

RECEIVED

MAY 17 1999

FEDERAL COMMUNICATIONS COMMISSION

Before the

FEDERAL COMMUNICATIONS COMMISSION

Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

In the Matter of:

Communications Assistance for Law
Enforcement Act

CC Docket No. 97-213

COMMENTS REGARDING CALEA MANUFACTURER REVENUE ESTIMATES

Louis J. Freeh, Director
Federal Bureau of Investigation

Larry R. Parkinson
General Counsel
Federal Bureau of Investigation
935 Pennsylvania Avenue, N.W.
Washington, D.C. 20535

Honorable Janet Reno
Attorney General of the United States

Donald Remy
Deputy Assistant Attorney General

Douglas N. Letter
Appellate Litigation Counsel
Civil Division
U.S. Department of Justice
601 D Street, N.W., Room 9106
Washington, D.C. 20530
(202) 514-3602

No. of Copies rec'd
List ABCDE

10-15

TABLE OF CONTENTS

SUMMARY	1
DISCUSSION	2
Introduction	2
I. The Revenue Estimates In The Public Notice Cannot Assist The Commission In Fulfilling Its Statutory Mandate Under Section 107(b) Of CALEA.	3
II. The Commission Should Afford Interested Parties A More Meaningful Opportunity To Comment Upon The Revenue Estimates.	4
III. The Revenue Estimates Appear To Greatly Overstate The Cost Of Acquiring CALEA Solutions.	5
IV. The Manufacturers' Revenue Estimates Demonstrate The Inflated Nature Of The Carriers' Cost Assertions.	8
V. More Reliable Cost Information May Be Available In The Near Future.	10
CERTIFICATE OF SERVICE	

SUMMARY

The aggregated manufacturer revenue estimates set out in the Commission's Public Notice have no relevance to the Commission's task under Section 107(b) of CALEA. The revenue estimates offer no basis for comparing alternative means of correcting any of the J-Standard's deficiencies, and thus cannot assist the Commission in choosing the most "cost-effective" means of curing these deficiencies. If the Commission nevertheless intends to "consider" these data, as it has suggested, the Commission should grant interested parties a more meaningful opportunity to comment on them. As it stands, the Commission has released aggregated numbers with virtually no explanation of the information and assumptions which underlie them, leaving the government and other interested parties to guess at what they mean and what inappropriate assumptions they may incorporate. The government suggested several means of mitigating this problem in its Petition for Reconsideration of the order granting confidential status to the underlying manufacturer revenue data, and the Commission should consider adopting the government's suggestions.

Despite the fact that the government thus far has been denied the opportunity to look behind the aggregated numbers, the magnitude of the aggregated numbers and other considerations suggest that the numbers are inflated far in excess of the costs that carriers will incur in obtaining CALEA compliance solutions. First, the numbers likely represent estimates that are based on the manufacturers' "list" prices, with no reflection of the substantial discounts that are standard practice in the industry. Second, a substantial portion of the total costs involved in achieving CALEA compliance will be reimbursed by the government. Thus, only by significantly reducing the aggregated numbers can they be brought close to realistic estimates of the carriers' costs of acquiring CALEA solutions. Yet even taking these numbers at face value, they demonstrate that the carriers' cost-related assertions in prior filings are highly questionable.

