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

In the Matter of)
)
Implementation of Section 304 of the) CS Docket No. 97-80
Telecommunications Act of 1996)
)
Commercial Availability of Navigation Devices)

REPLY COMMENTS OF ECHELON CORPORATION

Echelon Corporation ("Echelon"), by its attorneys, respectfully submits these reply comments in connection with the petitions for reconsideration¹ of the Commission's *Navigation Device Order*.² Echelon concurs with the National Cable Television Association ("NCTA") and Circuit City Stores, Inc. ("Circuit City") that the analog decoder interface standard is fast becoming an "orphan" that should finally be "put to rest" in this proceeding. The Commission would be best served by moving aggressively into the digital domain, exempting analog navigation devices from its separation rules, and avoiding the factual, policy and legal complexities arising from analog set-top box equipment.

INTRODUCTION

The Commission should yield to the overwhelming weight of the record in this proceeding, and the consensus among virtually all commenters, by exempting analog devices from the requirement that multichannel video programming distributors ("MVPDs") separate security and

¹ National Cable Television Association, Petition for Expedited Reconsideration (filed Aug. 14, 1998) ("NCTA Petition"); Telecommunications Industry Association, Petition for Expedited Reconsideration (filed Aug. 14, 1998 ("TIA Petition"); Consumer Electronics Manufacturers Association, Petition for Reconsideration (filed Aug. 14, 1998 ("CEMA Petition").

² *Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, Report and Order, CS Docket No. 97-80, FCC 98-117 (released June 24, 1998) ("*Navigation Device Order*").

No. of Copies rec'd 0514
List A B C D E

non-security components of navigation devices. As a matter of both sound policy and law, it is far preferable for the Commission to concentrate its resources on the development and deployment of advanced digital technologies instead of becoming embroiled in the technical, security and legal complexities of fashioning separation standards for analog equipment. Commenters as diverse — and otherwise opposed — as Circuit City Stores and NCTA also agree with Echelon that the Commission should not endorse the decoder interface as an appropriate technical standard for analog set-top boxes. Therefore, the Commission should grant the NCTA and Telecommunications Industry Association (“TIA”) reconsideration petitions and fashion an analog exemption to the separation requirement.

DISCUSSION

I. THE COMMISSION SHOULD APPLY ITS SEPARATION RULES EXCLUSIVELY TO DIGITAL TECHNOLOGIES BY ESTABLISHING AN EXEMPTION FOR ANALOG NAVIGATION DEVICES

The opening comments demonstrate a clear consensus that the Commission should exempt analog devices from the rule requiring separation of security and non-security functionalities in set-top boxes.³ The *Navigation Device Order* extends complex restructuring requirements to antiquated analog devices, during the twilight of this technology. The separation of analog equipment is not only unnecessary, but as Ameritech explained will “significantly increase overall system costs” by requiring “additional equipment to provide redundant functionalities.”⁴ By imposing new design requirements for old analog equipment, the *Navigation Device Order* sends perverse investment signals to both industry participants and consumers.

³ Circuit City Comments at 4; NCTA Comments at 3-4; GI Comments at 5; Echelon Comments at 6; Ameritech New Media Comments at 4-5; TIA Petition at 5-7

⁴ Ameritech New Media Comments at 4-5

As General Instrument Corp. (“GI”) recognized, by including analog systems in the new regulatory scheme the *Navigation Device Order* will “force the cable industry to re-allocate significant resources” away from the advancement of digital technology.⁵ Rather than redesigning components of near-obsolete technology, the Commission instead should focus its efforts on encouraging investment into “the development and deployment of new feature-rich digital navigation devices,” which as the Commission recognizes are essential to the introduction of digital broadcast television.⁶

Notwithstanding the Commission’s clear policy goal of pursuing the rapid deployment of digital technologies,⁷ CEMA and Tandy argue that the Commission should affirm the separation rules for analog devices. Under their curious logic, an analog exemption would deny cable operators an “incentive to introduce digital technology.”⁸ The facts are exactly the opposite. Application of the separation rules to analog devices would substantially increase the embedded inventory of analog equipment, which the Commission has sought to phase-out, and thus discourage both MVPDs and consumers from adopting digital technologies. Tandy and CEMA fail to recognize that the Commission has already established a regulatory scheme with an aggressive digital roll-out schedule, providing a strong incentive for all industry members, from manufacturers to programmers to cable systems, to focus their resources on this new digital technology.

