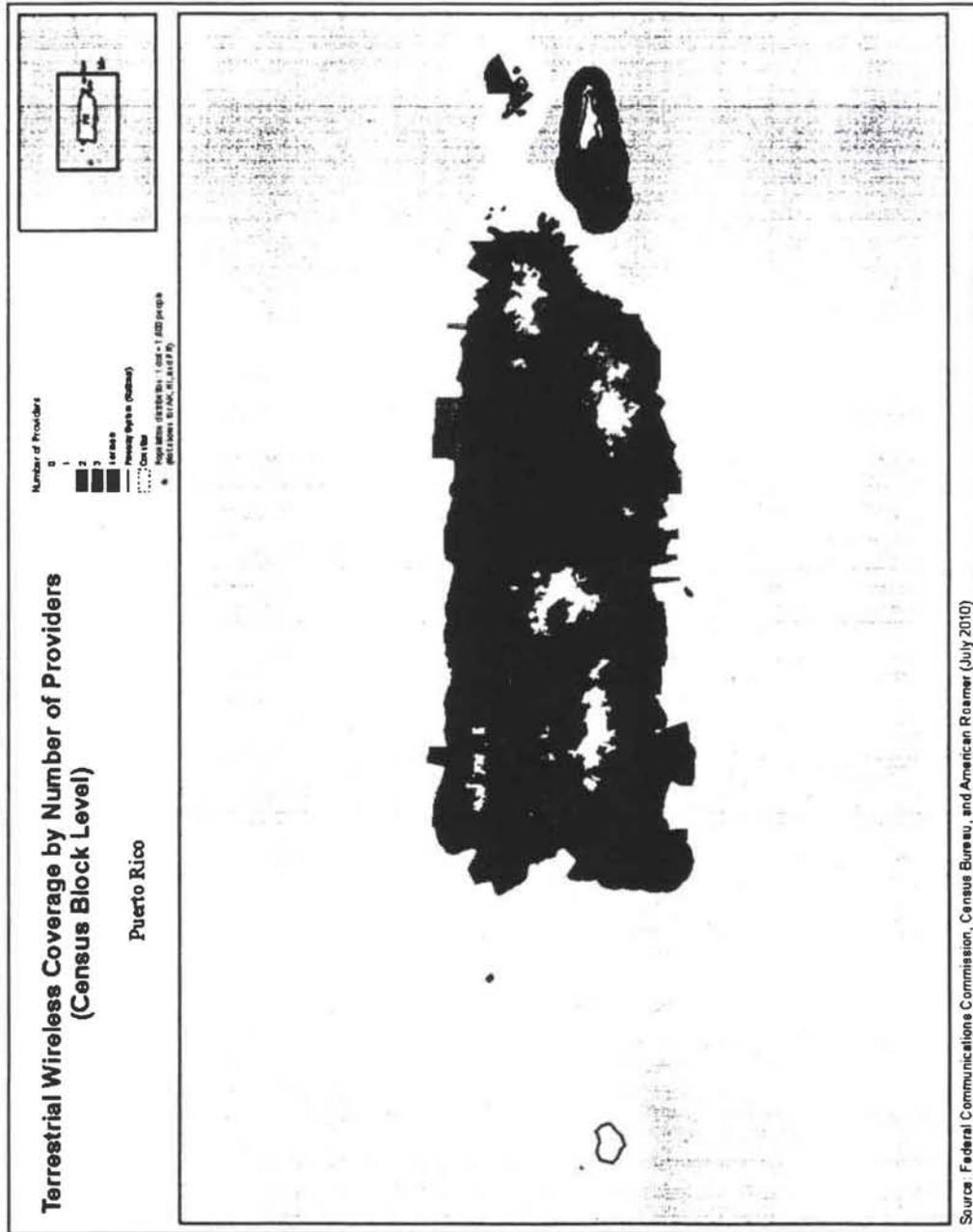
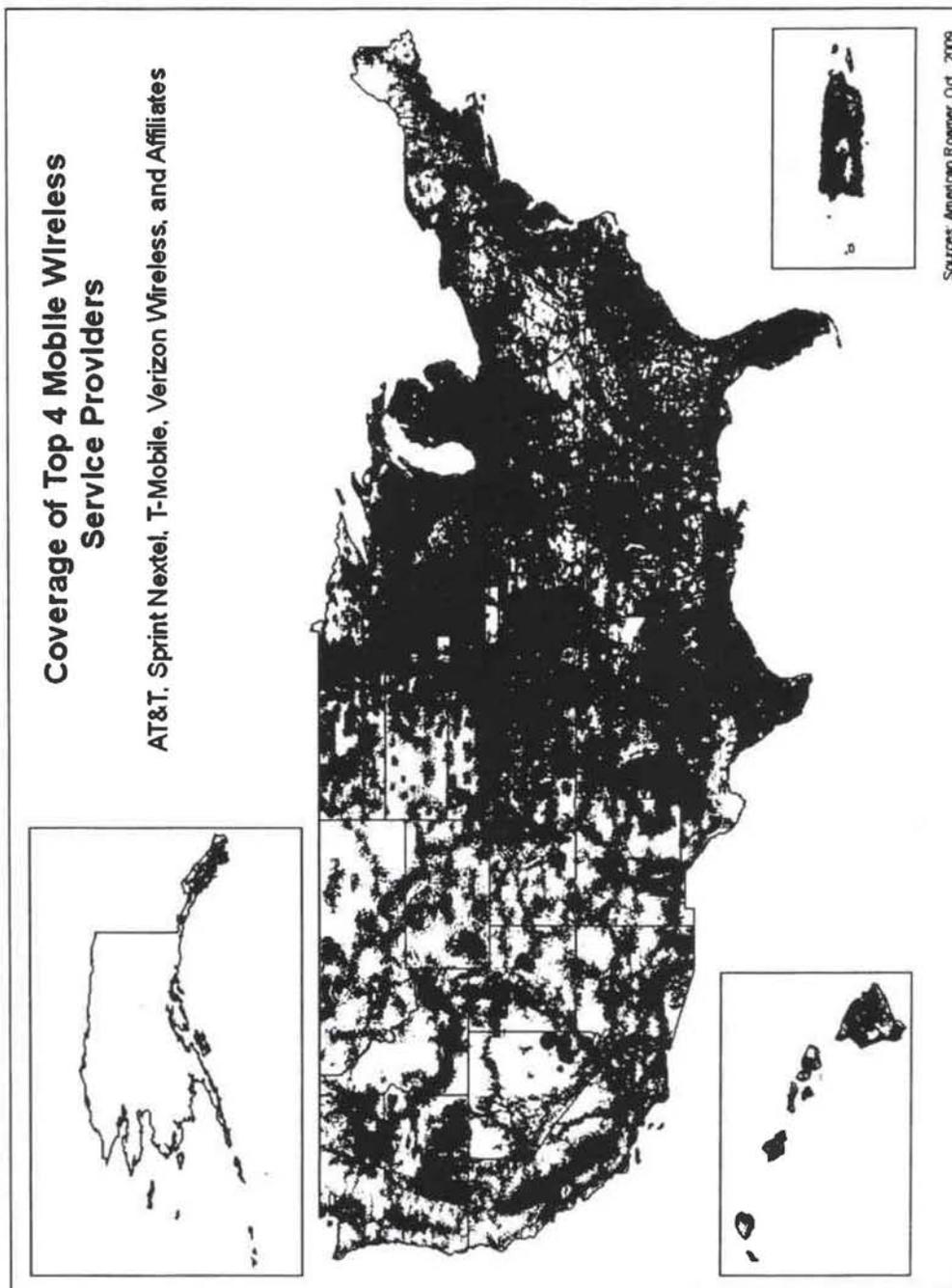


