

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	ET Docket No. 00-258
Amendment of Part 2 of the Commission's Rules)	
to Allocate Spectrum Below 3 GHz for Mobile and)	
Fixed Services to Support the Introduction of New)	
Advanced Wireless Services, including Third)	
Generation Wireless Systems)	
)	
Petition for Rulemaking of the Cellular)	RM-9920
Telecommunications Industry Association)	
Concerning Implementation of WRC-2000)	
Review of Spectrum and Regulatory Requirements)	
for IMT-2000)	
)	
Amendment for the U.S. Table of Frequency)	RM-9911
Allocations to Designate the 2500-2520/2670-)	
2690 MHz Frequency Bands for the Mobile-)	
Satellite Service)	

REPLY COMMENTS OF AT&T WIRELESS SERVICES, INC.

Pursuant to the Commission's Notice of Proposed Rulemaking, AT&T Wireless Services, Inc. ("AT&T") hereby submits its reply comments in the above-captioned proceeding.^{1/}

INTRODUCTION

The record in this proceeding amply demonstrates that the increased demand for advanced wireless services in the United States simply cannot be met without additional spectrum allocations consistent with the decisions made at the International Telecommunication Union's ("ITU") 2000 World Radiocommunication Conference ("WRC-2000") and international

^{1/} Amendment of Part 2 of the Commission's Rules to Allocate Spectrum Below 3 GHz for Mobile and Fixed Services to Support the Introduction of New Advanced Wireless Services, Including Third Generation Wireless Systems, Notice of Proposed Rulemaking, ET Docket No. 00-258 (rel. Jan. 5, 2001) ("Notice").

decisions governing International Mobile Telecommunications 2000 (IMT-2000) services.^{2/} To that end, AT&T urges the Commission to move quickly to allocate the 1710-1755 MHz band, which already has been designated for transfer to the Commission, and the 1755-1850 MHz band for commercial mobile and fixed radio services. These bands would provide adequate spectrum for the initial growth of wireless third generation (“3G”) services. Moreover, both bands are among the spectrum identified by WRC-2000, and as recognized by many parties, offer the potential to harmonize with GSM or DCS-1800 systems worldwide.^{3/}

For the most part, the growing demand for 3G services, or at least broadband wireless services, is recognized across the board by service providers, including MDS and ITFS licensees, manufacturers, and industry groups.^{4/} While a few commenters insist that the consumer desire for advanced wireless services is unproven,^{5/} they simply ignore reality. AT&T alone has experienced the demand for 3G services in the rapid growth of its PocketNet data service, which combines AT&T’s wireless digital voice service with the ability to access e-mail and the Internet through a handheld unit. Since its introduction last year, close to half a million customers have

^{2/} See e.g., Ericsson, Inc. Comments at 6-7; Motorola, Inc. Comments at 8-10; Nokia, Inc. Comments at 2; Nortel Networks, Inc. Comments at 1-3; QUALCOMM Incorporated Comments at 3-5; Siemens Corporation Comments at 9-11; Cingular Wireless LLC Comments at 4-6; Cook Inlet Region, Inc. Comments at 3; Personal Communications Industry Association (“PCIA”) Comments at 2, 7-8; Telephone and Data Systems, Inc. (“TDS”) Comments at 3; Verizon Wireless Comments at 4-8, 30; Canadian Wireless Telecommunications Association (“CWTA”) Comments at 1; Radio Advisory Board of Canada (“RABC”) Comments at 2; Qwest Wireless, LLC Comments at 4.

^{3/} See n.7, supra.

^{4/} See n.2; see also, e.g., BayPoint TV, Inc. Comments at 9-10 (proposing that the Commission permit MDS licensees to provide 3G services or to sell or lease their licenses to other companies); Hubbard Trust, et al. Comments at 14 (also arguing for the Commission to permit MDS/ITFS licensees to provide 3G services or to sell their licenses to 3G providers); Eureka College and the Illinois ITFS Educators Comments at 2-4 (noting that ITFS spectrum is being used to provide advanced services to rural America).

