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

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JUN - 7 1995

In the matter of)
Amendment of Part 90 of the Commission's) PR Docket No. 93-61
Rules to Adopt Regulations for Automatic)
Vehicle Monitoring Systems)

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To: The Commission
REPLY TO OPPOSITIONS TO PETITIONS FOR RECONSIDERATION

Southwestern Bell Mobile Systems, Inc. ("SBMS"), by its attorneys and pursuant to Section 1.429 of the Commission's Rules,^{1/} hereby submits its Reply to Oppositions to Petitions for Reconsideration of the Report and Order ("R&O") in the above-referenced proceeding.^{2/}

I. Introductory Statement

Throughout this proceeding, the FCC has struggled to create a permanent and workable framework for the operation of diverse LMS systems and Part 15 interests in the 902-928 MHz band.^{3/} While the Commission is properly concerned with limiting interference among these diverse users, it must recognize that the primary objective of this rulemaking proceeding was to create a permanent framework in which LMS could flourish. If the Commission does not remain so focused, LMS will truly become a captive of, and subservient to, Part 15 interests. In this regard, and as shown below, SBMS is in full accord with the other multilateral commenters.

With regard to other outstanding issues addressed in the various oppositions and comments, SBMS' positions are specified below.

II. The Commission Must Carefully Reconsider Its Unlawful Elevation of Part 15 Interests In Relation To LMS

The multilateral parties concur that the FCC has unlawfully elevated Part 15 interests to co-equal status with LMS.^{4/} In this respect, the non-multilateral parties and the

^{1/} 47 C.F.R. §1.429.

^{2/} PR Docket No. 93-61, FCC 95-41 (rel. Feb. 6, 1995).

^{3/} R&O at 50-51.

^{4/} SBMS Petition for Reconsideration ("SBMS Petition") at 7-9, SBMS Opposition and Comments to Petitions for Reconsideration ("SBMS Opposition") at 8-15, AirTouch Teletrac

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multilateral parties are in accord.^{5/}

The Part 15 community alleges that Part 15 users require an irrebutable presumption of non-interference so that consumers will be able to use their Part 15 devices.^{6/} However, Part 15 devices do not have such a presumption in any of the other bands in which they operate. The Part 15 community has not explained why such a presumption is needed only in the 902-928 MHz band and not in the other bands which they currently inhabit. Nor has it provided any evidence from which the FCC could conclude that this lack of a presumption has affected the use of Part 15 devices in these other bands.

TIA and Metricom cite to AirTouch's lack of comment on Part 15's new protections on reconsideration as evidence that AirTouch supports the irrebuttable presumption and post-grant testing requirements.^{7/} However, AirTouch ardently opposed both of these concepts in its Opposition.^{8/} In any event, whether or not AirTouch supports these rules, the essential fact remains that Part 15 is legally required to be secondary to LMS. The FCC's abrogation of this hierarchy without proper notice and a Part 15 rulemaking is simply unlawful.

Not satisfied with the FCC's interventions on its behalf, the Part 15 community asks for yet additional protections beyond those implemented by the R&O. EIA agrees with CellNet that the FCC should designate a portion of spectrum, including some portion within the 902-928 MHz

Opposition to Petitions for Reconsideration ("AirTouch") at 2-8, MobileVision Petition for Reconsideration at 10-13, MobileVision Opposition to Petitions for Reconsideration ("MobileVision") at 7-9, Pinpoint Petition for Reconsideration at 22-23, Opposition of Pinpoint to Petitions for Reconsideration ("Pinpoint") at 5-19, Uniplex Corp. Opposition to Petitions for Reconsideration ("Uniplex") at 2.

^{5/} Amtech Opposition to Petitions for Reconsideration ("Amtech") at 7-15, Ass'n of Amer. Railroads Opposition to Petition for Reconsideration ("AAR") at 5-6, Hughes Transportation Opposition to Petition for Reconsideration ("Hughes") at 2-5, MFS Tech. Comments on Petitions for Reconsideration ("MFS") at 2-3, Texas Instruments Opposition to Petitions for Reconsideration ("TI") at 8.