DISCUSSION

Introduction

The Commission is currently engaged in a rulemaking proceeding under Section 107(b) of the Communications Assistance for Law Enforcement Act (CALEA) to determine whether J-STD-025 (J-Standard), the industry "safe harbor" standard, omits assistance capabilities required by Section 103, and to correct any such omissions. See Further Notice of Proposed Rulemaking, Docket No. 97-213 (released November 2, 1998) (Further Notice). In connection with this rulemaking, five manufacturers of telecommunications equipment have given the Commission estimates of the revenue they foresee collecting through the sale of CALEA solutions to telecommunications carriers, together with requests that the Commission not release these estimates to the public. The Office of Engineering and Technology (OET) recently granted the manufacturers' requests for confidential treatment, and resolved to "withhold the associated data from routine public inspection." Order, Docket No. 97-213, ¶ 1 (released Mar. 2, 1999) (Confidentiality Order). The Confidentiality Order acknowledged that the Commission "generally has not afforded confidential treatment to material submitted in rulemakings," but added that it believed the confidential treatment of these estimates would "not deprive other interested parties of a meaningful opportunity to review and comment on the material" because the Commission intended to aggregate the estimates, release the aggregated estimates for comment, and "consider only the aggregated data" in rendering its final decision. *Id.* ¶ 5.

On March 31, 1999, the Department of Justice and Federal Bureau of Investigation (the government) filed a Petition for Reconsideration of the Confidentiality Order (Petition for Reconsideration). The government asserted that the Confidentiality Order constituted an

unwarranted departure from the Commission's general policy discouraging the use of confidential information in rulemaking proceedings. The government urged the Commission to deny the confidentiality requests and return the information, or to modify the Confidentiality Order in such a way as to provide the government with a meaningful opportunity to comment.

On May 7, 1999, OET released a Public Notice setting forth the manufacturers' revenue estimates in aggregated form and requesting public comment on them. The government now submits these comments in response to the Public Notice.

I. The Revenue Estimates In The Public Notice Cannot Assist The Commission In Fulfilling Its Statutory Mandate under Section 107(b) of CALEA.

As the government has explained in prior filings, see, *e.g.*, Reply Comments Regarding Further Notice of Proposed Rulemaking 9-10 (filed Jan. 27, 1999) (Reply Comments), the Commission's mandate with regard to CALEA's assistance capability obligations is clearly set out in Section 107(b). The Commission must determine whether the J-Standard is "deficient" as a means of meeting the assistance capability requirements of Section 103 and, if it so determines, must adopt technical standards that meet those requirements. 47 U.S.C. § 1006(b). Section 107(b) does not empower the Commission to remove assistance capabilities from Section 103 on the ground that they would be financially burdensome for particular carriers or the industry as a whole. Rather, the Act addresses compliance burdens elsewhere, by providing that individual carriers with a demonstrated need may secure individualized exemptions under Section 109(b) of CALEA. See 47 U.S.C. § 1008(b). The costs involved in providing the required assistance capabilities are relevant to the Commission's task only with regard to choosing the *means* by which any identified deficiencies will be corrected. Section 107(b) authorizes the Commission to consider costs in choosing between

available alternatives for curing particular deficiencies, by selecting the means that will be "cost-effective" and will "minimize the cost of such compliance on residential ratepayers." 47 U.S.C. § 1006(b)(1), (3).

The aggregated revenue figures set forth in the Public Notice cannot assist the Commission in determining which means of curing particular deficiencies will be most "cost-effective" or will "minimize" the burden on ratepayers. In each instance, the numbers address only a single means of curing the deficiencies identified by the government — the means proposed in the government's "punch list." The revenue figures do not propose or address any alternative means of correcting the deficiencies in the J-Standard, much less assign revenue estimates to such alternatives. If the manufacturers were aware of more cost-effective means of curing these deficiencies, they presumably would have given the Commission revenue estimates based on such alternatives. In any event, in the absence of identified alternatives to the government's proposals for curing the deficiencies in the J-Standard, the revenue estimates associated with the punch list items cannot advance the Commission's deliberations under Section 107(b), for the relevant issue under Section 107(b) is not the *absolute* cost of any particular punch list item, but rather the *relative* cost of the punch list item in comparison with an equally effective alternative.