^{5/} See e.g., Ad Hoc MDS Alliance Comments at 3; Alan Dixon Comments at 3; Illinois Institute of Technology Comments at 5.

subscribed to PocketNet service. Other commenters point out that consumers are increasingly requesting similar spectrum-intensive mobile services.^{6/}

I. THE COMMISSION SHOULD HARMONIZE ITS 3G ALLOCATION WITH SPECTRUM IDENTIFIED INTERNATIONALLY AND SUPPORTED DOMESTICALLY FOR ADVANCED SERVICES

Many commenters recognize the benefits of harmonization to consumers, the wireless industry, and manufacturers.^{7/} AT&T agrees with the Personal Communications Industry Association (“PCIA”) that harmonization promotes global roaming, permits expanded interoperability, allows manufacturers to take advantage of economies of scale -- leading to lower equipment and service costs -- and minimizes “the potential for ‘technological divides’ based on ‘information haves and have nots’”.^{8/} Nortel similarly points out that the demand for global roaming is growing and that harmonization is a critical attribute of 3G deployment.^{9/} The Canadian wireless industry groups also note the increase in cross-border and regional roaming.^{10/}

As several manufacturers and service providers explain, failure to harmonize spectrum bands would require a significant increase in the cost and complexity of wireless handsets. In particular, they note that the cost of handsets increases proportionately with the number of modes

^{6/} See, e.g., Nokia Comments at 2; Verizon Comments at 4-8.

^{7/} See, e.g., Ericsson Comments at 11; Lucent Technologies, Inc. Comments at 6; Motorola Comments at 18; Nokia Comments at 2-3 (observing that when “frequency bands are regional or national, rather than global, products tend to be more complex, more costly, and arrive later to market . . . [and] [t]he cutting-edge innovative products also tend to arrive later to market, if at all.”); Nortel Comments at 10; Qualcomm Comments at 12; Siemens Comments at 17 (supporting harmonization to facilitate global roaming); Cook Inlet Comments at 3-4; PCIA Comments at 8; Telecommunications Industry Association (“TIA”) Comments at 18; TDS Comments at 10; Universal Wireless Communications Consortium Comments at 4; Verizon Comments at 9; VoiceStream Wireless Corporation Comments at 1-2; CWTA Comments at 4; France Telecom Mobiles Orange (“Orange”) Comments at 2; RABC Comments at 6.

^{8/} PCIA Comments at 8.

^{9/} Nortel Comments at 10.

^{10/} CWTA Comments at 4; RABC Comments at 6.

and bands that must be built into the equipment.^{11/} Not only does harmonization promise more affordable services and equipment, the resulting economies of scale would help ensure deployment of a greater array of 3G services as quickly as possible. This is so because, as Motorola explains, manufacturers have limited resources and will develop and build technologies first for the largest markets in order to maximize return on investment. If the United States fails to align its 3G spectrum with the rest of the world, it risks being considered a secondary market and treated as a lesser priority.^{12/} In this regard, VoiceStream states that due to current non-aligned allocations in the United States, the domestic market is the last to receive innovative services from GSM vendors.^{13/} Nokia also observes that when “frequency bands are regional or national, rather than global . . . [t]he cutting edge innovative products also tend to arrive later to market, if at all.”^{14/}

AT&T agrees that meeting market demands for more spectrum should be a priority and it urges the Commission to move quickly to designate and license spectrum consistent with 3G allocations worldwide. While a few commenters urge the Commission not to delay or compromise allocation of spectrum for the sake harmonization,^{15/} harmonization and meeting market demands for more spectrum are not mutually exclusive goals. The Commission should not be tempted to auction spectrum simply to quell “urgent” requirements for spectrum instead of reaching an industry consensus in planning future 3G allocations. Not only would this be

^{11/} See e.g., Nokia Comments at 2-3; Siemens Comments at 19; VoiceStream Comments at 2; Orange Comments at 2.