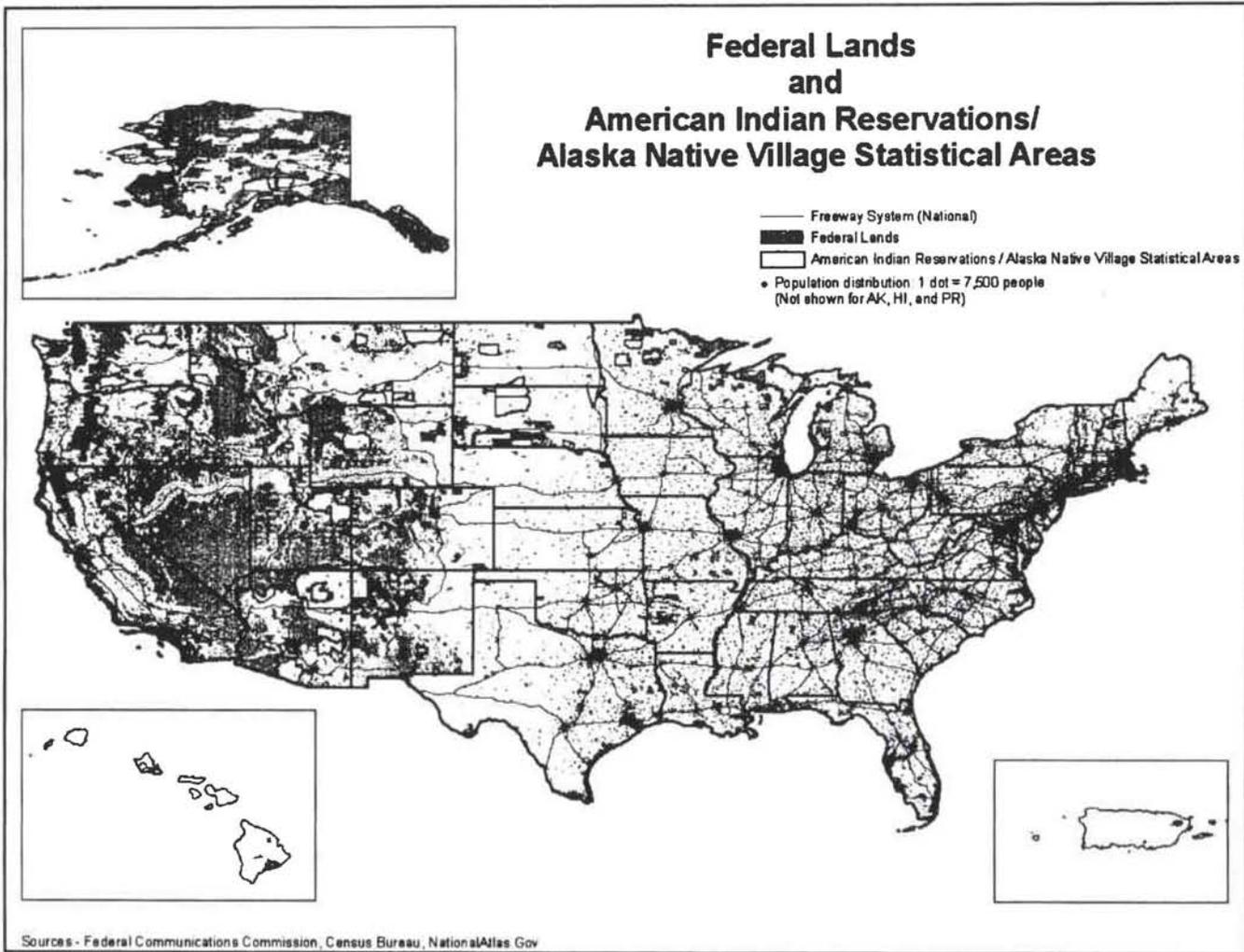
Map D-23: Wireless Coverage by Number of Providers by Region (16)



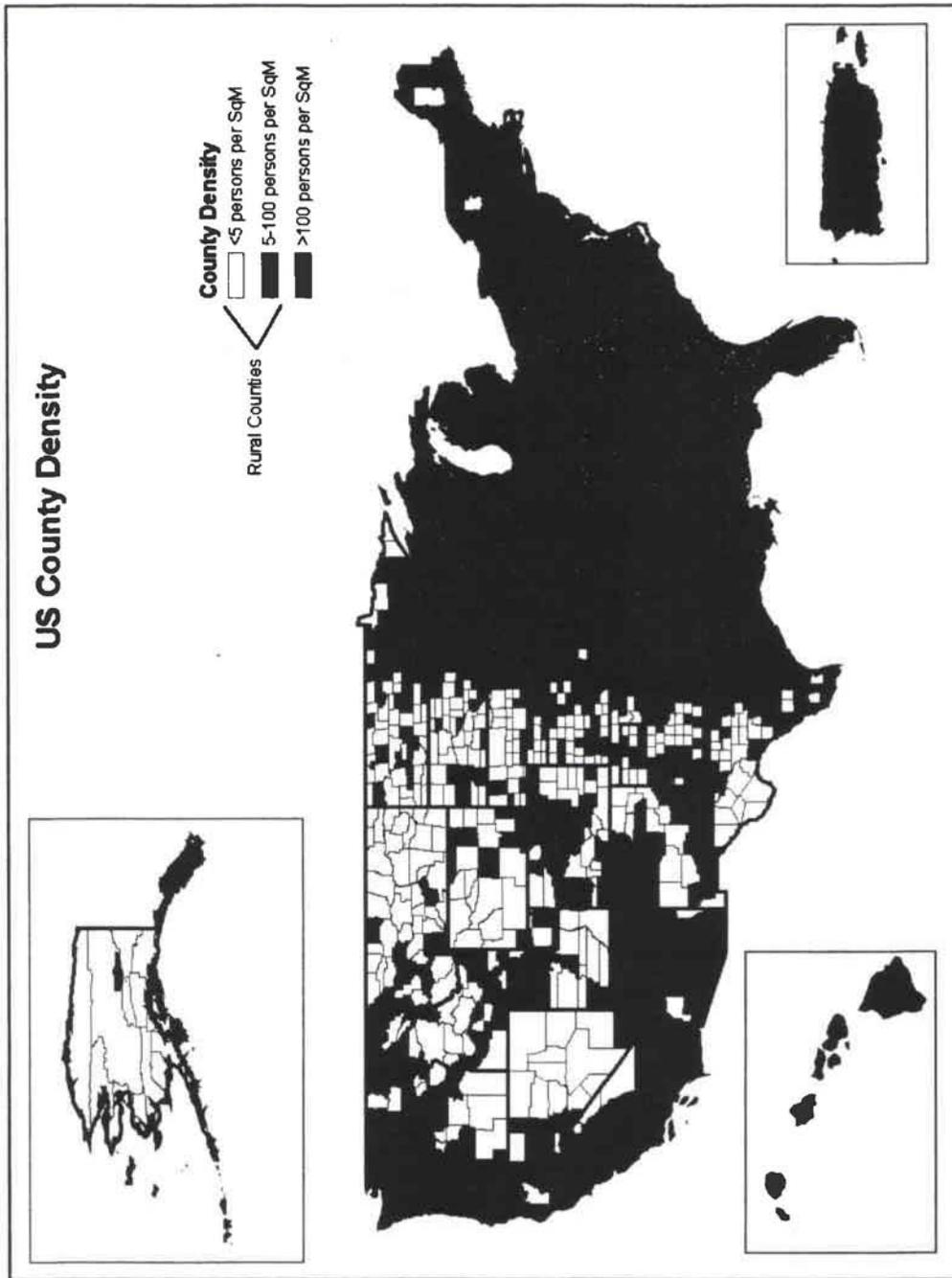
Map D-24: Coverage of the Top 4 Mobile Wireless Service Providers