II. The Commission Should Afford Interested Parties A More Meaningful Opportunity To Comment Upon The Revenue Estimates.

If the Commission nevertheless decides to place reliance on the manufacturer revenue estimates under Section 107(b), it should provide the interested parties with a more meaningful opportunity to comment upon the aggregated figures. Deprived of access to the information and assumptions that underlie these aggregated numbers, the government's ability to offer meaningful

comment is limited. This problem is exacerbated by the fact that the Commission has not indicated *how* it proposes to consider or use these data. The government and other commenters are thus left with the task of commenting on a set of numbers, while having little idea of what the numbers mean or what they are to be used for.

The government's Petition for Reconsideration suggested means by which the Commission could address this problem. Specifically, the Petition suggested that the Commission: (i) permit the government to examine the information underlying the aggregated figures pursuant to a protective order; (ii) condition its grant of the confidentiality requests on the manufacturers' agreement to release the government from the restraints imposed by non-disclosure agreements that prevent the government from releasing the cost-related information that it has obtained directly from the manufacturers, or (iii) disclose the assumptions that form the basis of the manufacturers' estimates together with the aggregated estimates. See Petition for Reconsideration 7-8.

The Public Notice does not acknowledge the concerns raised in the government's petition. The government hereby reiterates these concerns, and respectfully requests that the Commission adopt one or more of these suggested means, or other effective means, of affording the government a more meaningful opportunity to comment on the numbers contained in the Public Notice.

III. The Revenue Estimates Appear To Greatly Overstate The Cost Of Acquiring CALEA Solutions.

In the absence of an opportunity to examine the information and assumptions underlying these aggregated revenue estimates, the government must speculate as to their nature. (The Commission, too, may be left to speculate, since it is unclear how much of the information and assumptions underlying their individual estimates the manufacturers divulged even to the

Commission, and since the Confidentiality Order states (§ 5) that the Commission "intend[s] to consider only the aggregated data and not the individual data provided by the manufacturers.") However, given the magnitude of the aggregated numbers and other considerations, it appears very likely that these numbers are inflated far in excess of any realistic projection of the costs that carriers will incur in obtaining CALEA compliance solutions.

To begin, it appears likely that the revenue estimates in the Public Notice are based on "list" prices that are more than *twice as high* as those that carriers will actually pay for CALEA solutions. As the government explained in its Reply Comments, it is the general practice in the telecommunications industry for equipment manufacturers to grant their carrier customers significant discounts from the manufacturers' "list" prices. See Reply Comments 16. In the experience of the government's telecommunications industry experts, these discounts can range *from 30 percent to 90 percent*, depending on several market factors unique to the individual carrier-manufacturer relationship. For example, many carriers and manufacturers have long-term purchase agreements whereby a carrier agrees to purchase specified hardware and software from a given manufacturer over the life of the agreement. Additionally, manufacturers commonly offer discounts based on the number of switches for which a product is being purchased. Put simply, the more a customer purchases, the lower the unit price. Another common industry practice is for manufacturers to offer carriers a discount based on "yearly dollar value purchase" commitments, whereby discounts increase depending on the total dollar value of products purchased from that manufacturer in a given year. Discounts are also likely to be affected by the presence of competing vendors, a carrier's future network plan, potential carrier revenue generation for a specific feature, and other factors.

There are two related reasons for believing that the revenue estimates underlying the aggregated numbers reflect non-discounted "list" prices. First, the Government is not aware that any carriers have paid a fully negotiated price for CALEA solutions, such that manufacturers would be in a position to disclose the prices that will in fact be paid by the carrier, rather than their virtually meaningless "list" prices. Second, even if the manufacturers were in a position to disclose negotiated prices, they likely would be very reluctant to do so, for fear of undermining their position in future negotiations (*i.e.*, if pricing information publicly released by the Commission effectively revealed the manufacturers' average sale prices, manufacturers would find it very difficult to ask their customers to accept less favorable discounts than were reflected in these prices in future negotiations). If the Commission determines that it needs an accurate forecast of the cost to carriers of achieving CALEA compliance, it should ask these manufacturers to disclose to the Commission information regarding their past practices in granting discounts from their "list" prices to their carrier customers. In the absence of an appropriate adjustment for these discounts, the revenue information received by the Commission must be presumed to be inflated far beyond the actual costs carriers could incur in procuring these solutions.