^{6/} Comments of the Electronics Industry Ass'n ("EIA") at 3, Comments on Petitions for Reconsideration of the Ad Hoc Gas Distribution Utilities Council ("Gas Utilities") at 7.

^{7/} Opposition of Metricom and Southern California Edison Co. to Petitions for Reconsideration ("Metricom") at 12, Comments of the Telecommunications Industry Ass'n ("TIA") at 3.

^{8/} AirTouch at 2-9.

band, for exclusive Part 15 use.^{9/} It is perfectly clear, however, that the FCC always intended LMS to have use of the entire 902-928 MHz band.^{10/} Needless to say, Part 15 services cannot be exclusive within the band and still remain secondary.

AirTouch is in agreement with SBMS and believes that the Gas Utilities request for greater height/power restrictions for LMS are also contrary to Part 15's secondary status. Limiting the height and power of LMS would only add unnecessary expense and complexity to LMS services, resulting in a higher cost to the public.^{11/}

The Part 15 community asserts that because the FCC asked in the NPRM whether Part 15 operations should be removed from the band, Part 15 protections at the expense of LMS are a logical outgrowth of this proceeding.^{12/} This is hardly the case. The NPRM suggested restrictions on Part 15 operations in, or removal of Part 15 from this spectrum,^{13/} it did not suggest restriction of LMS with respect to Part 15. Therefore, the final rule cannot be considered a logical outgrowth of the NPRM, but rather an abrupt and complete departure from its underlying premise.

The Part 15 community also alleges that the FCC has the authority to impose conditions, including testing, on a licensee to reduce risk of interference.^{14/} While SBMS agrees that the FCC can impose conditions on licenses, the FCC cannot upset the hierarchy of an authorized service without first notifying the public that it is proposing to do so, nor can it establish standards and respective burdens for such testing without a notice and comment rulemaking

^{9/} EIA at 8, CellNet Petition for Reconsideration at 8.

^{10/} SBMS Opposition at 14-15.

^{11/} AirTouch at 17.

^{12/} EIA at 5-6, Symbol Tech. Comments on Petitions for Reconsideration ("Symbol") at 3-4, UTC Comments on Petitions for Reconsideration ("UTC") at 8-10.

^{13/} Notice of Proposed Rulemaking, 8 FCC Rcd 2502, 2507 ("NPRM").

^{14/} Metricom at 14-15, Part 15 Coalition Oppositions to Petitions for Reconsideration ("Part 15") at 9, Symbol at 8-9.

proceeding.^{15/} Contrary to the statements of the Part 15 community,^{16/} the conditioning of Part 90 licenses on a demonstration of non-interference to Part 15 devices and the requirement that Part 90 licensees accept interference from Part 15 devices (through the irrebuttable presumption), in effect, amend Part 15 of the Rules.^{17/} Even worse, this unlawful amendment imposes a condition with no standards on LMS licensees, and such licensees only find out whether they pass the test after they have expended millions of dollars building their systems.

The Part 15 community continues to assert that grandfathered licensees should be required to comply with the newly adopted protections for Part 15 devices.^{18/} SBMS demonstrated the unfairness and error of this position in its Opposition.^{19/} Part 15 providers not only want to have their status elevated by those rules, they want the benefit of that elevation to be imposed ex post facto. If grandfathered licensees are so encumbered, they may have to discontinue service to the public to engage in testing or otherwise resolve interference complaints. That would not be in the public interest, nor would it be consistent with the notion of preserving the requirements of the interim rules for grandfathered entities in order to avoid undue hardship.^{20/}

^{15/} See, e.g., Small Refiner Lead Phase-Down Task Force v. EPA, 705 F.2d 506, 549 (D.C. Cir. 1983) ("Agency notice must describe the range of alternatives being considered with reasonable specificity. Otherwise, interested parties will not know what to comment on, and notice will not lead to better informed decision making").