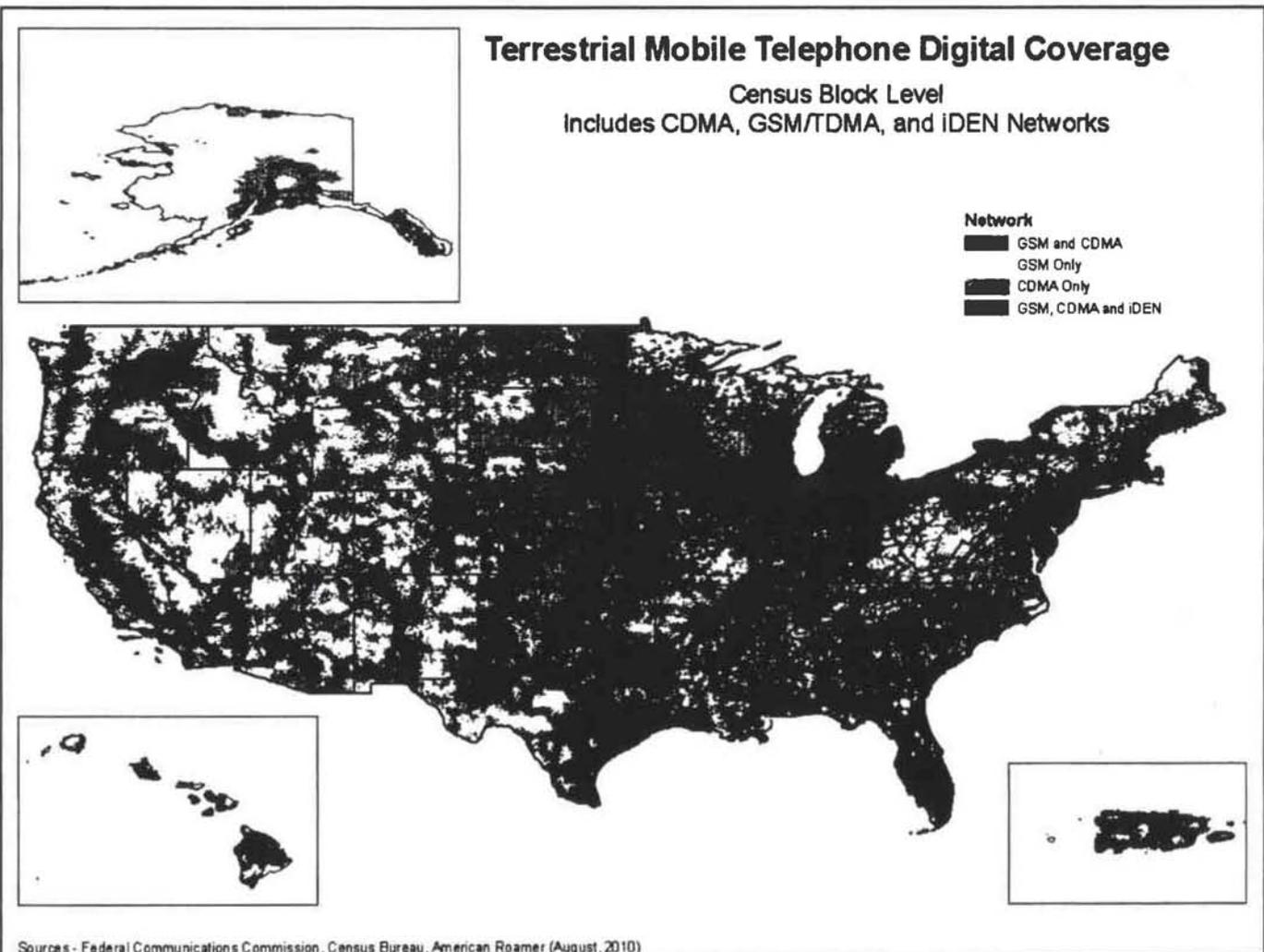
Map D-25: U.S. Federal Lands



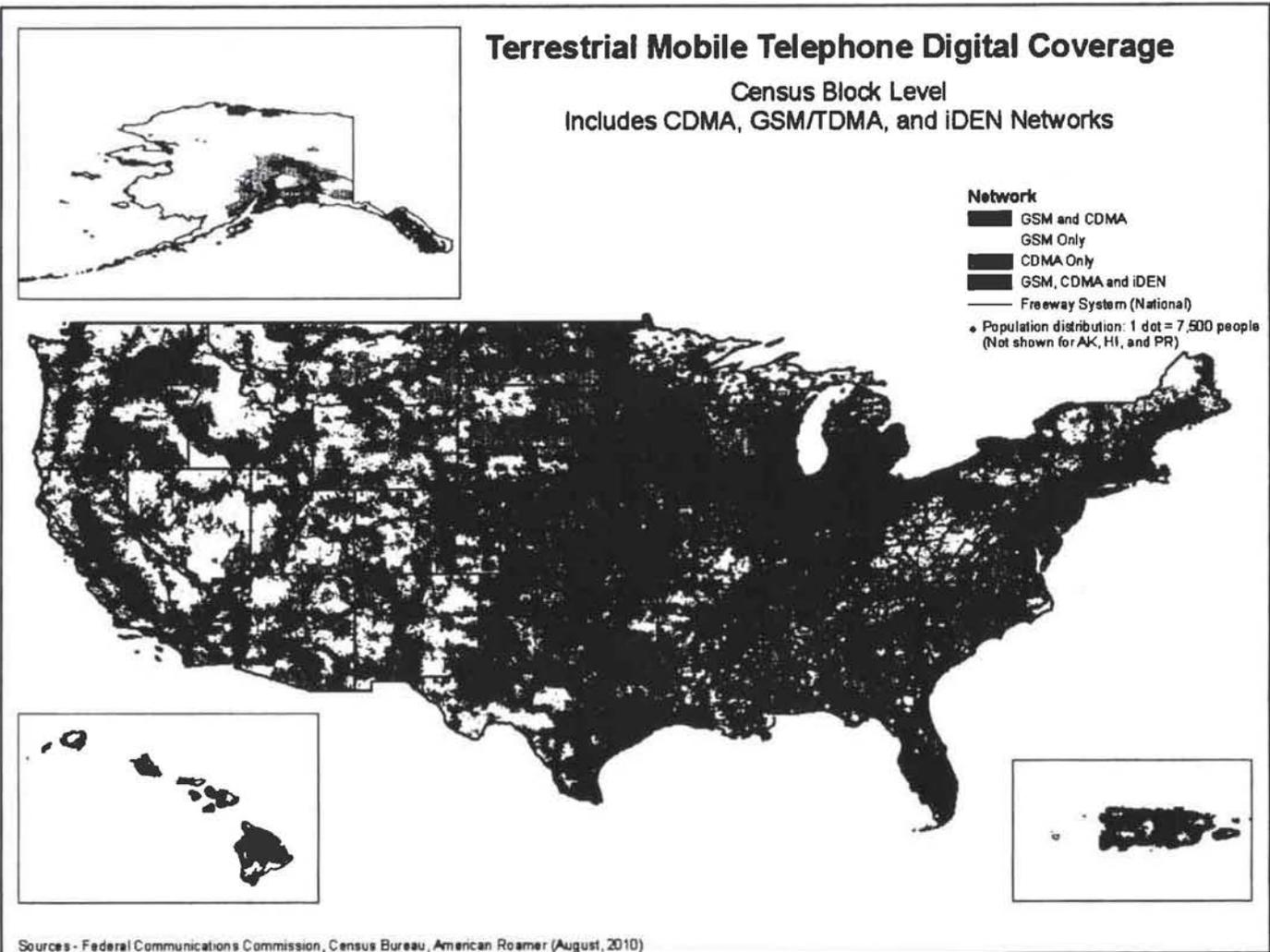
Map D-26: U.S. County Density



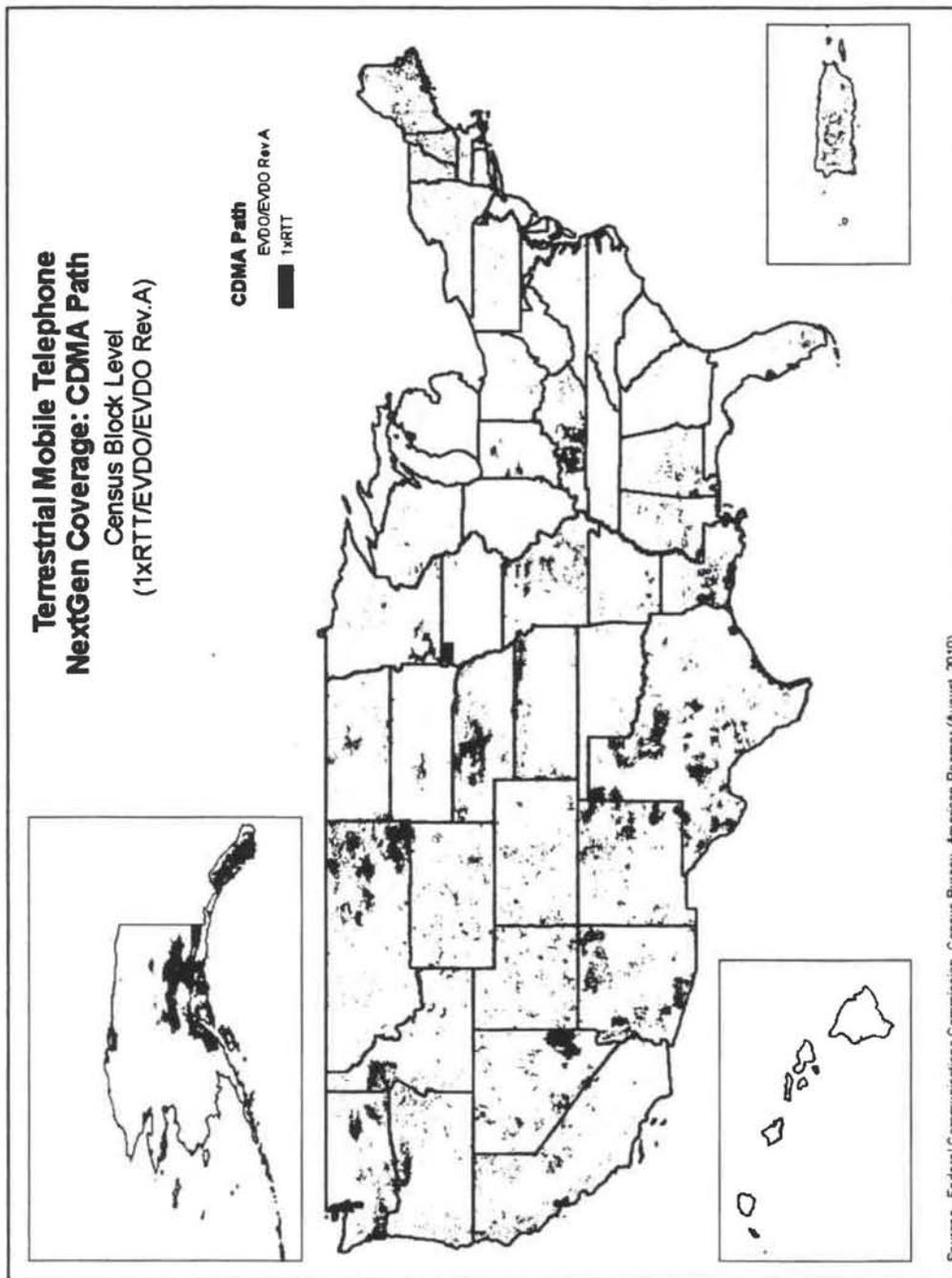
Map D-27: Mobile Wireless Digital Coverage