Even if these estimates are substantially reduced to take into account typical discounts, substantial further reductions appear necessary to arrive at a sound forecast of the carriers' costs. For example, the manufacturers' revenue estimates may include the revenues they will receive in enabling carriers to meet CALEA's *capacity* requirements. As provided under Section 104(e) of CALEA, eligible capacity costs incurred by the carrier are to be reimbursed by the government. See 47 U.S.C. § 1003(e); Reply Comments 17. Furthermore, the estimates appear to be based on the premise that *all* of the switches in service in the carriers' networks must be brought into compliance

at the carriers' expense. See Public Notice ¶ 4 (stating that the manufacturers' estimates were calculated by reference to the total number of switches "in service"). Estimates based on this number of switches dramatically overstate the carriers' actual compliance costs, for several reasons. First, carriers do not bear the cost of implementing CALEA solutions on equipment, facilities, or services that were "installed or deployed" prior to January 1, 1995, unless the equipment, facilities, or services have been significantly upgraded or undergone a major modification. 47 U.S.C. § 1008. Thus, the entire portion of these estimated manufacturer revenues that relate to such facilities must be excluded from any reckoning of the carriers' compliance costs. Second, for many platforms, compliance solutions need only be incorporated into the subset of "host" and "stand-alone" switches, and not into "remote" switches. See Reply Comments 17. If manufacturer revenue estimates are premised on the notion that solutions will be purchased for each and every switch in each carrier's network, these estimates are vastly inflated.

For all of these reasons, the Commission should assume that these estimates likely represent substantially more than twice the cost that carriers will incur in obtaining CALEA solutions.

IV. The Manufacturers' Revenue Estimates Demonstrate The Inflated Nature Of The Carriers' Cost Assertions.

While the manufacturers' revenue estimates appear to be inflated far above what carriers will actually pay to obtain CALEA solutions, a comparison between the manufacturers' revenue estimates and the cost assertions that have been made by the carriers shows that the carriers' assertions to the Commission are even *more* seriously inflated. For example, the Cellular Telecommunications Industry Association has suggested in filed comments that the industry-wide cost of achieving compliance with the J-Standard alone could be as high as \$5 billion. See Comments of the Cellular

Telecommunications Industry Association Regarding Further Notice of Proposed Rulemaking (filed Dec. 14, 1998) (CTIA Comments) 2. The Commission now has before it the revenue estimates of five telecommunications equipment manufacturers that collectively cover approximately 90% of the access lines in the United States. Even without the substantial downward adjustments to these numbers that appear necessary (see *supra*), the revenue estimates indicate that the total cost to their carrier customers of acquiring complete CALEA solutions (covering not only the J-Standard but the punch list capabilities as well) will be approximately \$1.3 billion. Adjusting this figure to cover the entire industry yields an estimate of \$1.4 billion¹ — less than 3% of the 1997 Earnings Before Interest, Taxes, Depreciation, and Amortization of the five major Regional Bell Operating Companies (RBOCs) and GTE. See Disclosure, Inc. Database.

The manufacturers' estimates also demonstrate the implausibility of the carriers' assertions regarding the share of the overall cost of CALEA compliance attributable to the punch list. For example, both SBC and CTIA claimed that adding the punch list items would double the cost of compliance. Comments of SBC Communications, Inc. (filed Dec. 14, 1998) 5; CTIA Comments 8. Yet the manufacturers' estimates indicate that the revenues associated with the punch list items represent less than a quarter of the overall cost of compliance for the wireline portion of the industry, and only 31% of the cost for the industry as a whole. It is critical to bear in mind that, for purposes