^{16/} Metricom at 14-15, Part 15 at 6-8, UTC at 9.

^{17/} Symbol suggests that to alleviate LMS fears concerning Part 15's new rights, a rule should be added requiring negotiation of interference issues in good faith. Symbol at 10. While SBMS hopes that most parties will negotiate in good faith to resolve interference, LMS should not be required to negotiate with a service that, by its own rules, must accept all interference and must not cause any interference.

^{18/} Comments of AT&T ("AT&T") at 7, Gas Utilities at 16, Part 15 at 3, TIA at 13, UTC at 7-8.

^{19/} SBMS Opposition at 9-10, 12.

^{20/} Some of the Part 15 community also assert that grandfathered licenses should only have until April 1, 1997 to comply with new rules. Gas Utilities at 15, n. 33, Part 15 at 3, n. 6. AirTouch agrees with SBMS and opposes this suggestion for reduction of the transition period for grandfathered licenses. They need three years. SBMS Opposition at 11-12, AirTouch at 11-12.

The Part 15 community alleges that a rebuttable presumption, as suggested by the multilateral parties,^{21/} would be tantamount to eliminating the new Part 15 protections and would provide less incentive to design LMS systems which respect Part 15 interests.^{22/} This is clearly not the case. LMS operators would remain fully motivated to design their systems to respect Part 15 interests because they would not want to be perpetually embroiled in disputes before the agency in which they had the burden of rebutting the presumption. The Part 15 community's "all or nothing" position suggests that the FCC would do well to return to the hierarchy required by Part 15 of the rules. If the presumption of non-interference is not rebuttable, LMS operators will be required to accept cases of actual interference, thereby degrading LMS service to their subscribers and depreciating the value of their licenses.

The Part 15 community continues to advocate the elimination of the height restrictions contained in Section 90.361.^{23/} As SBMS previously noted, if Part 15 is to be given the benefit of an irrebuttable presumption, Part 15 devices must be restricted by height in order for LMS to remain viable.^{24/} Certain of the Part 15 community continue to argue that the irrebuttable presumption should also include indoor and outdoor antennas.^{25/} The multilateral parties are in accord that any irrebuttable presumption should not apply to outdoor antennas, because such

^{21/} SBMS Petition at 20, SBMS Opposition at 11, AirTouch at 6, MobileVision at 7-10, Pinpoint at 9-13, Uniplex at 2.

^{22/} Amer. Telemedicine Ass'n Opposition to Petitions for Reconsideration ("Telemedicine") at 5-6, CellNet Opposition to Petitions for Reconsideration of CellNet ("CellNet") at 5-7, EIA at 4, Gas Utilities at 5, Connectivity for Learning Coalition Opposition to Petitions for Reconsideration ("Learning") at 4-6, Metricom at 5-7, Part 15 at 10, TIA at 2-3.

^{23/} Part 15 at 8, UTC at 10-12.

^{24/} SBMS Opposition at 13-14.

^{25/} Metricom at 9-10.

antennas will almost certainly increase interference to LMS.^{26/}

SBMS agrees with Pinpoint that the Hata model is the appropriate one for most urban environments and that if a presumption of non-interference survives reconsideration, the height/power derating formula for Part 15 devices should be based on this model.^{27/} At the center of the 902-928 MHz band, the Hata model leads to a propagation loss proportional to $2.56 \log(h/5)$ dB, where h is antenna height. Accordingly, the formula in Section 90.361(c)(2)(ii)(A) should be changed from $20 \log(h/5)$ dB to $2.56 \log(h/5)$ dB.

Many of the Part 15 interests oppose Pinpoint's request to seek further reconsideration of the term "final link" as they allege it clearly only applies to public safety entities.^{28/} However, Learning requests that educational uses be excluded from the height/power limitations for Part 15 devices.^{29/} Applying the presumption beyond a Part 90 eligible "final link" would mean that the presumption would swallow the rule as it would be difficult, if not impossible, to monitor these uses.^{30/} SBMS demonstrated that educational uses should not be exempted from the Part 15 restrictions and that "final link" cannot include every link used by a public safety entity.^{31/} If a newly elevated Part 15 is not reasonably constrained in its operation, LMS will not thrive, and the FCC's goals for the Transportation Infrastructure Radio Services ("TIRS")^{32/} will not be realized.