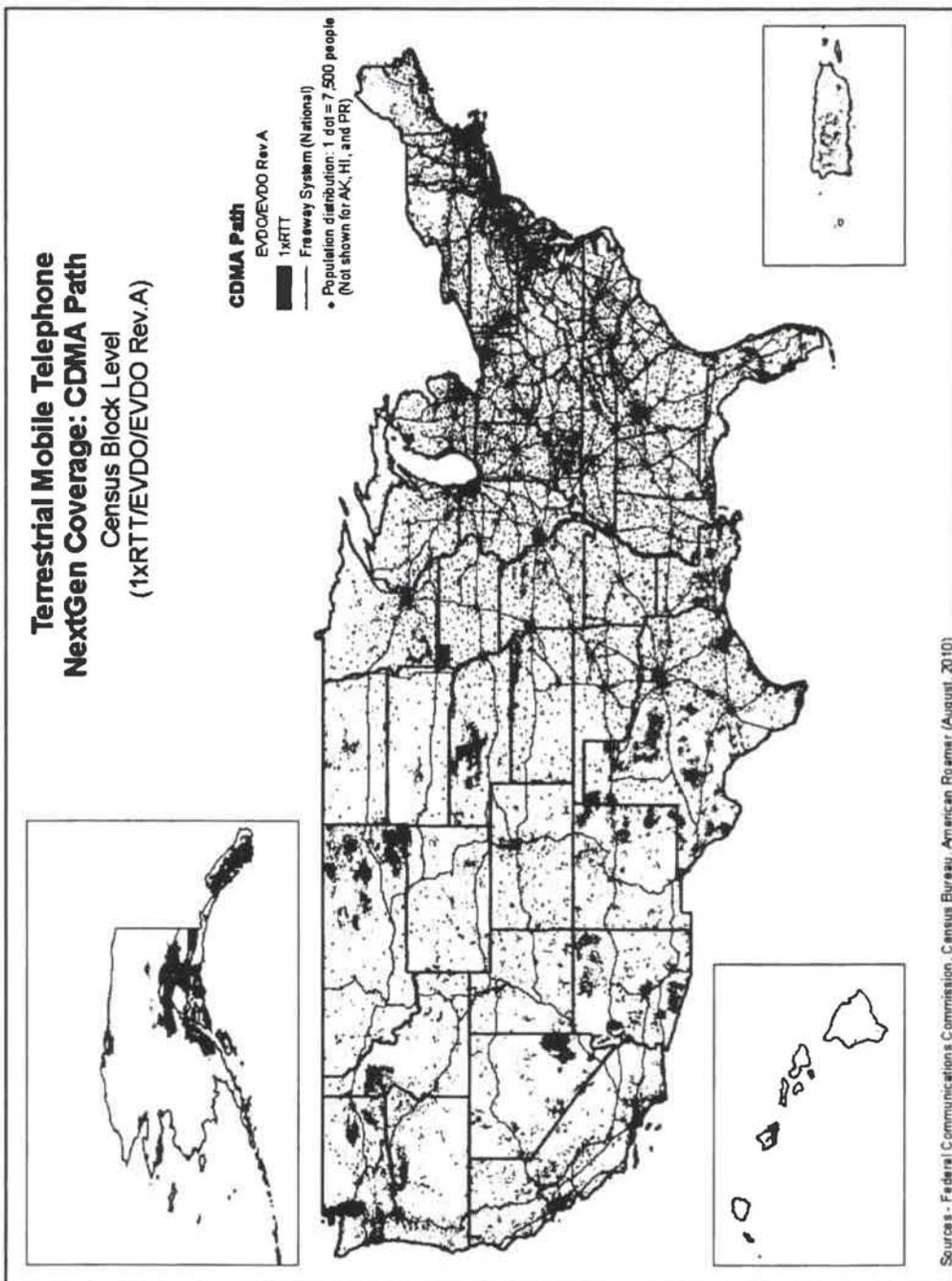
Map D-28: Mobile Wireless Digital Coverage (2)



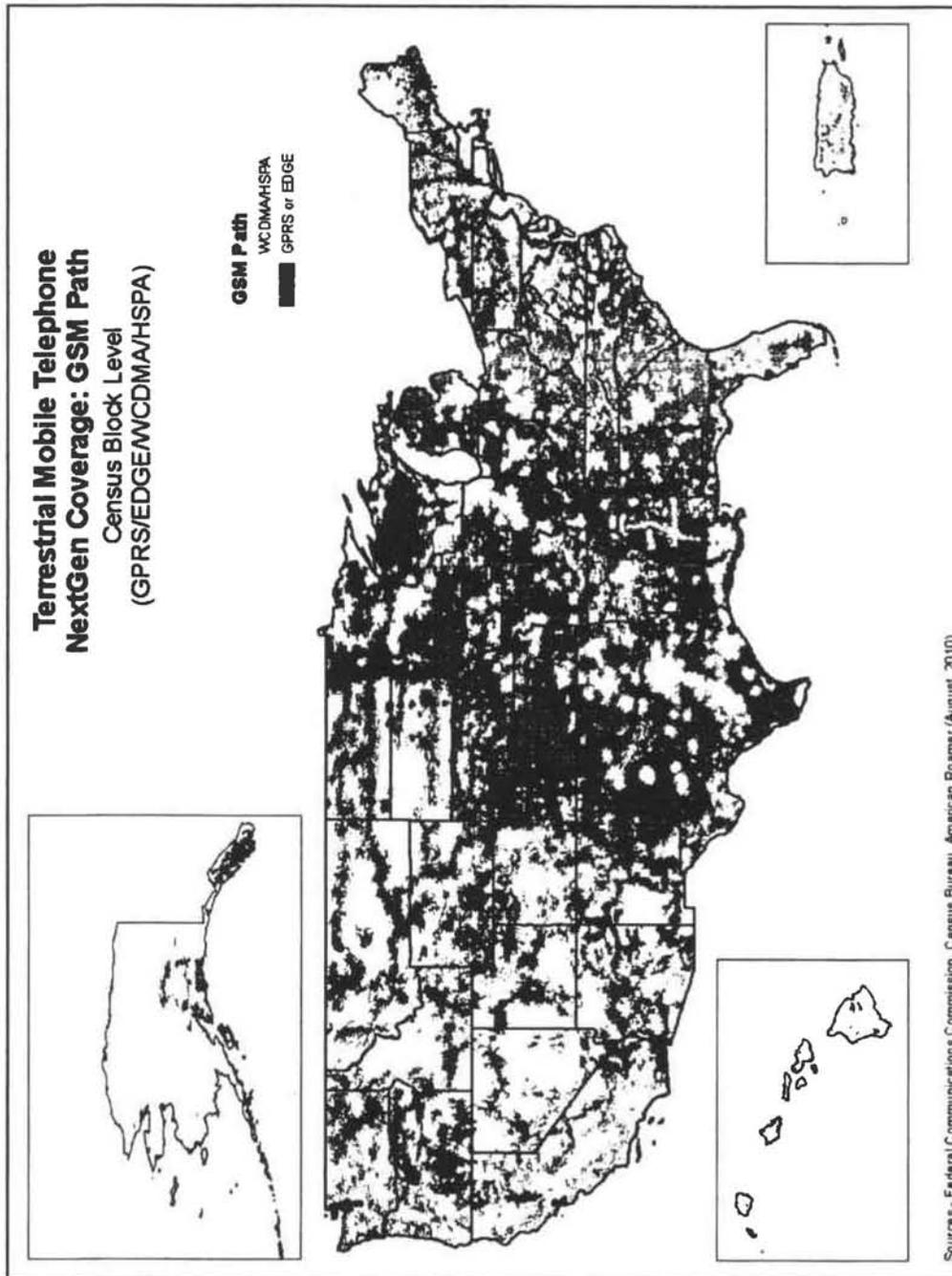
Map D-29: Mobile Wireless NextGen Coverage: CDMA Path