¹ Although the manufacturer's estimates appear to reflect only the cost to the carriers of acquiring CALEA solutions, and not the costs involved in deploying these solutions on their networks, the government has already established that the deployment costs associated with the punch list items would not substantially increase the carriers' overall costs of compliance. See Reply Comments 14 ("The essential process of deploying a release is the same, regardless of the particular features included in it"); BellSouth Comments (filed Dec. 14, 1998) (BellSouth Comments) 6 ("the Commission's selective pruning of punch list items will not substantially reduce carriers' capital and expense costs * * *").

of this rulemaking proceeding, the costs associated with the core J-Standard are entirely irrelevant; only the incremental costs associated with the punch list have any possible legal significance under Section 107(b). See Reply Comments 11.

The carriers' assertions regarding their own compliance costs are likewise undermined by the manufacturers' estimates. Consider BellSouth's assertion that it alone would spend more than \$182 million achieving compliance with the punch list items tentatively approved by the Commission in the Further Notice. BellSouth Comments 2. This number exceeds by \$35 million the manufacturers' estimate of the costs that will be incurred by all of these five manufacturers' wireline customers *combined*, in acquiring the necessary solutions to provide these items. Likewise, GTE's asserted cost of complying with the core J-Standard (over \$400 million) represents over 70% of the cost estimated for all five manufacturers' wireline customers to acquire the J-Standard solutions. See Comments of GTE (filed Dec. 14, 1998) 7.

These comparisons confirm the merit of the government's advice to the Commission to approach the carriers' cost assertions with "a healthy measure of skepticism." Reply Comments 15. As the comparisons amply illustrate, even taking the manufacturers' revenue estimates at face value, the estimates severely undermine the carriers' assertions regarding the cost of CALEA compliance — and along with them, the carriers' general theme that the Commission must rescue the industry and ratepayers from the burdens of CALEA compliance by leaving punch list capabilities out of its "safe harbor" rule.

V. More Reliable Cost Information May Be Available In The Near Future.

In the near future, it may be possible for the Commission to review an actual negotiated price for CALEA solutions, rather than meaningless and inflated "list" prices. As noted in the Public

Notice (§ 4 n.8), manufacturers have begun negotiations related to the development and sale of CALEA solutions. When even one such negotiation is consummated, the Commission will be able to consider a meaningful number with some bearing upon the actual costs of CALEA compliance in general and the costs associated with the punch list items in particular. If the Commission intends to consider the cost of CALEA compliance (and not only the relative costs of alternative methods of curing deficiencies in the J-Standard) in its rulemaking, the government strongly encourages the Commission to look to hard numbers that emerge from negotiations, and not to speculative projections or "list" prices that bear no relation to any carrier's actual compliance costs.

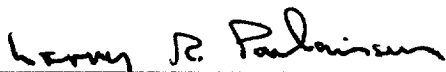
DATE: May 17, 1999

Respectfully submitted,

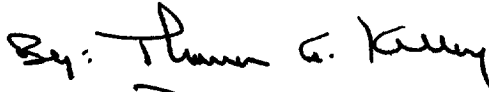
Louis J. Freeh, Director
Federal Bureau of Investigation

Honorable Janet Reno
Attorney General of the United States

Donald Remy
Deputy Assistant Attorney General


Larry R. Parkinson
General Counsel
Federal Bureau of Investigation
935 Pennsylvania Avenue, N.W.
Washington, D.C. 20535


Douglas M. Letter
Appellate Litigation Counsel
Civil Division
U.S. Department of Justice
601 D Street, N.W., Room 9106
Washington, D.C. 20530
(202) 514-3602

By: 
Deputy General Counsel

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

In the Matter of:)

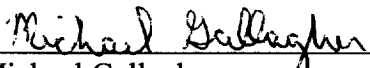
Communications Assistance for Law)
Enforcement Act)
_____)

CC Docket No. 97-213

Certificate of Service

I, Michael Gallagher, a Program Analyst in the office of the Federal Bureau of Investigation, Washington, D.C., hereby certify that, on May 17, 1999, I caused to be served, by first-class mail, postage prepaid (or by hand where noted) copies of the above-referenced Comments Regarding CALEA Manufacturer Revenue Estimates, the original of which is filed herewith and upon the parties identified on the attached service list.