Moreover, application of the segregation rules to analog devices will force consumers — especially consumers in the rural areas — into an unacceptable paradox. The Commission has already laid the groundwork for encouraging consumers to invest in digital consumer electronics

⁵ GI Comments at 5.

⁶ GI Comments at 5.

⁷ Echelon Comments at 7.

⁸ Tandy Comments at 4-5.

equipment.⁹ At the same time, the *Navigation Device Order* provides a counter-incentive for consumers to purchase another generation of analog equipment for the sole purpose of assuring the commercial availability of a device — the analog set-top box — that the Commission wants to eliminate in favor of more advanced technology. This result makes no common sense. Thus, contrary to CEMA's argument, unless the Commission adopts a wholesale exemption for analog set-top boxes, the vast majority of consumers will not enjoy the benefits of a competitive market for digital navigation devices until well into the next century.¹⁰

As Ameritech emphasized, a “near consensus” already existed in the earlier phase of this proceeding “that analog devices should not be subject to the security separation requirement, among other things because of concerns about how to preclude effectively signal theft using non-integrated devices.”¹¹ The delivery of analog signals “presents significantly greater risks than digital,” amply justifying the exclusion of analog devices from the new separation requirement.¹² Analog systems have traditionally relied on hardware security solutions, where digital applications use software security.¹³ Requiring cable operators and other MVPDs to separate the security module in analog equipment would “necessarily reveal information about the proprietary technology used to provide security.”¹⁴ Even CEMA recognizes that the cable industry has “legitimate concerns” about the security of cable signals.¹⁵ Contrary to Tandy's claim that there “is little substance”¹⁶ to the security issue, therefore, “application of the new rules to the ‘huge em-

⁹ Echelon Comments at 12.

¹⁰ CEMA Comments at 23 (emphasis supplied).

¹¹ Ameritech New Media Comments at 2-3.

¹² Ameritech New Media Comments at 4.

¹³ Ameritech New Media Comments at 4.

¹⁴ Ameritech New Media Comments at 4.

¹⁵ CEMA Comments at 22.

¹⁶ Tandy Comments at 9.

bedded base of analog equipment' poses enormous security risks which alone provide a more than ample basis for the categorical exclusion of such devices, pursuant to Section 629(b)."¹⁷

The Commission should adopt the "forward-looking approach" of ensuring the commercial availability of digital navigation devices, which "represent the future of technology in this area."¹⁸ A regulatory scheme that concentrates on the development of digital applications is "far more consistent with the statute, the public interest, and the record in this proceeding than the overly-expansive approach" of the *Navigation Device Order*.¹⁹

II. EVEN IF THE COMMISSION REJECTS AN ANALOG EXEMPTION, IT SHOULD REVERSE ITS ENDORSEMENT OF THE DECODER INTERFACE

The Commission should adhere to Congress' explicit prohibition on adoption of the decoder interface standard in amended Section 624A of the Communications Act.²⁰ Notwithstanding the *Navigation Device Order*'s reasoning that the Commission has not actually set a technical standard for the separation of analog equipment, its endorsement of the decoder interface as a "model" technical standard for analog devices is a de facto adoption of this standard.²¹ And although the Commission believes it has not acted under the Section 624A charter to ensure cable equipment "compatibility," its emphasis on assuring "portability" of set-top boxes among different cable systems is of course an initiative to establish set-top box equipment compatibility.

As a legal matter, the issue is hardly as cut-and-dried as the *Navigation Device Order* suggests. Arguing that amended Section 624A does not apply to the Commission's commercial

¹⁷ GI Comments at 3.

¹⁸ GI Comments at 7.

¹⁹ GI Comments at 7.