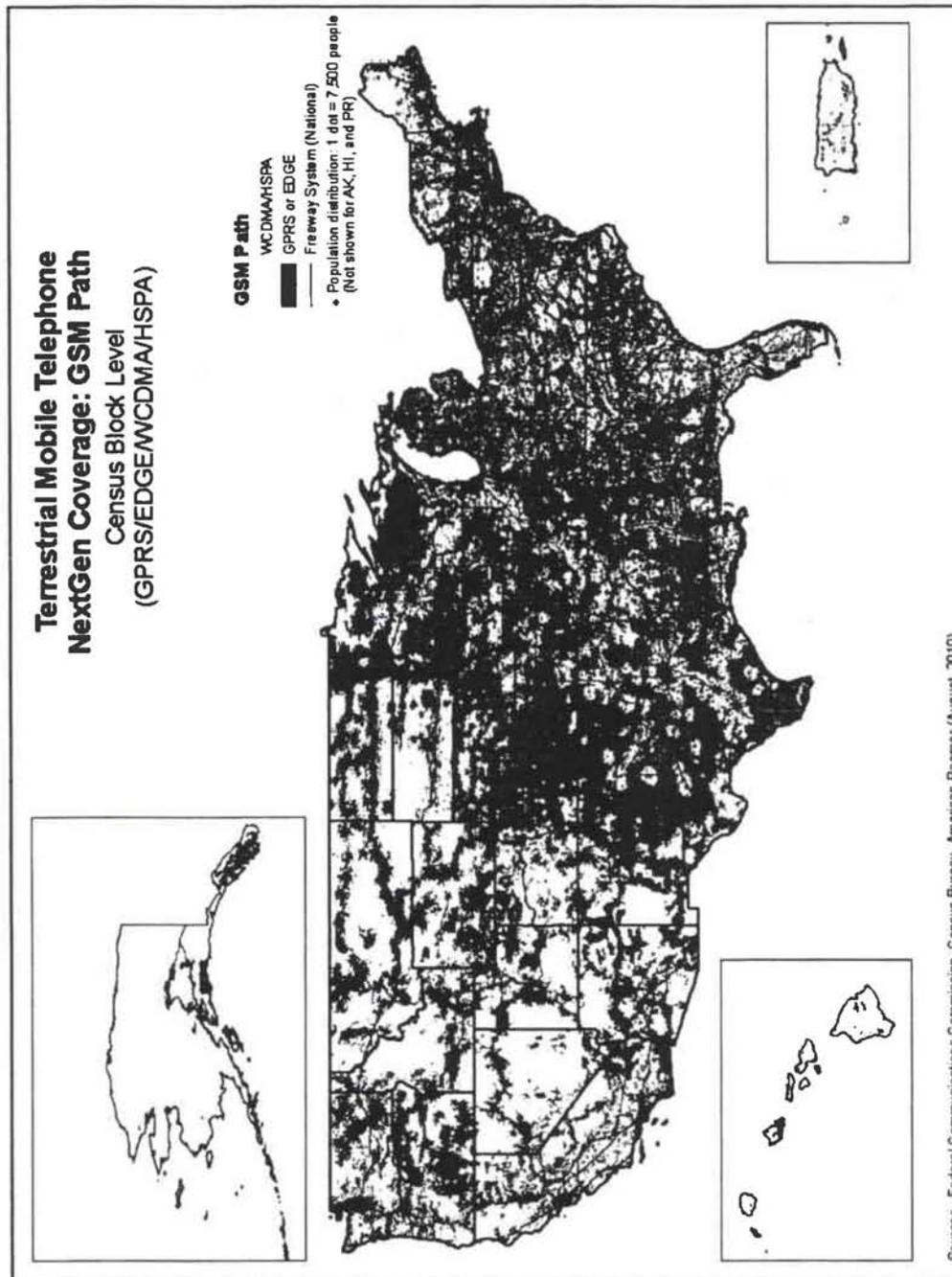
Map D-30: Mobile Wireless NextGen Coverage: CDMA Path (2)



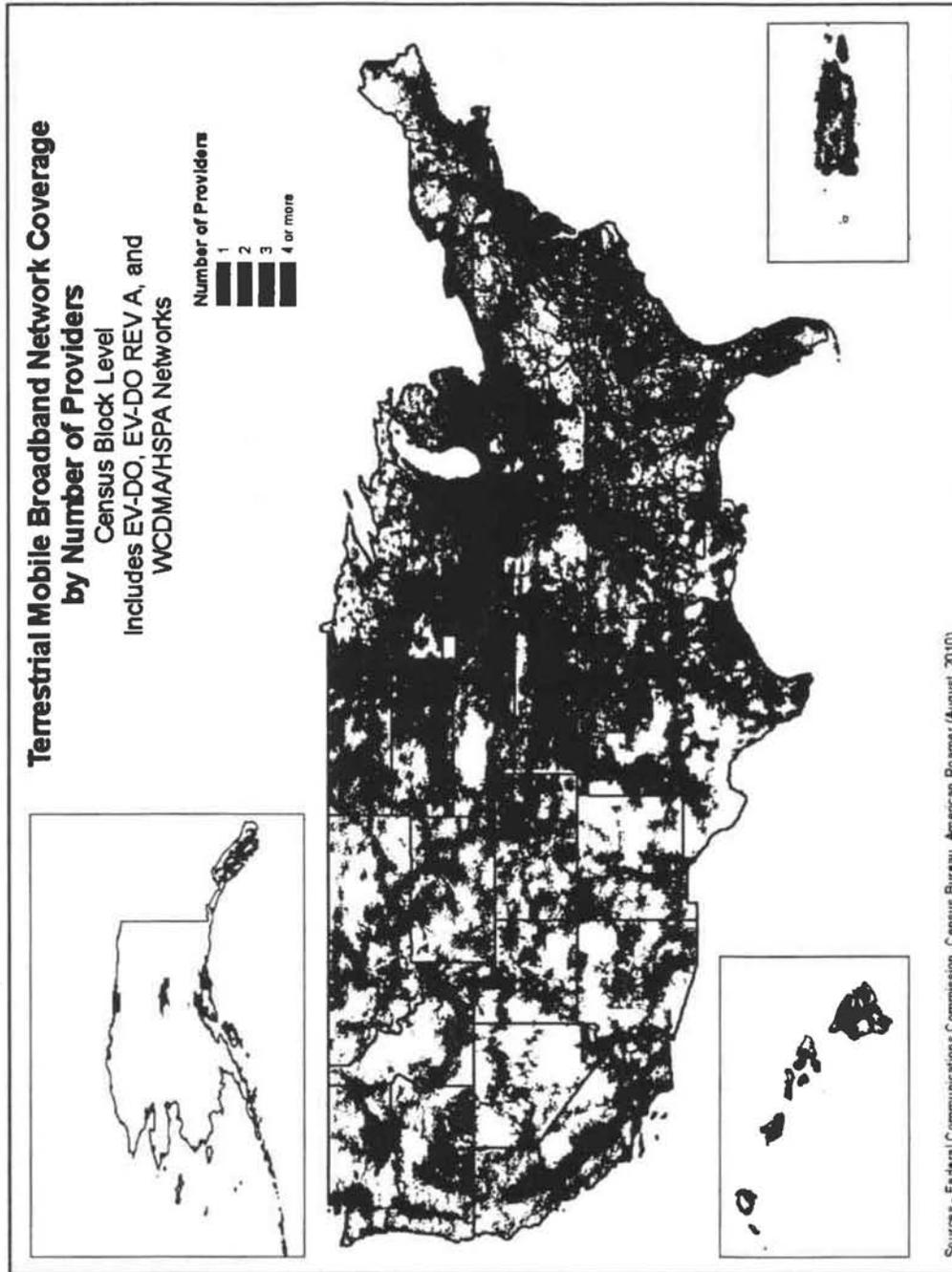
Map D-31: Mobile Wireless NextGen Coverage: GSM Path



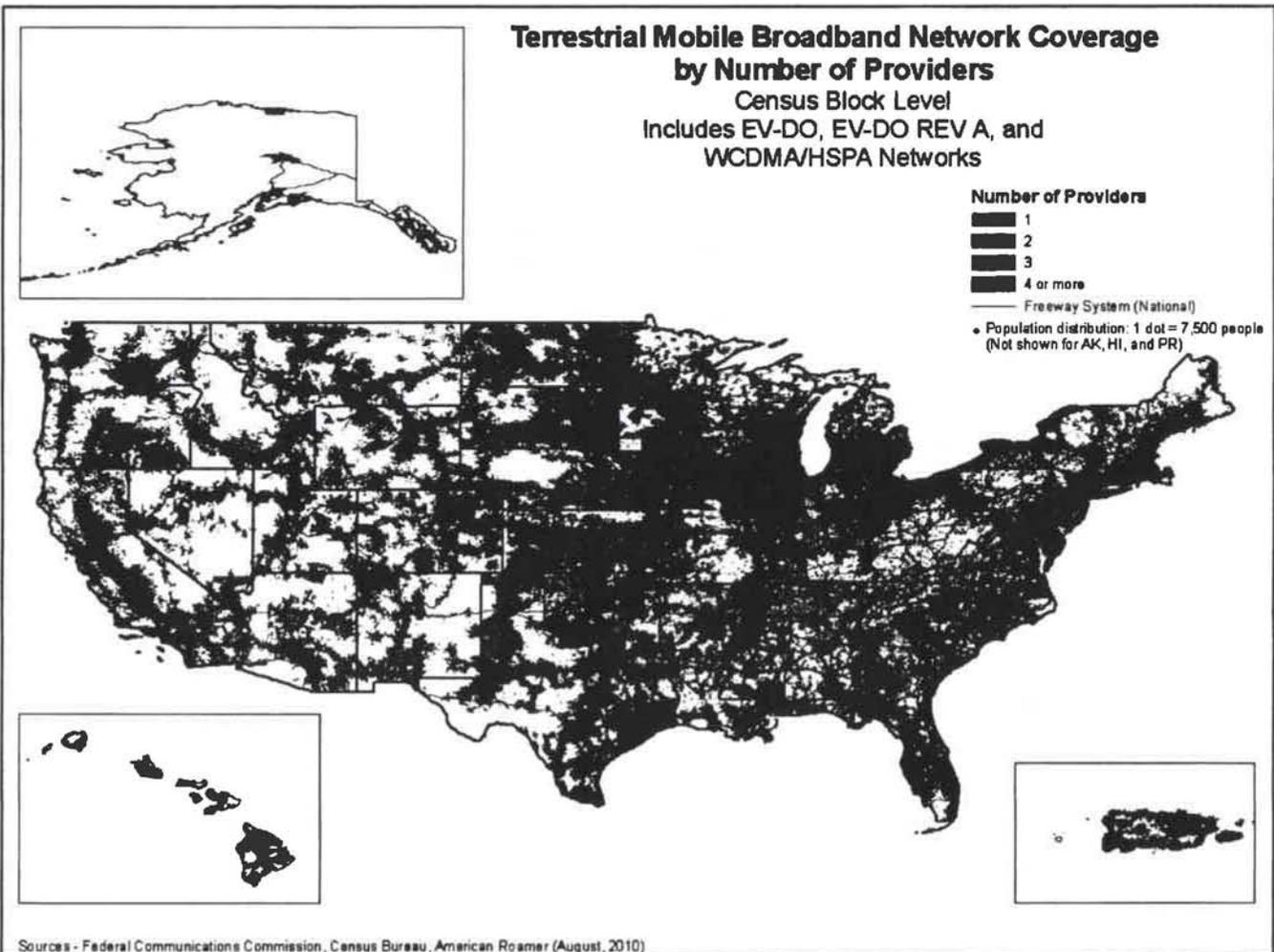
Map D-32: Mobile Wireless NextGen Coverage: GSM Path (2)