DATED at Washington, D.C. this 17th day of May, 1999.



Michael Gallagher

**IN THE MATTER OF:
COMMUNICATIONS ASSISTANCE FOR LAW ENFORCEMENT ACT
CC DOCKET 97-213
SERVICE LIST**

*The Honorable William E. Kennard
Chairman
Federal Communications Commission
445 12th Street, S.W., Room 8B201
Washington, D.C. 20554

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

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

*The Honorable Michael Powell
Commissioner
Federal Communications Commission
445 12th Street, S.W., Room 8A204
Washington, D.C. 20554

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

*Ari Fitzgerald
Legal Advisor to Chairman Kennard
Federal Communications Commission
445 12th Street, S.W., Room 8B201
Washington, D.C. 20554

***James Casserly**
Legal Advisor to Commissioner Ness
Federal Communications Commission
445 12th Street, S.W., Room 8B115B
Washington, D.C. 20554

***Paul E. Misener**
Senior Legal Advisor to Commissioner Furchtgott-Roth
Federal Communications Commission
445 12th Street, S.W., Room 8A302B
Washington, D.C. 20554

***Peter A. Tenhula**
Legal Advisor to Commissioner Powell
Federal Communications Commission
445 12th Street, S.W., Room 8A204F
Washington, D.C. 20554

***Karen Gulick**
Legal Advisor to Commissioner Tristani
Federal Communications Commission
445 12th Street, S.W., Room 8C302F
Washington, D.C. 20554

***Christopher J. Wright**
General Counsel
Federal Communications Commission
445 12th Street, S.W., Room 8C755
Washington, D.C. 20554

***Lawrence E. Strickling**
Chief
Common Carrier Bureau
Federal Communications Commission
1919 M Street N.W., Room 500
Washington, D.C. 20554

***Thomas Sugrue**
Bureau Chief
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W.
Washington, D.C. 20554

***Anna Gomez**
Chief
Network Services Division
Common Carrier Bureau
Federal Communications Commission
2000 M Street N.W., Room 235B
Washington, D.C. 20554

***Kent Nilsson**
Office of Engineering and Technology
Federal Communications Commission
2000 M Street N.W.
Washington, D.C. 20554

***Charles Iseman**
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W., Room 424
Washington, D.C. 20554

***Jim Burtle**
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W., Room 281
Washington, D.C. 20554

***Julius Knapp**
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W., Room 425
Washington, D.C. 20554

*Rodney Small
Office of Engineering and Technology
Federal Communications Commission
445 12th Street, S.W., 7-A121
Washington, D.C. 20554

*Geraldine Matise
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W., Room 480
Washington, D.C. 20554

*Charlene Lagerwerff
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., 4-A124
Washington, D.C. 20554

*James F. Green
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., 4-A237
Washington, D.C. 20554

*Tejal Mehta
Wireless Telecommunications Bureau
Federal Communications Commission
2100 M Street, N.W., Room 7115
Washington, D.C. 20554

*David O. Ward
Network Services Division
Common Carrier Bureau
Federal Communications Commission
2000 M Street, N.W., Room 210
Washington, D.C. 20554

*Dale Hatfield
Chief
Office of Engineering and Technology
Federal Communications Commission
2000 M Street, N.W., Room 1300
Washington, D.C. 20554

*Susan Aaron
Office of General Counsel
Federal Communications Commission
445 12th Street, S.W., 8-A522
Washington, D.C. 20554

*Diane Conley
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., 4th Floor
Washington, D.C. 20554