²⁰ 47 U.S.C. § 544a(a)(4). These amendments specify that the Commission may only adopt "narrow technical standards" for cable equipment compatibility, but also require that any Commission "regulations" on set-top box compatibility "not affect" unrelated markets and mandate only a "minimum degree of common design and operation." Id. The *Navigation Device Order*'s contrived rationale that regulations requiring use of standard inter-

availability authority under Section 629, the Commission and advocates of the decoder interface are forced to hide behind the thin veil of a single sentence from a House Report that was not adopted or corroborated by the House-Senate Conference Committee. Furthermore, the legislative history of Section 629 — including a Senate debate colloquy relied on for other purposes by the *Navigation Device Order* — clearly demonstrates Congress' intent that any navigation device rules respect the standards-setting limits of the so-called "Eshoo Amendment."²² Thus, as Circuit City, one of the principal architects of the navigation device provision, forthrightly concedes, the Commission's decision to embroil itself in the standard-setting process by selecting the decoder interface "constitute[s] over-regulation and is not supported by the record."²³

Circuit City also agrees with Echelon that, at this point in time, the Commission's reliance on the decoder interface, developed for a different purpose, is "misplaced."²⁴ None of the millions of analog televisions, VCRs or set-top boxes that are currently in American homes are compatible with the decoder interface.²⁵ Circuit City correctly recognizes that "building the decoder interface into new TVs and VCRs would do nothing to address" the obstacle of transferring signals across separated modules with respect to any of the "200 million analog TVs and VCRs now owned by consumers."²⁶ Consequently, the *Navigation Device Order* would have consumers spend thousands of dollars on new home entertainment equipment to assure the commercial availability of a technology that is rapidly becoming obsolete with the introduction of digital broadcast signals. There is no more cogent conclusion than that of Circuit City itself,

faces, but not specifically referencing the decoder interface, are permissible, overlooks the statutory limits on Commission "regulations", in addition to technical standards

²¹ *Navigation Device Order* ¶ 71.

²² Echelon Comments at 21.

²³ Circuit City Comments at 17.

²⁴ GI Comments at 4; see Circuit City Comments at 17-18.

²⁵ Echelon Comments at 24.

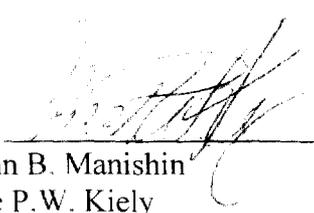
²⁶ Circuit City Comments at 17.

which now believes that the decoder interface, which is "fast becoming an orphan in terms of potential implementation, should be put to rest insofar as this proceeding is concerned."²⁷

CONCLUSION

The Commission should grant the NCTA and TIA petitions and reconsider its decision to include analog navigation devices in the separation requirements. By imposing a cumbersome technical architecture on analog equipment, the *Navigation Device Order* establishes unnecessary regulations and will embroil the Commission in complex factual, policy and legal uncertainties that could fatally undermine the Commission's important efforts to move consumers into a new, competitive era of advanced digital television

Respectfully submitted,

By: 
Glenn B. Manishin
Elise P.W. Kiely
Blumenfeld & Cohen—Technology Law Group
1615 M Street, N.W., Suite 700
Washington, DC 20036
202.955.6300
202.955.6460 fax

Counsel for Echelon Corporation

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²⁷ Circuit City Comments at 18 (emphasis supplied).

CERTIFICATE OF SERVICE

I, Amy E. Wallace, do hereby certify that on this 5th day of October, 1998, that I have served a copy of the foregoing document via *hand delivery and U.S. Mail, postage pre-paid, to the following:



Amy E. Wallace

*Chairman William E. Kennard
Federal Communications Commission
1919 M Street, N.W., Rm 814
Washington, DC 20054

*Commissioner Susan Ness
Federal Communications Commission
1919 M Street, N.W., Rm 832
Washington, DC 20054

*Commissioner Michael K. Powell
Federal Communications Commission
1919 M Street, N.W., Rm 844
Washington, DC 20054

*Commissioner Harold Furchgott-Roth
Federal Communications Commission
1919 M Street, N.W., Rm 802
Washington, DC 20054

*Commissioner Gloria Tristani
Federal Communications Commission
1919 M Street, N.W., Rm 826
Washington, DC 20054

*Deborah Lathen, Chief
Cable Services Bureau
Federal Communications Commission
2033 M Street, N.W., Rm 918
Washington, DC 20054

*Susan Fox
Senior Legal Advisor
Office of Chairman William E. Kennard
FCC
1919 M Street, N.W., Rm. 814
Washington, DC 20054