^{12/} Motorola Comments at 18.

^{13/} VoiceStream Comments at 2.

^{14/} Nokia Comments at 3.

^{15/} See, e.g., Cingular Comments at 6-8, 11-12 (stressing that deployment of 3G technologies and services should not be delayed or compromised in pursuit of harmonization); Verizon Comments at 9 (placing speed of spectrum allocation above the goal of harmonization); Cook Inlet Comments at 5.

inefficient spectrum planning, it is not apparent that harmonization would slow the Commission's process of making available spectrum for commercial use.^{16/}

A. Harmonization Would Be Best Achieved By A Paired Allocation in the 1710-1850 MHz Band

AT&T agrees with the majority of the parties proposing band plans and supports internal pairing in the 1710-1850 MHz band as the best alternative for achieving the maximum level of harmonization.^{17/} Pairing of spectrum in the 1710-1755 MHz band with spectrum in the 2110-2150/2160-2165 MHz band, the Commission's preferred option,^{18/} in contrast, is inconsistent with the goal of harmonization and should be avoided.^{19/} Although commenters differ slightly as to proposed spectrum block sizes, size of guard bands, and the exact frequencies in the 1710-1850 MHz that should be auctioned, they all target this band for 3G services.

AT&T supports internal pairing in the 1710-1850 MHz segment because this spectrum has been identified by WRC-2000 and would support global roaming. Several other parties also believe that internal pairing of these frequencies would provide substantial harmonization with the DCS-1800 (or "GSM") scheme used by the majority of countries around the world for second-generation ("2G") services.^{20/} As Motorola and Orange explain, the 1710-1850 MHz

^{16/} AT&T disagrees with parties that advocate speed of licensing only to the extent that they place this principle above spectrum harmonization. AT&T also believes that it is imperative that the Commission move quickly to allocate new spectrum blocks for 3G services.

^{17/} See, e.g., Motorola Comments at 14, 21 (noting that the 1710-1850 MHz band provides the best opportunity to harmonize internationally); Lucent Comments at 12; Nortel Comments at 5-6; Qualcomm Comments at 13; Siemens Comments at 4, 18, 33; RABC Comments at 2, 17; Orange Comments at 4.

^{18/} Notice at ¶ 67.

^{19/} In its comments, AT&T proposed as its preferred 3G band plan an initial allocation pairing 25 MHz in the 1710-1755 MHz band with 25 MHz in the 1755-1850 MHz band. AT&T Comments at 14. In light of an existing allocation adjacent to 1710-1850 MHz, AT&T recognizes that complete harmonization is not possible; however, the problem of a fragmented 3G allocation would be aggravated should the Commission pair 1710-1755 MHz band with 2110-2150/2160-2165 MHz.

^{20/} See n.17, *supra*. The European DCS-1800 allocation pairs 1710-1785 MHz (mobile station transmit) with 1805-1880 MHz (base station transmit). See Motorola Comments at n.51.

band is used by several countries worldwide for 2G GSM systems and a number of countries and providers plan to transition to 3G systems in this band.^{21/} Siemens calculates that the 1710-1755 MHz/1805-1850 MHz pairing is used in 60 countries around the world, not just in Europe, in part or completely for DCS-1800.^{22/} Motorola notes that because of the substantial harmonization with DCS-1800, similar equipment could be developed for a 3G pairing, and Nortel explains that this allocation would permit manufacturers to take advantage of research and development work already done worldwide to develop 3G services.^{23/}

The Commission's proposal to pair spectrum in the 1710-1850 MHz band with spectrum in the 2110-2165 MHz band was criticized, or at least selected as a less favored option, by many commenters, and AT&T agrees that the Commission should avoid such a pairing if possible.^{24/} As Cingular notes, equipment costs would be higher and the United States would not be in harmony with 3G services worldwide if the Commission were to pair those particular bands.^{25/}

B. Internal Pairing Within The 1710-1850 MHz Band Is Supported Worldwide

In addition to the majority of commenters that support adoption of a band plan that would permit alignment with the GSM/DCS-1800 band plan, AT&T also notes that similar band plan proposals have received widespread support in the international community. At the most recent meeting of the ITU's Working Party 8F (February 20-27, 2001), several countries, including Canada, Korea, and France, submitted 3G spectrum proposals that are designed to allow IMT-2000 alignment with the GSM or DCS-1800 band plan. Although no final decisions have been

^{21/} Motorola Comments at 13; Orange Comments at 4.