*David Krech
Wireless Telecommunications Bureau
Federal Communications Commission
445 12th Street, S.W., 4-A223
Washington, D.C. 20554

Matthew J. Flanigan
President
Telecommunications Industry Association
Suite 300
2500 Wilson Boulevard
Arlington, VA 22201-3834

Stewart A. Baker
Tom Barba
Steptoe & Johnson LLP
1330 Connecticut Avenue, N.W.
Washington, D.C. 20036-1795

Thomas Wheeler
President & CEO
Cellular Telecommunications Industry Association
Suite 200
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

Albert Gidari
Perkins Coie
1201 Third Avenue
40th Floor
Seattle, Washington 98101

Mark J. Golden
Senior Vice President, Industry Affairs
Robert Hoggarth
Senior Vice President, Paging/Messaging
Personal Communications Industry Association
Suite 700
500 Montgomery Street
Alexandria, VA 22314-1561

Roy Neel
President & CEO
United States Telephone Association
Suite 600
1401 H Street, N.W.
Washington, D.C. 20005-2164

Alliance for Telecommunication Industry Solutions
Suite 500
1200 G Street, N.W.
Washington, D.C. 20005

Jerry Berman
Executive Director
Center for Democracy and Technology
Suite 1100
1634 Eye Street, N.W.
Washington, D.C. 20006

Mark C. Rosenblum
Ava B. Kleinman
Seth S. Gross
Room 3252F3
295 North Maple Avenue
Basking Ridge, NJ 07920

William L. Roughton, Jr.
Associate General Counsel
PrimeCo Personal Communications, L.P.
Suite 320 South
601 13th Street, N.W.
Washington, D.C. 20005

Pamela J. Riley
David A. Gross
AirTouch Communications, Inc.
1818 N Street, N.W.
Washington, D.C. 20036

Joseph R. Assenzo
4900 Main Street, 12th Floor
Kansas City, MO 64112

James P. Lucier, Jr.
Director of Economic Research
Americans for Tax Reform
Suite 200
1320 18th Street, N.W.
Washington, D.C. 20036

Lisa S. Dean
Director, Center for Technology Policy
Free Congress Foundation
717 Second Street, N.E.
Washington, D.C. 20002

Anita Sheth
Director, Regulatory Policy Studies
Citizens for a Sound Economy
Suite 700
1250 H Street, N.W.
Washington, D.C. 20005

James X. Dempsey
Senior Staff Counsel
Daniel J. Weitzner
Deputy Director
Center for Democracy and Technology
Suite 1100
1634 Eye Street, N.W.
Washington, D.C. 20006

Eric W. DeSilva
Stephen J. Rosen
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006

Lawrence E. Sarjeant
Linda Kent
Keith Townsend
Suite 600
1401 H Street, N.W.
Washington, D.C. 20005

Michael Altschul
Vice President and General Counsel
Randall S. Coleman
Vice President, Regulatory Policy and Law
Cellular Telecommunications Industry Association
Suite 200
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

John Pignataro
Senior Technical Advisor
Police Department, City of New York
Fort Totten Building 610
Bayside, NY 11359

Barbara J. Kern
Counsel
Ameritech Corporation
4H74
2000 Ameritech Center Drive
Hoffman Estates, IL 60196

James D. Ellis
Robert M. Lynch
Durward D. Dupre
Lucille M. Mates
Frank C. Magill
175 E. Houston, Room 4-H-40
San Antonio, TX 78205

Robert Vitanza
Suite 1300
15660 Dallas Parkway
Dallas, TX 75248

M. Robert Sutherland
Theodore R. Kingsley
BellSouth Corporation
Suite 1700
1155 Peachtree Street, N.E.
Atlanta, GA 30309-3610

Michael P. Goggin
BellSouth Cellular Corp.
Suite 910
1100 Peachtree Street, N.E.
Atlanta, GA 30309-4599