^{26/} SBMS Opposition at 13, MobileVision at 9-10 (opposing the irrebuttable presumption in all cases), Pinpoint at 13, Uniplex at 2 (opposing the irrebuttable presumption in all cases).

^{27/} Pinpoint Petition at 21-24.

^{28/} Telemedicine at 1-5, Learning at 7-9, Metricom at 15-17.

^{29/} Learning at 9.

^{30/} Pinpoint at 13.

^{31/} SBMS Opposition at 15.

^{32/} R&O at 4-5.

III. 2 MHz Building Blocks

Pinpoint alleges that SBMS' 2 MHz building block proposal was rejected by the FCC based on evidence in the record that such a plan would "needlessly impede the competitive viability of small entrepreneurial LMS developers like Pinpoint."^{33/} There has been no such demonstration and Pinpoint cited none. The FCC did not explain the grounds for denial of SBMS' proposal although it was obligated to do so.^{34/} Contrary to Pinpoint's claim, SBMS has demonstrated that its building block plan would likely encourage competition by permitting more entities to bid and at a lower cost.^{35/ 36/}

IV. Permissible Use and Interconnection

Contrary to MobileVision's assertion,^{37/} SBMS does not support a complete ban on voice. It does, however, believe that voice used in LMS should be limited to status and instructional messages related to location and monitoring, except as otherwise required in an emergency.^{38/} Most of the commenting parties agree that the FCC should reject proposals to expand the permissible use of LMS or let the market determine its scope (e.g., MobileVision's suggestion of broad interconnection and no content limitation).^{39/} All the multilateral parties

^{33/} Pinpoint at 24.

^{34/} See, e.g., Continental Air Lines v. DOT, 843 F.2d 1444, 1451 (D.C. Cir. 1988) (an agency is required to consider meaningful alternatives, provide an explanation of the alternative chosen, and demonstrate a nexus between the facts found and the choice made). See also SBMS Petition at 3, 7-8.

^{35/} SBMS Opposition at 6-8, SBMS Petition at 5-7.

^{36/} TI opposes the application of SBMS' building block proposal to non-multilateral systems. TI at 20. However, SBMS' proposal was limited to multilateral systems.

^{37/} Replies of MobileVision, L.P. In Response to Oppositions and Comments at 2.

^{38/} SBMS Opposition at 15-17.

^{39/} Telemedicine at 8-10, AT&T at 4-6, CellNet at 8-10, Gas Utilities at 12-13, Learning at 1-2, Metricom at 1-4, Part 15 at 10-14, UTC at 3-6.

believe that permissible use should not be further restricted.^{40/} However, as SBMS argued in its prior filings, the FCC should more clearly define permissible use and limitations on interconnection lest it invite violations of the new rules.

The Gas Utilities and Metricom agree with SBMS that the "store and forward" limitation on interconnection is not meaningful without a definition of "store and forward."^{41/} The Gas Utilities suggest a minimum storage interval of 10 seconds.^{42/} The multilateration parties believe that a mandatory delay is contrary to the needs of LMS customers who require immediate information.^{43/} While SBMS does want "store and forward" defined in terms of a mailbox requiring retrieval by the receiving party, it does not support adoption of a minimum storage interval or mandatory delay.

While the Part 15 community expresses concern that no means exist to monitor the emergency use exception to real-time interconnection,^{44/} a complete ban on interconnection is not appropriate. SBMS agrees with AirTouch that preprogrammed emergency messages and push button activation do not cover every emergency situation.^{45/} Though the FCC cannot embroil itself as a policeman of message content, a clear articulation of the restrictions on permissible use and interconnection will provide sufficient standards by which to judge actual instances of misuse and still permit the flexibility to address emergency situations.

