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FEDERAL COMMUNICATIONS COMMISSION
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September 2, 1994

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William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Washington, D.C. 20554

DOCKET FILE COPY ORIGINAL

Re: PR Docket No. 93-61
Automatic Vehicle Monitoring Systems

Dear Mr. Caton:

On Friday, September 2, 1994, a copy of the attached letter was delivered to Richard B. Engelman, Chief, Technical Standards Branch, Authorizations and Evaluation Division, Office of Engineering and Technology, and to all of the Commissioners, as well as to the Commission's Staff listed at the end of the letter.

Two copies of this letter are being submitted to the Secretary of the Commission pursuant to § 1.1206(a)(1) of the Commission's Rules.

Please contact the undersigned if you have any questions or require additional information concerning this matter.

Sincerely,

Henry M. Rivera
Henry M. Rivera

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Richard B. Engelman, Chief
Technical Standards Branch
Authorization and Evaluation Division
Office of Engineering and Technology
Federal Communications Commission
Room 7122
2025 M Street, N.W.
Washington, D.C. 20554

Re: PR Docket No. 93-61
Automatic Vehicle Monitoring Systems

Dear Mr. Engelman:

On behalf of our clients, Metricom, Inc. and Southern California Edison Co., this is to briefly respond to certain of the August 12, 1994 comments concerning the Staff's informal proposal in the above-referenced proceeding. Before addressing those comments specifically, we note that it appears to be the majority opinion of those who filed that additional formal notice and comment is required in this proceeding if the Commission intends to adopt rules based the Staff's (informal) proposal.^{1/}

PRESUMPTION OF NON-HARMFUL INTERFERENCE. Several multilateral proponents have misconstrued the Staff proposal concerning the "presumption of non-harmful interference." The Staff proposal is that Part 15 devices not exceeding the proposed thresholds are presumed not to cause harmful interference to LMS operations. The multilateral proponents appear to believe that this presumption creates another presumption which is that any Part 15 device operating in excess of any of the thresholds is presumed to be causing harmful interference (see, e.g., submissions of AirTouch, p. 3; Pinpoint, p.3; and, SBMS, p.2). The Commission's Staff did not create a presumption of harmful interference because such a presumption (without any data showing actual interference) would not help to identify or resolve actual instances of harmful interference. Such a presumption would, therefore, be useless.

^{1/} This is especially true in light of the fact that some parties were told that there was a proposal to auction the two six MHz exclusive allocations, and other parties were not so informed.

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AirTouch is very concerned that the Staff's proposal (that Part 15 devices not exceeding the proposed thresholds are presumed not to cause harmful interference to LMS operations) be a rebuttable presumption because, "LMS licensees would be forced to live with actual interference from unlicensed Part 15 devices." (emphasis added) AirTouch at 3-4. Similarly, Pinpoint states that: "there are deployment scenarios for unlicensed devices that could destroy the operation of any wide-area [multilateration] system." Pinpoint, p. 3.^{2/} AirTouch and Pinpoint have now joined Part 15 interests in saying what Part 15 interests have been saying since the inception of this proceeding, that Part 15 devices will cause "actual interference" to proposed LMS operations, and it will be difficult, if not impossible, for the two services to operate in the same band without one of the services being adversely impacted. Introducing a new, incompatible, licensed service into the band simply will not work without a significant adverse impact on Part 15 operations.

The notion of a rebuttable presumption of non-harmful interference advanced by AirTouch and MobileVision makes no sense to our clients.^{3/} A presumption would have no effect if it were rebuttable, especially if the band hierarchy rules are to be enforced. After all, the presumption appears to have been proposed because of the allegations of the multilateration proponents that Part 15 devices would very rarely, if ever, cause harmful inter-

^{2/} This is additional evidence that the two services, Part 15 and LMS, cannot co-exist in the same band. Under current Part 15 rules, so long as the Part 15 equipment is certified and operating in accordance with the rules, any Part 15 "deployment scenarios" are permitted. Under the multilateration proponents' proposal that the presumption be rebuttable, only those Part 15 deployment scenarios that do not cause harmful interference to multilateration systems would be allowed. Accordingly, Part 15 device operations become significantly and adversely impacted under a rebuttable presumption model.

^{3/} It should also be noted that AirTouch begins its comments stating that it supports the Staff's plan with "one minor change" (presumably the rebuttable presumption). However, AirTouch suggests many significant changes to the Staff's proposal. In fact, AirTouch does not support the Staff's proposal any more than the vast majority of Part 15 interests. It is also interesting to note that a substantial portion of AirTouch's filing deals with "Interference Definition" but the filing fails either to define or offer a solution to interference.