Michael W. White
BellSouth Wireless Data, L.P.
10 Woodbridge Center Drive, 4th Floor
Woodbridge, NJ 07095-1106

J. Lloyd Nault, II
BellSouth Telecommunications, Inc.
4300 BellSouth Center
675 West Peachtree Street, N.E.
Atlanta, GA 30375

Charles M. Nalborne
Suite 400
3353 Peachtree Road, N.E.
Atlanta, GA 30326

Kurt A. Wimmer
Gerard J. Waldron
Alane C. Weixel
Ellen P. Goodman
Erin Egan
Covington & Burling
1201 Pennsylvania Avenue, N.W.
P.O. Box 7566
Washington, D.C. 20044-7566

William T. Lake
John H. Harwood II
Samir Jain
Todd Zubler
Wilmer, Cutler & Pickering
2445 M Street, N.W.
Washington, D.C. 20037-1420

Kathryn Marie Krause
Edward M. Chavez
1020 19th Street, N.W.
Washington, D.C. 20036

Martin L. Stern
Lisa A. Leventhal
Preston Gates Ellis & Rouvelas Meeds LLP
Suite 500
1735 New York Avenue, N.W.
Washington, D.C. 20006

John M. Goodman
Attorney for the Bell Atlantic telephone companies
1300 I Street, N.W.
Washington, D.C., 20005

Francis D. R. Coleman
Director of Regulatory Affairs- North America
ICO Global Communications
1101 Connecticut Avenue, NW
Suite 550
Washington, D.C. 20036

Cheryl A. Tritt
James A. Casey
Morrison & Foerster LLP
2000 Pennsylvania Avenue, N.W.
Suite 5500
Washington, D.C. 20006

Joel M. Margolis
Corporate Counsel-Regulatory
Nextel Communications, Inc.
1505 Farm Credit Drive
Suite 100
McLean, Virginia 22102

Sylvia Lesse
Marci Greenstein
Kraskin, Lesse & Cosson, LLP
2120 L Street, N.W.
Suite 520
Washington, DC 20037

Robert M. Lynch
Roger K. Toppins
Hope E. Thurrott
One Bell Plaza, Room 3023
Dallas, Texas 75202

John T. Scott, III
Crowell & Moring LLP
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Henry M. Rivera
Larry S. Solomon
J. Thomas Nolan
Shook, Hardy & Bacon LLP
1850 K Street, N.W.
Suite 900
Washington, D.C. 20006

Colette M. Capretz
Fisher Wayland Cooper
Leader & Zaragoza LLP
2001 Pennsylvania Ave., N.W.
Suite 400
Washington, D.C. 20006

Lon C. Levin
Vice President and Regulatory Counsel
American Mobile Satellite Corporation
10802 Park Ridge Boulevard
Reston, Virginia 20191

Carole C. Harris
Christine M. Gill
Anne L. Fruehauf
McDermott, Will & Emery
600 Thirteenth St., N.W.
Washington, D.C. 20005

Peter M. Connolly
Koteen & Naftalin, LLP
1150 Connecticut Ave., N.W.
Washington, D.C. 20036

Edward J. Wisniewski
Deputy Assistant Administrator
Office of Investigative Technology
Drug Enforcement Administration
8198 Terminal Road
Lorton, VA 22079

Dudley M. Thomas
Director
Texas Department of Public Safety
5805 N. Lamar Blvd.
Box 4087
Austin, Texas 78773-0001

Colonel Carl A. Williams
Superintendent, New Jersey State Police
Post Office Box 7068
West Trenton, NJ 08628-0068

L. Marie Guillory
Jill Canfield
National Telephone Cooperative Association
4121 Wilson Blvd. 10th Floor
Arlington, VA 22203-1801

*International Transcription Service, Inc.
1231 20th Street, N.W.
Washington, D.C. 20036

* Hand Delivered