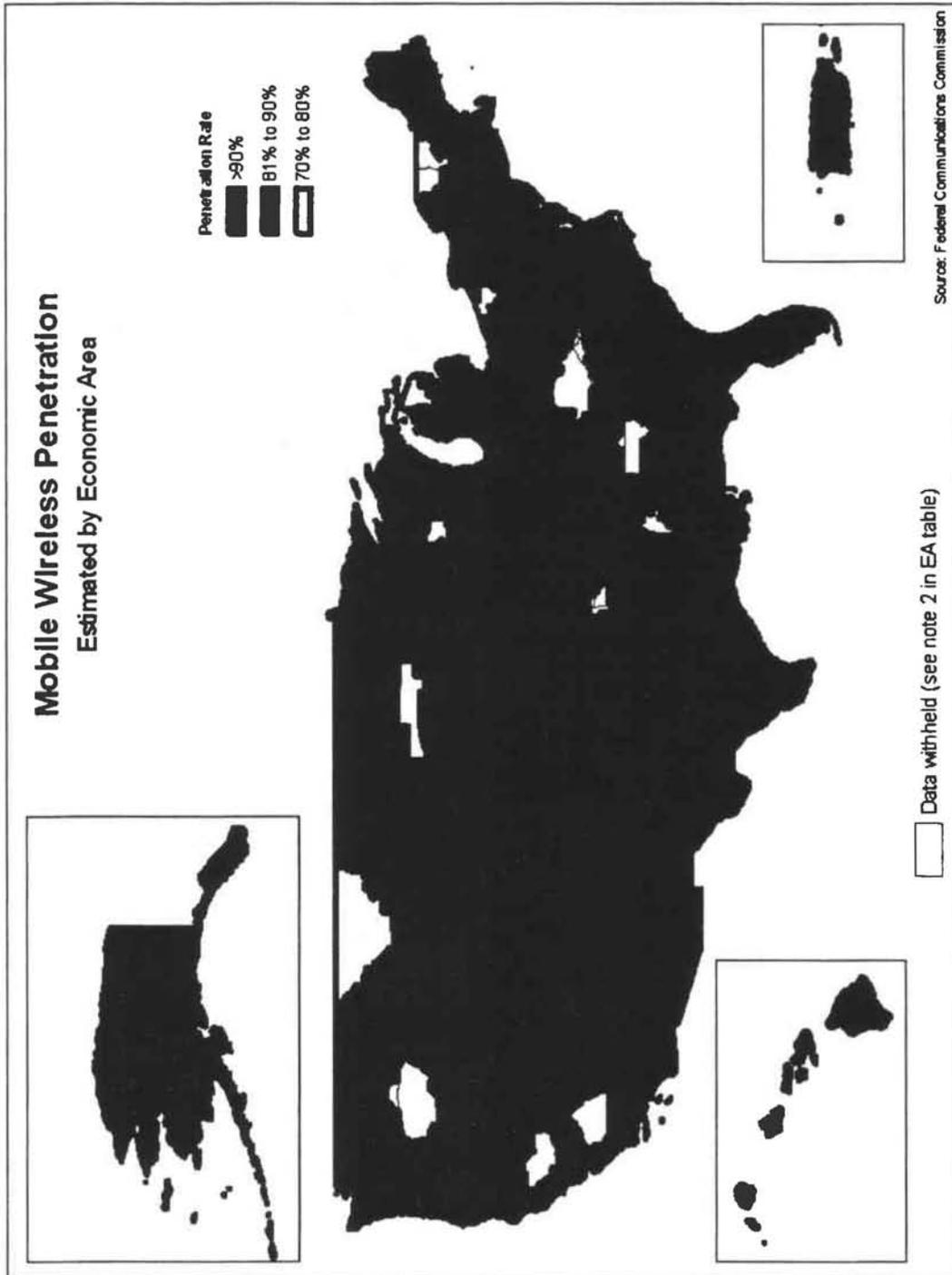
Map D-33: Mobile Broadband Network Coverage



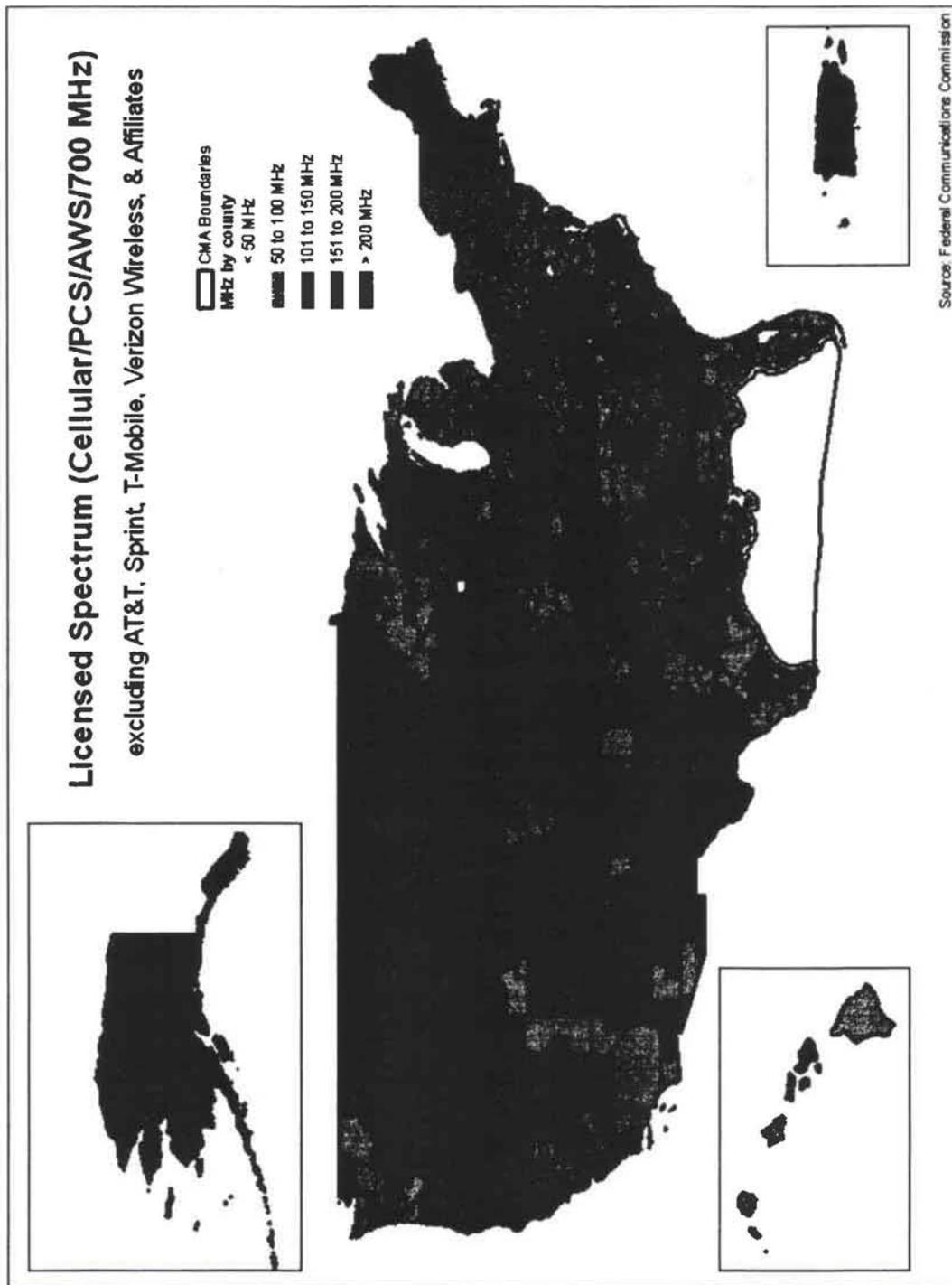
Map D-34: Mobile Broadband Network Coverage (2)