^{22/} Siemens Comments at 33.

^{23/} Motorola Comments at 21; Nortel Comments at 6.

^{24/} Cingular Comments at 23; Orange Comments at 4.

^{25/} Cingular Comments at 23. Another workable alternative proposed by some commenters would be internal pairing within 2500-2690 MHz band. See Orange Comments at 4; VoiceStream Comments at 2.

made by Working Party 8F, it is clear that international sentiment is leaning heavily in favor of such a band plan.

In contrast, proposals to pair the 1.7 GHz band with the 2.1 GHz band, as proposed in the Commission's Notice,^{26/} were met with severe opposition at the meeting. In particular, several European countries expressed the view that such an arrangement would not be possible in their countries, given their existing uses of the 1.7 GHz band for GSM and their imminent use of the 2.1 GHz band as they implement the 3G bands identified at WARC-92. Latin American countries also are considering a band pairing proposal similar to the GSM or DCS-1800 band plan favored worldwide.

Based on the 3G band plans gaining consensus internationally and domestically, AT&T urges the Commission to adopt a band plan that will allow harmonization with the rest of the world in the 1.7 GHz band. It is clear that harmonization is what the countries of the world want. It was a key precept of WRC-2000 and the members of the ITU are now making rapid progress toward achieving that goal. A decision by the United States to adopt a band plan that is at odds with the direction the rest of the world appears poised to take would consign the United States to a U.S.-only solution and cement its place as a 3G backwater, harming operators, manufacturers and, most importantly, domestic subscribers.

Such a decision also would seriously undermine U.S. credibility at future ITU meetings. U.S. government and industry representatives to ITU meetings have been espousing the benefits of harmonization for a long time over many meetings. For the United States now to reverse course and adopt a band plan that is different from that being pursued everywhere else would undermine future U.S. negotiating positions and strategies.

^{26/} Notice at ¶ 67.

C. 3G Services Require Spectrum Blocks Of At Least 10 MHz

Several commenters, consistent with AT&T's proposal, support Commission allocation of the 3G spectrum in blocks of at least 10 MHz.^{27/} Such an assignment matches the 3G assignments made in Europe and Asia.^{28/} Nortel warns the Commission that smaller spectrum blocks would probably require guardbands or special filters and would adversely affect the deployment costs, as well as services, that could be implemented in the isolated blocks.^{29/} Similarly, TIA clarifies that spectrum-intensive 3G services require larger, paired assignments, such as two 10 MHz blocks or two 15 MHz blocks.^{30/}

The commenters' concerns that the Commission provide paired frequency blocks of at least 10 MHz favors the reshuffling of allocations in the 2.1 GHz band proposed by AT&T in its Option 1.^{31/} AT&T's Option 1 calls for a 45 MHz allocation from the 2110-2155 MHz band.^{32/} Currently, however, the spectrum at 2150-2160 MHz is encumbered by MDS and ITFS licensees. Therefore, under AT&T's proposal, the portion of the band at 2155-2165 MHz would be redesignated for MDS/ITFS use. Other commenters agree that continued MDS operations at

^{27/} See, e.g., Nokia Comments at 3; Nortel Comments at 5; TIA Comments at 14-15 (recognizing that commercial operators will require a minimum spectrum allocation of paired 15 MHz blocks to support a successful 3G system); TDS Comments at 3 (supporting a 30 MHz 3G spectrum block); Orange Comments at 2 (proposing a paired allocation of two 20 MHz blocks); RABC Comments at 9 (supporting two 15 MHz block allocations). See also Siemens Comments at 23 (clarifying that two 10 MHz blocks are required to support FDD technology); Lucent Comments at 7 (noting that paired 10 MHz or 15 MHz blocks are desirable "as they can accommodate future, higher data rates").