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ference to their LMS operations. If this were true, why would the multilateration proponents seek a rebuttable presumption?^{4/}

THRESHOLDS. Our clients continue to object to the imposition of any thresholds. Our August 12, 1994 response to the Staff's informal proposal dealt at some length with our clients' problems with the thresholds. Adding more thresholds or making the ones the Staff proposed even more restrictive, as AirTouch and MobileVision propose, makes the thresholds even more problematic.^{5/} AirTouch's and MobileVision's proposals that the antenna height criterion be modified or be defined by height above ground level or height above average terrain^{6/} amounts to making Part 15 devices bear all the burdens of licensed devices without any of the privileges. As noted in our clients' August 12, response, such an approach would

^{4/} It is ironic that some multilateration proponents now seem quite concerned about harmful interference from Part 15 devices when this was not a problem in Late June when they filed their "LMS Consensus Position on Part 15 Interference," on June 23, 1994. The Commission must take notice of the fact that Part 15 devices have been operating successfully with each other, and with other current users, in this band for several years, without formal coordination, and without any harmful interference rules. Part 15 operation has been successful because the Commission created a level playing field to encourage the development and proliferation of Part 15 devices.

It must also be kept in mind that if LMS operations were authorized in the band, such operations would have to tolerate interference from government stations and industrial, scientific and medical ("ISM") devices operating in the band, and may not cause interference to government operations in the band.

^{5/} One of AirTouch's suggested additional thresholds has to do with "fixed" installations but neither AirTouch nor the Part 15 rules define "fixed." Does "fixed" mean "not in motion" or does it mean staying in one particular place for a specified period of time, or does it mean bolted to a support? Without licensing locations of Part 15 devices, "fixed" is a meaningless term.

For all the reasons specified in our comments, our clients strongly disagree with the Ad Hoc Gas Distribution Utilities Coalition's concept that "thresholds" for Part 15 resolution of interference to LMS systems should be implemented.

^{6/}Must there be a height above average terrain calculation every time a Part 15 device is turned on?

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significantly limit the flexibility of Part 15 devices and greatly increase their cost, both to the detriment of consumers.

Our clients agree with and support most of the observations made by Pinpoint in that portion of its comments entitled "Part 15 Operation," at pp. 2-4 of its filing. However, our clients are drawn by this part of Pinpoint's comments to a different conclusion. As the Part 15 Community has been saying since the inception of this proceeding, LMS should not be in the 902-928 MHz band. This is not virgin spectrum and it is virtually impossible to clear it of current users. LMS cannot coexist there with Part 15 devices. The Staff's thresholds present many problems, several of which are articulated by Pinpoint in this portion of its comments and echo our clients' observations about them.

Regarding that part of MobileVision's filing entitled "Part 15 Considerations," our clients reject any conclusions drawn from the Smith Study and "Annex I" to MobileVision's August 12, 1994, filing as patently erroneous.^{7/} A group of Part 15 manufacturers, users and associations submitted, on August 12, 1994, two papers challenging the accuracy and soundness of the Smith Study.

AUCTIONS. Commission Staff did not inform us of any "auction" proposal for the two six MHz allocations when the plan was presented. Our clients do not support the modifications to the auctioning process proposed by AirTouch. AirTouch's proposed modifications to auctioning have no basis other than to permit AirTouch to warehouse spectrum and to save AirTouch money. There is no reason AirTouch should not have to obtain its licenses by means of an auction. This includes those licenses it has already constructed, because it obtained those licenses as a result of interim rules that it knew were interim. AirTouch has no claim to an equitable remedy for its ill-advised investment.^{8/} To follow AirTouch's suggestion would make the Commission an accomplice to

^{7/} The entire premise of "Annex I," like the Smith Study, is fallacious. Defining harmful interference as "Annex I" attempts to do is meaningless. This approach necessarily leads to the effective "licensing" of Part 15 at specific locations.

^{8/} See Comments of Southwestern Bell Mobile Systems ("SBMS") at P. 10-"Licenses For All Unbuilt Facilities Must Be Cancelled Upon Release Of The LMS Order."

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AirTouch's spectrum warehousing scheme and unprecedented spectrum grab.^{9/}

Our clients disagree with Pinpoint's comment that because the 902-928 MHz band is neither virgin spectrum nor likely to be cleared of all users, it cannot be valued by potential bidders.^{10/} The spectrum sharers in the band currently use the band well. A potential bidder can evaluate its technology to determine if its technology can exist in the band with the current users. If it cannot exist with current users, then the spectrum is not worth much, if anything, to that potential bidder. This is as it should be. The Commission's mandate under the Communications Act is to promote the more effective and efficient uses of radio in the public interest, not to assure that as much money as possible can be raised.^{11/}

Our clients reject any claim by MobileVision to some sort of equitable claim to spectrum to provide LMS based on AVM systems constructed pursuant to interim rules. If the Commission is going to create a new service called LMS in exclusive spectrum bands, it ought to auction the spectrum to allocate licenses and it should do so for all the licenses it issues for this new service. No one should have an advantage nor can any advantage for anyone be rationalized.