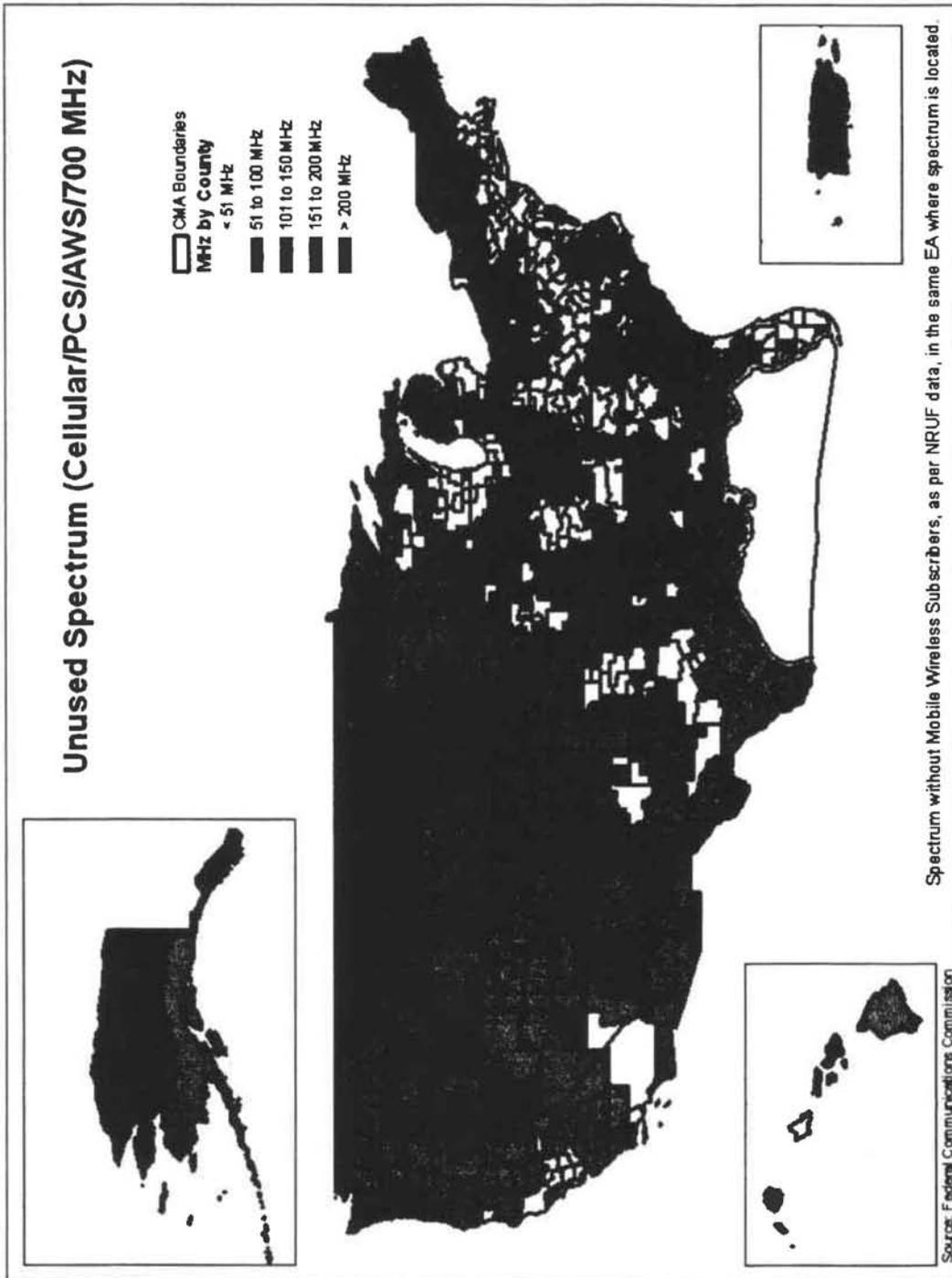
Map D-35: Mobile Wireless Penetration By EAs



Map D-36: Spectrum Not Licensed to the Nationwide Providers and Their Affiliates



Map D-37: Available Licensed Spectrum



APPENDIX E

Index of Acronyms

2G	Second Generation
3G	Third Generation
4G	Fourth Generation
ALMB	Average Local Monthly Bill
AMPS	Advanced Mobile Phone System
ARPU	Average Revenue Per User
ATC	Ancillary Terrestrial Component
ATN	Atlantic Tele-Network
AWS	Advanced Wireless Service
BEA	Bureau of Economic Analysis
BLS	Bureau of Labor Statistics
BRS	Broadband Radio Service
BTA	Basic Trading Area
CFR	Code of Federal Regulations
CAPEX	Capital Expenditures
CDC	Centers for Disease Control
CDMA	Code Division Multiple Access
CEA	Component Economic Area
CEO	Chief Executive Officer
CMA	Cellular Market Area
CMRS	Commercial Mobile Radio Services
CPI	Consumer Price Index
CPP	Calling Party Pays
DA	Delegated Authority
DAS	Distributed Antenna System
DOJ	Department of Justice
DRA	Deficit Reduction Act of 2005
DSL	Digital Subscriber Line
DTV	Digital Television
DTV Act	Digital Television Transition and Public Safety Act of 2005
EA	Economics Area
EBIT	Earnings before Interest and Taxes
EBITDA	Earnings before Interest, Taxes, Debt, and Amortization
EBS	Educational Broadband Service
EDGE	Enhanced Data Rates for Global Evolution
EHA	Exclusive Handset Agreement
EIRP	Equivalent Isotropically Radiated Power
ETF	Early Termination Fee
EV-DO	Evolution Data Optimized
FCC	Federal Communications Commission
FDD	Frequency Division Duplex
FNPRM	Further Notice of Proposed Rulemaking
FSS	Frequency Spread Spectrum
FTC	Federal Trade Commission
GAO	Government Accountability Office
GB	Gigabyte
GHz	Gigahertz

GPRS	General Packet Radio Service
GSM	Global System for Mobile Communication
HDMI	High-Definition Multimedia Interface
HHI	Herfindahl-Hirschman Index
HP	Hewlett Packard
HSDPA	High Speed Downlink Packet Access
HSPA	High Speed Packet Access
HSUPA	High Speed Uplink Packet Access
HTC	HTC Corporation
HTML	HyperText Markup Language
HTTP	Hypertext Transfer Protocol
IB	International Bureau
iDEN	Integrated Digital Enhanced Network
ILEC	Independent Local Exchange Carrier
ISM	Industrial, Scientific, and Medical
ISO/IEC	International Organization for Standardization/International Electrotechnical Commission
ITIF	Information Technology & Innovation Foundation
ITU	International Telecommunication Union
kbps	Kilobits per Second
LEC	Local Exchange Carrier
LEO	Low Earth Orbit
LLC	Limited Liability Corporation
LNP	Local Number Portability
LTE	Long Term Evolution
M&O	Management and Operations
M2M	Machine-to-Machine
MB	Megabyte
Mbps	Megabits per Second
MEA	Major Economic Area
MHz	Megahertz
MIMO	Multiple Input Multiple Output
MMS	Multimedia Messaging Service
MOUs	Minutes of use (average minutes of use per subscriber per month)
MSA	Metropolitan Statistical Area
MSS	Mobile Satellite Service
MTA	Major Trading Area
MVNO	Mobile Virtual Network Operator
NCHS	National Center for Health Statistics
NFC	Near-Field Communication
NHIS	National Health Interview Survey
NIST	National Institute of Standards and Technology
NOI	Notice of Inquiry
NPA-NXX	the first six digits of a ten-digit telephone number
NPAC	Number Portability Administration Center
NPRM	Notice of Proposed Rulemaking
NRUF	Numbering Report / Utilization Forecast
NTCA	National Telecommunications Cooperative Association
NTIA	National Telecommunications and Information Administration
OBI	Omnibus Broadband Initiative
OET	Office of Engineering & Technology
OFDMA	Orthogonal Frequency Division Multiple Access
OS	Operating System

PC	Personal Computer
PCS	Personal Communications System
PDA	Personal Digital Assistant
PHS	Personal Hot Spot
PN	Public Notice
POPs	population (people)
PR	Public Relations
PSTN	Public Switched Telephone Network
PTT	Push-to-Talk
PUC	Public Utility Commission
R&D	Research and Development
R&O	Report and Order
RF	Radio Frequency
RIM	Research in Motion
RPM	Revenue per Minute
RSA	Rural Service Area
SDARS	Satellite Digital Audio Radio Service
SEC	Security and Exchange Commission
SF 1	Summary File 1
SIM	Subscriber Identity Module
SMR	Specialized Mobile Radio
SMS	Short Message Service
TB	Terabyte
TDD	Time Division Duplex
TDM	Time Division Multiplexing
TDMA	Time Division Multiple Access
TNS	A company now known as Kantar Media
TVWS	TV White Spaces
UK	United Kingdom
ULS	Universal Licensing System
UMTS	Universal Mobile Telecommunications System
US	United States
USB	Universal Serial Bus
USC	United States Code
USF	Universal Service Fund
VoIP	Voice over Internet Protocol
VZ	Verizon
WCDMA	Wideband Code Division Multiple Access
WCS	Wireless Communications Service
WiMAX	Worldwide Interoperability for Microwave Access
WLAN	Wireless Local Area Network
WTB	Wireless Telecommunications Bureau
XIT	XIT Communications