^{28/} See Nokia Comments at 3 (noting that 3G spectrum has been auctioned in Europe and Asia in paired blocks of 10 MHz to 20 MHz).

^{29/} Nortel Comments at 5.

^{30/} TIA Comments at 14.

^{31/} AT&T Comments at 15.

^{32/} *Id.* Although pairing between the 1.7 GHz band and the 2.1 GHz band is not supported internationally, reshuffling of the 2.1 GHz band, as AT&T proposes, would provide a workable contiguous block of spectrum that could be paired with other bands.

2150-2160 MHz could hamper 3G deployment in the 2.1 GHz band.^{33/} Indeed, after taking into account even a minimal guard band and filtering technology, a block of less than 5 MHz would be available above the current MDS/ITFS allocation. This orphaned spectrum would not be sufficient to support 3G services, and would be a waste of a valuable resource.

III. THE COMMISSION SHOULD MAINTAIN EXISTING PROTECTION RULES

AT&T continues to urge the Commission to maintain flexibility in its development of a 3G plan, but clarifies that flexible spectrum policies should not alter the Commission's continued application of its rules regarding protection from harmful interference. As the Cellular Telecommunications & Internet Association ("CTIA") notes, continued application of these rules would minimize post-licensing interference problems, which would help ensure the viability of existing licensees and reduce the cost of resolving any interference problems.^{34/} Moreover, because existing spectrum allocations will be used to transition to 3G systems, protection from interference remains essential. Accordingly, the Commission should reject Arraycomm's proposal to lower out-of-band emissions requirements of incumbents merely to accommodate an unproven technology.^{35/}

IV. AUCTION REVENUES SHOULD BE USED TO FUND RELOCATION OF INCUMBENTS

AT&T believes that a relocation funding mechanism under which proceeds from the spectrum auction would be used to relocate affected incumbent operators would be beneficial to incumbents, auction winners, and manufacturers. Such an approach would encourage efficient and cost effective relocation so that the largest possible balance from the auction would remain

^{33/} Verizon Comments at 15; Motorola Comments at 17 (stating that a consolidated 3G allocation in the 2110-2150/2160-2165 MHz band would be beneficial to 3G and MDS services).

^{34/} Cellular Telecommunications & Internet Association Comments at 11-12.

^{35/} Arraycomm, Inc. Comments at 4-5.

for deposit to the U.S. Treasury.^{36/} Moreover, a built-in relocation reimbursement mechanism would provide incumbents with certainty that legitimate relocation costs will be timely and fully paid, and would encourage investment in 3G equipment and deployment of advanced services.

CONCLUSION

For the foregoing reasons, AT&T support the designation of additional spectrum for 3G use, which should be, to the extent possible, harmonized with spectrum use globally.

Respectfully submitted,

AT&T WIRELESS SERVICES, INC.

/s/ Douglas I. Brandon

Douglas I. Brandon
Vice President-External Affairs
David P. Wye
Director, Spectrum Policy
1150 Connecticut Avenue, N.W.
Washington, D.C. 20036
(202) 223-9222

Howard J. Symons
Sara F. Leibman
Paula Deza
Mintz, Levin, Cohn, Ferris, Glovsky
and Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Suite 900
Washington, D.C. 20004
(202) 434-7300

Of Counsel

Dated: March 9, 2001

^{36/} See Motorola Comments at 15-16; DCT Los Angeles, L.L.C. Comments at 9 (supporting an alternative for clearing the 2.1 GHz band of MDS licensees that would involve use of some of the auction proceeds to compensate incumbents). See also Verizon Comments at 12 (urging the Commission to work closely with NTIA to develop reasonable relocation and reimbursement provisions for government users in the 1710-1755 MHz band, as well as the 1755-1850 MHz band, in accordance with the National Defense Authorization Act for Fiscal Year 1999 that will advance the development of 3G).