Anita Wallgren
Legal Advisor
Office of Commissioner Susan Ness
FCC
1919 M Street, N.W., Rm. 832
Washington, DC 20054

Benjamin Griffin
Robert A. Galbreath
Reed, Smith, Shaw, & McClay
1301 K Street, N.W.
1100 East Tower
Washington, DC 20005

Jonathan D. Blake
Kurt A. Wimmer
Erin M. Egan
Covington & Burling
1201 Pennsylvania Avenue, N.W.
Washington, DC 20004-7566

Marlin D. Ard
Sarah R. Thomas
Pacific Bell Video Services
140 New Montgomery Street, 1522 A
San Francisco, CA 94105

Margaret E. Garber
1275 Pennsylvania Avenue, N.W.
Washington, DC 20004

Debra H. Morris
George D. Callard
Ameritech New Media, Inc.
300 S. Riverside Plaza,
Suite 1800 North
Chicago, IL 60606

Robert S. Schwartz
Joni Lupovitz
McDermott, Will, & Emory
600 13th Street, N.W.
Washington, DC 20005

Andre J. LaChance
1830 M Street, N.W.
Suite 1200
Washington, DC 20036

Stuart E. Overby
Spectrum Planning
Motorola, Inc.
1350 I Street, N.W., Suite 400
Washington, DC 20005

Aaron I. Fleischman
Arthur H. Harding
Fleishman & Walsh, L.L.P.
1400 16th Street, N.W., Suite 600
Washington, DC 20036

Gregg P. Skall
Pepper & Corarzzini, L.L.P.
1776 K Street, N.W., Suite 200
Washington, DC 20006

James F. Rogers
James H. Barker
Nandam M. Joshi
Latham & Watkins
1001 Pennsylvania Avenue, N.W., Suite 1300
Washington, DC 20004-2505

Marvin Rosenberg
David Vaughan
Holland & Knight, L.L.P.
2100 Pennsylvania Avenue, N.W.
Suite 400
Washington, DC 20037-3202

Richard L. Sharp
W Steven Cannon
Circuit City Stores, Inc.
9950 Maryland Drive
Richmond, VA 23233

Becca Gould
J.D. Marple
Business Software Alliance
1150 18th Street, N.W.
Suite 700
Washington, DC 20036

Daniel Brenner
Neal M. Goldberg
Loretta P. Polk
Counsel for NCTA
1724 Massachusetts Avenue, N.W.
Washington, DC 20036

Howard S. Shapiro
Craig A. Gilley
Fleishman & Walsh, L.L.P.
1400 16th Street, N.W., Suite 600
Washington, DC 20036

Philip L. Verveer
Francis M. Buono
Willkie, Farr, & Gallagher
Three Lafayette Center
1155 21st Street, N.W., Suite 600
Washington, DC 20036-3384

David G. Frolio
David G. Richards
Karen B. Possner
BellSouth Corporation
1133 21st Street, N.W., Suite 900
Washington, DC 20036

Kevin DiLallo
Levine, Blaszak, Block, Boothby, L.L.P.
1300 Connecticut Avenue, N.W., Suite 500
Washington, DC 20036

John I. Taylor
Nick Mehta
Zenith Electronics Corp
1000 N Milwaukee Avenue
Glenview, IL 60025

John M. Boehm
Commercial Engineering
811 South 13th Street
Lincoln, NE 68508

Edward Schor
Anne Lucey
Viacom, Inc.
1515 Broadway
New York, NY 10036

Allen P. Bierman
Broadband Products
Belden Wire and Cable Company
PO Box 1980
Richmond, IN 47375-1980

Bill Loughrey
Corporate Communications Department
Scientific-Atlanta, Inc.
One Technology Parkway, South
Norcross, GA 30092-2967

Matthew J. Flanigan
Grant E. Seiffert
Telecommunications Industry Association
1201 Pennsylvania Avenue, N.W., Suite 315
Washington, DC 20004-2401

Bruce Hahn
Computer Technology Industry Association
6776 Littlefalls Road
Arlington, VA 22213

Brenda L. Fox
Gregory L. Cannon
U.S. West, Inc.
1020 19th Street, N.W., Suite 700
Washington, DC 20036