APPENDIX F**List of Commenters**Public Notice Comments

AT&T Inc. (AT&T)
CTIA – The Wireless Association (CTIA)
Free Press and Media Access Project
MetroPCS Communications, Inc. (MetroPCS)
Mobile Future
MSS ATC Coalition
National Telecommunications Cooperative Association (NTCA)
PCIA – The Wireless Infrastructure Association (PCIA)
Rural Cellular Association (RCA)
Rural Telecommunications Group, Inc. (RTG)
Satellite Industry Association (SIA)
Sprint Nextel Corporation (Sprint Nextel)
Verizon Wireless

Public Notice Reply Comments

AT&T Inc. (AT&T)
Cricket Communications, Inc. (Cricket)
CTIA – The Wireless Association (CTIA)
T-Mobile USA, Inc. (T-Mobile)
United States Cellular Corporation (US Cellular)
Verizon Wireless

**STATEMENT OF
COMMISSIONER MICHAEL J. COPPS**

Re: *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10-133.*

I am pleased that this year's mobile competition report builds on the leaps and bounds of progress over previous reports that began with last year's Fourteenth Report. This year's report again recognizes the on-the-ground reality that mobile is about much more than voice. The analysis of voice, data and text services provides Congress with an updated picture of the state of competition in commercial mobile service markets. The report brings further improvements, showing us, for example, how the number of competitors in an area varies by consumer income. Although we deliver the product to Congress, we would be remiss if we at the Commission did not use this report to consider the effects of our policy decisions on the mobile market.

But we should not allow this progress to stop us from continuing to improve the report going forward. I note, for example, that we continue to rely on third parties to furnish us most of the data on pricing and investment. I would prefer to have the Commission gather and verify this data ourselves. Good regulatory decisions depend on good data. Similarly, while I am pleased to see that mobile service covers vast swaths of our land, the report's coverage maps and network performance data are based on what carriers advertise and how each carrier defines coverage. The report acknowledges that this likely overstates actual coverage, and we have asked about actual performance for data services in our Form 477 notice. With the technology increasingly available to validate coverage and performance claims, shouldn't we, the expert agency, be moving toward a model of what consumers are actually experiencing?

Finally, I cannot ignore some of the darkening clouds over the state of mobile competition. The headline for this Report will be that the FCC neither finds nor does not find effective competition. Dig deeper and, sure enough, we find ongoing trends of industry consolidation. The well-accepted metric for market concentration, the Herfindahl-Hirschman Index, remains above the threshold for a "highly concentrated" market. It also appears that consumers are no longer enjoying falling prices, according to the CPI for cellular services. We know there is a looming spectrum crunch and a growing need for backhaul. There is no doubt that the mobile market is an American success story, and there are many ways to measure industry health. But it would be foolish and decidedly not in the public interest to ignore the facts this Report reveals. If we want Americans to continue to enjoy innovation, affordability and improved mobile coverage, we must heed these facts and continue to examine areas where the Commission can act to encourage mobile competition.

Thank you to the Chairman and the Wireless Telecommunications Bureau for bringing us this data-rich, well presented report.

**CONCURRING STATEMENT OF
COMMISSIONER ROBERT M. McDOWELL**

Re: *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10-133.*

The record in this proceeding, and the report itself, contain a wealth of facts that demonstrate the important role the mobile industry plays in the lives of everyday Americans, not to mention in the U.S. economy. The wide-ranging and competitive wireless sector has and continues to deliver innovative services at low cost, all the while exhibiting some of the most impressive capital expenditure numbers of any industry in the world. The greatest beneficiaries of these investments are American consumers who have steadily incorporated advanced wireless technologies into their daily lives.

I vote to concur because we have not identified new or particularly revealing information that would prevent us from opining as to “whether or not there is effective competition,” as the statute requires. In fact, the report states, “[i]t would be overly simplistic to apply a binary conclusion or blanket label to this complex and multi-dimensional industry.” Nonetheless, this is what Congress asked us to do.

Yet, at its core, the report shows that the wireless sector is dynamic, ever-improving and responsive to consumer demand. With respect to mobile broadband service providers, the percentage of the population served by *four or more* providers increased from 58 percent in November 2009 to 68 percent in August 2010. And, the percentage served by *three or more* providers increased from 76 to 82 percent. In rural areas, 69 percent have a choice of *two or more* providers and 38 percent have a choice of three or more providers.

To put this progress in a historic context, for 2008, these numbers were 62 and 29 percent respectively. That said, we can and we must do better. Bringing the benefits of mobile broadband to rural America is an important priority. At the same time, given these examples of good news, we *all* should tread cautiously lest we jeopardize the compelling consumer benefits associated with the ongoing rollout of mobile broadband services.

I thank outgoing chief Ruth Milkman, incoming chief Rick Kaplan, and the entire team of the Wireless Telecommunications Bureau. This is a tremendous body of work and we are grateful for your efforts.

**STATEMENT OF
COMMISSIONER MIGNON L. CLYBURN**

Re: *Implementation of Section 6002(b) of the Omnibus Budget Reconciliation Act of 1993, Annual Report and Analysis of Competitive Market Conditions with Respect to Mobile Wireless, including Commercial Mobile Services, WT Docket No. 10-133.*

I commend Ruth Milkman and the talented staff of the Wireless Telecommunications Bureau, for continuing the approach they took in the Fourteenth Mobile Report. As this Fifteenth Report reaffirms, the percentage of American households which rely solely on mobile wireless providers for their phone service, increases each year. As the importance of the mobile services industry grows, so should the amount of information the Commission collects to evaluate the structure of that market. Therefore, the Commission should continue to gather more data about the key input segments such as spectrum, towers, backhaul, and transport facilities, as well as the outputs, such as voice services, text messages, Internet access services and other data applications. More information on these relevant factors improves the Commission's ability to make policy decisions to ensure that the mobile services market can bring the tremendous benefits of innovation in mobile services to all American households. In this regard, I was particularly pleased to see that this Report, for the first time, includes an analysis of how the number of mobile service providers, which have coverage in a census tract, varies according to median income levels.

I still find it troubling that despite the billions of dollars that have been invested to provide wireless coverage to most parts of our country, millions of Americans living in rural parts of our country do not enjoy the competitive choices available in metropolitan areas. As the Report points out, more than seven million Americans still live in rural census blocks with two or fewer mobile service providers. In addition, more than 37 million Americans live in rural census blocks that have two or fewer choices when it comes to mobile broadband services.

In my separate statement last year on the Fourteenth Mobile Services Report, I encouraged commenters to provide more information about how the Commission could spur deployment of networks in rural areas. I applaud the Chairman and the Bureau for presenting us, this March, with an NPRM that sought comment on creative proposals to spur more mobile network development on Tribal Lands. I also appreciate the efforts of some providers, such as Verizon Wireless, that have sought to partner with smaller service providers to deploy more advanced mobile broadband networks in rural areas. It would be great if we could see other creative solutions to provide Americans with more competitive options for mobile broadband service.

I am disappointed however, to see that just as with last year's Report, the staff could not calculate unit price measures for mobile broadband data services as this is becoming an increasingly important mobile wireless service. There is evidence before this Commission that this is especially the case for those segments of the population, such as communities of color and people living in low-income areas, which use their mobile devices to access the Internet more than other Americans.¹ Also, according to the

¹ John B. Horrigan, Broadband Adoption and Use in America at 5 (Federal Communications Commission) (2010) (Whereas 30 percent of all American adults access the Internet from a mobile device, 39 percent of African Americans and 39 percent of Latinos access the Internet from a mobile device); Letter from Latinos for Internet Freedom to Marlene H. Dortch, Secretary, FCC, GN Docket No. 09-191 (filed Dec. 2, 2010), at i ("Lower barriers to (continued....)")

Report, the staff did not have sufficient information, for the first time in several years, to calculate unit prices for text messaging. The Commission needs revenue information specifically about mobile broadband use and text messaging, so that it can thoroughly evaluate if consumers are benefitting from lower prices for mobile data services -- a key element in an analysis of the mobile wireless market's performance. I encourage the industry to work with Bureau staff in arriving at the least burdensome approach to provide the Commission with the information it needs to properly evaluate the mobile data services market.

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adoption have facilitated the widespread use of the mobile Internet in communities of color and low-income areas, where many individuals would otherwise go without Internet access altogether. . . . [M]any of our constituents rely exclusively on mobile wireless Internet access as their onramp to the web.”).