CERTIFICATE OF SERVICE

I, Paula Deza, hereby certify that on this 9th day of March, 2001, a copy of the foregoing Reply Comments of AT&T Wireless Services, Inc. was sent by hand delivery (*), or first class mail, postage prepaid to the following:

Thomas Sugrue, Chief*
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C252
Washington, DC 20554

Honorable Michael K. Powell*
Chairman
Federal Communications Commission
445 12th Street, S.W., Room 8 A204
Washington, DC 20554

Attn: Peter A. Tenhula

Honorable Susan Ness*
Commissioner
Federal Communications Commission
445 12th Street, S.W., Room 8 B115
Washington, DC 20554

Honorable Gloria Tristani*
Commissioner
Federal Communications Commission
445 12th Street, S.W., Room 8 C302
Washington, DC 20554

Attn: Mark Schneider

Attn: Adam Krinsky

Honorable Harold Furchtgott-Roth*
Commissioner
Federal Communications Commission
445 12th Street, S.W., Room 8 A302
Washington, DC 20554

Bruce Franca*
Acting Chief
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W., Room TW
Washington, DC 20554

Attn: Bryan Tramont

Donald Abelson, Chief*
International Bureau
Federal Communications Commission
445 12th Street, S.W., Room TW
Washington, DC 20554

Diane Cornell*
Associate Chief
Wireless Communications Bureau
Federal Communications Commission
445 12th Street, S.W., Room TW
Washington, DC 20554

Kathleen Ham*
Deputy Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C252
Washington, DC 20554

Rodney Small*
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W.
Washington, DC 20554

John F. Sopko, Acting
Assistant Secretary for Communications
And Information
National Telecommunications and
Information Administration
Room 4898
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

Frederick Wentland
Director, Spectrum Plans and Policies
Office of Spectrum Management
National Telecommunications and Information
Administration
Room 4009
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

William T. Hatch
Associate Administrator
Office of Spectrum Management
National Telecommunications and Information
Administration
Room 4009
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

Donald J. Evans
Fletcher, Heald and Hildreth
1300 North 17th Street
Arlington, VA 22209-3801
Counsel for Baypoint TV, Inc.

J. David Farnes
Vice President, Regulatory Affairs
Canadian Wireless Telecommunications
Association
275 Slater Street, Suite 500
Ottawa, Ontario, Canada, K1P 5H9

James D. Schlichting*
Deputy Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., Room 3-C252
Washington, DC 20554

Milton Brown
Office of the General Counsel
National Telecommunications and Information
Administration
Room 4713
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

Russel W. Slye
Office of Spectrum Management
National Telecommunications and Information
Administration
Room 4009
U.S. Department of Commerce
1401 Constitution Avenue, N.W.
Washington, DC 20230

J.R. Carbonell
Carol L. Tacker
5565 Glenridge Connector
Suite 1200
Atlanta, GA 30342
Counsel for Cingular Wireless LLC

R.D. Coles
President
Radio Advisory Board of Canada
116 Albert Street, Suite 811
Ottawa, ON K1P 5G3

Alan Dixon
General Radiotelephone Operator
2721 Maderia Circle
Melbourne, Florida 32935-5594

Brian T. O'Connor
Robert A. Calaff
VoiceStream Wireless Corporation
401 9th Street, N.W.
Suite 550
Washington, D.C. 20004

Matthew J. Flanigan
Grant E. Seiffert
Derek R. Khlopin
Bill Belt
Telecommunications Industry Association
1300 Pennsylvania Avenue, N.W.
Suite 350
Washington, D.C. 20004

Tom Lindström
Director, Telecom Policies and Regulations
Ericsson Inc.
Office of Public Affairs
1634 I Street, N.W., Suite 600
Washington, D.C. 20006-4083

Diane Law Hsu
Corporate Counsel
Lucent Technologies Inc.
8201 Greensboro Drive, Suite 717
McLean, VA 22102

Stephen L. Goodman
Halprin, Temple, Goodman & Maher
555 12th Street, N.W.
Suite 950, North Tower
Washington, D.C. 20004
Counsel for Nortel Networks Inc.