^{40/} AirTouch at 12-15, Pinpoint at 21-23.

^{41/} Gas Utilities at 12-13, Metricom at 3-4.

^{42/} Metricom at 3-4, Part 15 at 14, TIA at 12.

^{43/} AirTouch at 15.

^{44/} Metricom at 2, Part 15 at 13-14.

^{45/} AirTouch at 13-14.

V. Emission Mask Limitations

As demonstrated by the multilateration parties,^{46/} the emission mask of Section 90.209(m) represents a technical impossibility for multilateration systems. The emission mask specification proposed by the multilateration parties is based upon a reasonable relaxation of an existing FCC rule for digitally modulated free-space transmissions.^{47/} This relaxation is reasonable because the new requirement is for mobile transmitters at ground level which have a much lower effective radiated power than do those from fixed-site elevated antennas. In addition, the use of space-consuming filters is greatly restricted in mobile systems, as opposed to fixed-site systems. Finally, LMS reverse-link transmissions have a very low duty cycle compared to fixed-site transmission. For example, the duty cycle of SBMS' system is typically about 1%.

Many in the Part 15 community have objected to the alternative emission mask proposed by the multilateration parties.^{48/} However, in view of the fact that the proposed specification is based on an existing, accepted standard, and because the proposed relaxation of that standard is slight and based on the sound technical reasons given above, the objections do not appear to be justified. In addition, it is noteworthy that certain of the non-multilateration and Part 15 parties explicitly state that they have no objection to the alternative proposed emission mask.^{49/}

VI. Uncertainty Concerning The Rights Of Grandfathered Licensees And Pending Applicants

SBMS has expressed its opposition to tying up vast amounts of spectrum and geography through the grandfathering of unbuilt licenses.^{50/} A number of commenting parties supported

^{46/} SBMS Petition at 21-23, Pinpoint Petition at 17-20, MobileVision at 9-10, Uniplex Petition at 6-7, AirTouch at 2-8.

^{47/} 47 C.F.R. §21.106(a)(2).

^{48/} CellNet at 3-5, Gas Utilities at 16-17, Hughes at 11-13, Metricom at 21-22, TIA at 7-10.

^{49/} Amtech at 19-20, Part 15 at 16-17.

^{50/} SBMS Petition at 13-19.

SBMS' position.^{51/} Nevertheless, if the FCC persists down the path of grandfathering, it must be evenhanded about the process and create a licensing regime which promises to bring beneficial service to the public within the markets so affected. Applications pending but which should have been granted by February 3, 1995 should obtain the same grandfathering rights as unbuilt licensees.^{52/} Moreover, grandfathered licensees must have the flexibility to provide meaningful service. In this regard, SBMS would support either its own 75 mile radius proposal^{53/} or Pinpoint's suggestion of utilizing BTAs.^{54/}

Respectfully submitted,

SOUTHWESTERN BELL MOBILE SYSTEMS, INC.

By: Wayne Watts (BY)
Wayne Watts

Southwestern Bell Mobile
Systems, Inc.
17330 Preston Road, Suite 100A
Dallas, Texas 75252
(214) 733-2000

By: Louis Gurman
Louis Gurman
Jerome K. Blask
Nadja S. Sodos

Gurman, Blask & Freedman, Chartered
1400 16th Street, N.W., Suite 500
Washington, D.C. 20036
(202) 328-8200

Its Attorneys

June 7, 1995

^{51/} CellNet at 12-14, Gas Utilities at 14-15, Part 15 at 1-4, UTC at 7.

^{52/} SBMS Petition at 19-20, TI at 23 (supporting SBMS' request for grandfathering of pending applications).

^{53/} SBMS Opposition at 21.

^{54/} Pinpoint at 23, Pinpoint Petition at 15-16.