John W. Pettit
Richard J. Arsenault
Drinker, Biddle, & Reath, L.L.P.
901 15th Street, N.W.
Washington, DC 20005

Charles C. Hunter
Catherine M. Hannan
Hunter Communications Law Group
1620 Eye Street, N.W., Suite 701
Washington, DC 20006

Michael R. Gardner
William J. Gildea, III
Harvey Kellman
1150 Connecticut Avenue, N.W., Suite 710
Washington, DC 20036

John D. Heubusch
Government Affairs
Gateway 2000, Inc.
707 D Street, N.W.
Washington, DC 20004

Michael H. Hammer
Todd G. Hartman
Willkie, Farr, & Gallagher
Three Lafayette Center
1155 21st Street, N.W., Suite 600
Washington, DC 20036-3384

Sam Antar
Law and Regulation
ABC, Inc.
77 West 66th Street
New York, NY 10023

David A. Nall
Jonathan Jacob Nadler
Squire, Sanders, & Dempsey, L.L.P.
1201 Pennsylvania Avenue, N.W..
PO Box 407
Washington, DC 20044

Michael F. Altschul
Lolita D. Smith
Cellular Telecommunications Industry Association
1250 Connecticut Avenue, N.W.
Suite 200
Washington, DC 20036

Douglas B. Comer
Intel Corporation
1634 I Street, N.W.
Suite 300
Washington, DC 20036

Fiona Branton
Information Technology Industry Council
1250 Eye Street, N.W.
Suite 200
Washington, DC 20005

Erwin G. Krasnow
Michael D. Berg
John S. Tritak
Vernen, Liipfert, Bernhard, McPherson, & Hand
901 15th Street, N.W., Suite 700
Washington, DC 20005

Paul J. Sinderbrand
Robert D. Primosch
Wilkinson, Barker, Knauer, & Quinn
2300 N Street, N.W., Suite 700
Washington, DC 20037

David R. Pahl
Michael J. Pierce
ESPN, Inc.
ESPN Plaza
Bristol, CT 06010-7454

George A. Hanover
Gary S. Klein
Consumer Electronics Manufacturers Association
2500 Wilson Blvd
Arlington, VA 22201

James R. Coltharp
Comcast Corporation
1317 F Street, N.W.
Washington, DC 20004

Howard J. Symons
Mintz, Levin, Cohn, Ferris, Glovsky, & Popeo, P.C.
701 Pennsylvania Avenue, N.W.
Washington, DC 20004

Leo J. Hindrey, Jr.
Tele-Communications, Inc.
PO Box 5630
Denver, CO 80217-5630

John F. Raposa, HQE03J27
GTE Service Corporation
PO Box 152092
Irving, TX 75015-2092

Quincy Rodgers
Christine G. Crafton
Faye Morrison
General Instruments Corporation
1133 21st Street, N.W., Suite 405
Washington, DC 20036-3384

Jeffrey Krauss
17 West Jefferson Street
Suite 106
Rockville, MD 20850

John J. Motley, III
National Retail Federation
325 7th Street, N.W.
Suite 1000
Washington, DC 20004

Gina Harrison
SBC Communications, Inc.
1401 I Street, N.W., Suite 1100
Washington, DC 20005

Richard G. Warren
NYNEX Telephone Corporation
1095 Avenue of the Americas, Rm 3831
New York, NY 10036

Robert Nicholson
Robert J. Wiggers
Appellate Section, Antitrust Division
U.S. Department of Justice
601 D Street, N.W., Room 10535
Washington, DC 20530

Gail L. Polivy
1850 M Street, N.W.
Suite 1200
Washington, DC 20036

Ronald L. Parrish
Tandy Corporation
1800 One Tandy Center
Fort Worth, TX 76102

Morrison G. Cain
International Mass Retail Association
1700 North Moore Street
Suite 2250
Arlington, VA 22209

Craig A. Newman
Bruce D. Gellman
Corporate Media Partners
10880 Wilshire Blvd, Suite 1750
Los Angeles, CA 90024

Andrew R. Paul
Satellite Broadcasting and Communications Assn
225 Reinekers Lane, Suite 600
Alexandria, VA 22314

Donald J. Russell
U.S. Department of Justice
Antitrust Division
Suite 8000
1401 H Street, N.W.
Washington, DC 20001