Michael F. Altschul
Vice President, General Counsel
Cellular Telecommunications &
Internet Association
1250 Connecticut Avenue, N.W., Suite 800
Washington, D.C. 20036

George Y. Wheeler
Peter M. Connolly
Holland & Knight LLP
2099 Pennsylvania Avenue, N.W., Suite 100
Washington, D.C. 20006
Counsel for Telephone and Data Systems, Inc.

Steve B. Sharkey
Director,
Telecommunications Regulation
Motorola, Inc.
1350 I Street, N.W.
Washington, D.C. 20005

Elisabeth H. Ross
Allison M. Ellis
Birch Horton Bittner & Cherot
1155 Connecticut Avenue, N.W.
Suite 1200
Washington, D.C. 20036
Counsel for Ericsson

Cecily A. Cohen
Manager, Government and Industry Affairs
Nokia Inc.
1101 Connecticut Avenue, N.W.
Suite 910
Washington, D.C. 20036

John G. Lamb, Jr.
Nortel Networks Inc.
2100 Lakeside Boulevard
Richardson, Texas 75081-1599

John T. Scott, III
Vice President and Deputy
General Counsel - Regulatory Law
Verizon Wireless
1300 I Street, N.W., Suite 400W
Washington, D.C. 20005

Jennifer M. McCarthy
Director, International Government Affairs
Qualcomm Inc.
2000 K Street, N.W.
Suite 375
Washington, D.C. 20006

James T. Flynn, Jr.
Chief Financial Officer
Eureka College
300 East College Avenue
Eureka, IL 61530

Mark Kroloff
Scott Torrison
Senior VP & General Counsel
Cook Inlet Region, Inc.
2525 C Street, Suite 500
Anchorage, Alaska 99509-3330

Michael R. Gardner
Washington Counsel for UWCC
1150 Connecticut Avenue, N.W.
Suite 710
Washington, D.C. 20036

Donald C. Brittingham
Director - Spectrum Policy
Verizon Wireless
1300 I Street, N.W., Suite 400W
Washington, D.C. 20005

Edgar Class III
Shook, Hardy & Bacon L.L.P.
Hamilton Square
600 14th Street, N.W., Suite 800
Washington, D.C. 20005-2004
Counsel for Eureka College

Thomas J. Dougherty, Jr.
Laura C. Mow
Francis E. Fletcher, Jr.
Gardner, Carton & Douglas
1301 K Street, N.W.
Suite 900, East Tower
Washington, D.C. 20005
Counsel for Illinois Institute of Technology

Jonathan D. Blake
Christine E. Enemark
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington, D.C. 20004-2401
Counsel for Cook Inlet Region, Inc.

Thomas J. Dougherty
Lee G. Petro
Gardner, Carton & Douglas
1301 K Street, N.W.
Suite 900, East Tower
Washington, D.C. 20005-3317
Counsel for DCT Los Angeles, L.L.C.

Leonard S. Kolsky
Lukas, Nace, Gutierrez & Sachs, Chartered
1111 19th Street, N.W., Suite 1200
Washington, D.C. 20036
Counsel for Arraycomm, Inc.

Mark Esherick
Director, IT and Telecommunications
Siemens Corporation
701 Pennsylvania Avenue, N.W.
Suite 720
Washington, D.C. 20004

Robert L. Hoggarth
Senior Vice President
Personal Communications Industry
Association
500 Montgomery Street, Suite 700
Alexandria, VA 22314

Sharon J. Devine
Blair A. Rosenthal
1801 California Street, Suite 4900
Denver, CO 80202
Counsel for Qwest Wireless, LLC

International Transcription Service (ITS)*
445 12th Street, S.W.
Washington, D.C. 20037

/s/Paula Deza