CERTIFICATE OF SERVICE

I, Lilly A. Whitney, a secretary in the law offices of Gurman, Blask and Freedman, Chartered, do hereby certify that I have on this 7th day of June, 1995, had copies of the foregoing "REPLY TO OPPOSITION TO PETITIONS FOR RECONSIDERATION" mailed by U.S. first class mail, postage prepaid, to the following:

David E. Hilliard, Esquire
Wiley, Rein & Fielding
1776 K Street, N.W.
Washington, D.C. 20006

Kathleen Abernathy, Esquire
AirTouch Communications
1818 N Street, N.W.
Washington, D.C. 20036

Henry M. Rivera, Esquire
Larry S. Solomon, Esquire
Ginsburg, Feldman & Bress
1250 Connecticut Avenue, N.W.
Washington, D.C. 20036

John J. McDonnell, Esquire
Reed Smith Shaw & McClay
1200 18th Street, N.W.
Washington, D.C. 20036-2506

George Lyon, Esquire
Lukas, McGowan, Nace & Gutierrez
1111 19th Street, N.W.
Suite 1200
Washington, D.C. 20036

McNeil Bryan, President
Uniplex Corporation
2905 Country Drive
St. Paul, Minnesota 55117

Gordon M. Ambach, Executive Director
Council of Chief State School Officers
One Massachusetts Avenue, N.W.
Suite 700
Washington, D.C. 20001-1431

Jeffrey L. Sheldon, Esquire
UTC
1140 Connecticut Avenue, N.W.
Suite 1140
Washington, D.C. 20036

Henry Goldberg, Esquire
Henrietta Wright, Esquire
Goldberg, Godles, Wiener & Wright
1229 19th Street, N.W.
Washington, D.C. 20036

Lawrence J. Movshin, Esquire
Wilkinson, Barker, Knauer & Quinn
1735 New York Avenue, N.W.
Washington, D.C. 20006-5289

Robert B. Kelly, Esquire
Kelly & Povich, P.C.
1101 30th Street, N.W.
Suite 300
Washington, D.C. 20007

Deborah Lipoff, Esquire
Rand, McNally & Company
8255 North Central Park
Skokie, Illinois 60076

Allan R. Adler, Esquire
Cohn and Marks
1333 New Hampshire Avenue, N.W.
Suite 600
Washington, D.C. 20036-1573

Gary M. Epstein, Esquire
Latham & Watkins
1001 Pennsylvania Avenue, N.W.
Washington, D.C. 20004

Andrew D. Lipman, Esquire
Catherine Wang, Esquire
Swidler & Berlin, Chartered
3000 K Street, N.W.
Suite 300
Washington, D.C. 20007

Thomas J. Keller, Esquire
Verner, Lipfert, Bernhard, McPherson &
Hand, Chartered
901 15th Street, N.W.
Suite 700
Washington, D.C. 20005

Kelly D. Dahlman, Esquire
Texas Instruments, Incorporated
13510 North Central Expressway
P.O. Box 655474, MS 241
Dallas, Texas 75265

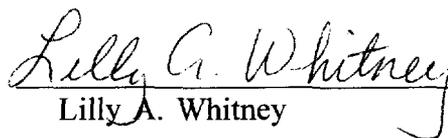
Jane Preston, MD, FAPA
The American Telemedicine Association
901 15th Street, N.W.
Suite 230
Washington, D.C. 20005

Gerald P. McCartin, Esquire
Arent Fox Kintner Plotkin & Kahn
1050 Connecticut Avenue, N.W.
Washington, D.C. 20036-5339

Ernest A. Gleit, Esquire
AT&T Corp.
Room 3252F3
295 North Maple Avenue
Basking Ridge, New Jersey 07920

Jay E. Padgett, Chairman
Telecommunications Industry Association
2500 Wilson Boulevard
Suite 300
Arlington, Virginia 22201

Matthew J. McCoy, Staff Legal President
Consumer Electronics Group
Electronic Industries Association
2500 Wilson Boulevard
Arlington, Virginia 22201


Lilly A. Whitney