SPECTRUM ALLOCATION. MobileVision now claims that it can operate in 6 MHz of spectrum. Previously, it stated that the absolute minimum bandwidth it could operate in was 8 MHz. It would benefit all parties to this proceeding if they could have confidence in what MobileVision is asking the Commission to do for it

^{9/} See SBMS' discussion on this subject beginning at p. 9 of its August 12, 1994, Comments.

^{10/} If the spectrum cannot be valued as Pinpoint alleges, then the current value of this spectrum must be dubious to Pinpoint; however, Pinpoint has not acted throughout this proceeding as though it is unable to place any value on this spectrum.

^{11/} Furthermore, the magnitude of usage of this band by municipal governments, as alleged by Pinpoint, is pure speculation and is certainly no basis on which to adopt one policy over another.

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by way of a spectrum allocation.^{12/} Furthermore, the Commission should satisfy itself that the Staff's proposal for allocation of 6 MHz to each of two wideband operators promotes, as stated in the NPRM in this proceeding, spectrum efficiency and competition.^{13/} Our clients agree with SBMS comments that it appears that the Staff's proposal gives great weight to the fact that both MobileVision and Teletrac simply claim 6 MHz is necessary and that, for some reason that is not obvious to our clients, this bald assertion has been given great credibility.^{14/}

If MobileVision has been inconsistent regarding how much spectrum it needs, it cannot be faulted for its consistency on the issue of LMS and Part 15's inability to coexist in the 902-928 MHz band. We agree with MobileVision about this; the Part 15 Community has been telling the Commission this fact since the inception of this proceeding. Since Part 15 is in the 902-928 MHz spectrum and has been in this spectrum for a number of years, if the Commission believes the American public cannot live without LMS, then the Commission ought to put LMS in a part of the spectrum where it can successfully exist and proliferate. Alternatively, the Commission should tell the American public to use GPS or some other technology for location services.^{15/}

Our clients object to allocation of the 926-928 MHz band as suggested in the comments of MFS Network Technologies, Inc. and Texas Instruments, Inc. The Part 15 Community submitted a

^{12/} We call your attention to SBMS' Comments at p. 5 where SBMS states that MobileVision intends to use its LMS spectrum for voice applications. Our clients agree that voice operations in this spectrum are inappropriate. It is interesting to note that MobileVision's definition of wideband LMS on p. 8 of its comments could be that of a licensed PCS wide area network that could also provide LMS. Spectrum for licensed PCS, subject to auction, has been made available by the Commission in another frequency band.

^{13/} Notice of Proposed Rulemaking, PR Docket No. 93-61, 8 FCC Rcd 2502 (1993).

^{14/} SBMS Comments at p.5.

^{15/} The Commission could then auction the equivalent of very narrow band paging channels, or permit GPS to operate in conjunction with some other service, to provide for a "control" station to poll vehicles and a mobile station to respond with the geographic coordinates determined by the GPS receiver.

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compromise proposal to the Commission on August 12, 1994. The 926-928 MHz is an integral part of this compromise proposal for it is here that the Part 15 Community compromise places narrowband forward links. Furthermore, there appears to be a consensus among the vast majority of those responding to the Staff's informal proposal that narrowband forward links should be allocated in this part of the band.^{16/}

PART 15 OPERATIONS. Uniplex's attack on the Metricom system is totally without merit. Metricom's Part 15 Microcellular Data Network ("MCDN") operates in complete compliance with the Commission's rules and policies, and the equipment employed has been appropriately certified.^{17/} However, Uniplex's comments are helpful in the proceeding because they do point to Metricom as an example of the existing and future proliferation of Part 15 devices (which is in accordance with the Commission's expressed desire^{18/}) and illustrate the difficulty, if not impossibility, of Part 15 devices and LMS co-existing in the same band.

CONCLUSION. The choice facing the Commission has never been clearer: Does the Commission wish to continue to encourage the successful development of the extraordinary number and wide variety of innovative, robust, spectrum-efficient and relatively inexpensive Part 15 devices which are in great demand by both businesses and consumers, or does it wish to implement the new Location and Monitoring Service in the 902-928 MHz band to the detriment of, and possible elimination of, many of these Part 15 devices? If the Commission answers this question in favor of LMS, then it must

^{16/} See, e.g., comments of AirTouch, MobileVision, TIA, UTC, Ad Hoc Gas Distribution Utilities Coalition.

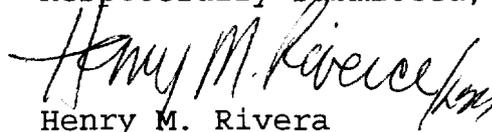
^{17/} Although Uniplex is obviously unaware of the fact, the type of operation Uniplex suggests Metricom employs violates the Commission's policies, see condition no. 47 which is placed on the Certifications of spread spectrum devices. The Commission's Staff is fully aware that Metricom's MCDN system operates in complete accordance with the rules. See letter dated May 24, 1994 to Julius Knapp, Chief, Authorization and Evaluation Division, Office of Engineering and Technology from Larry S. Solomon.

^{18/} See, e.g., Amendment of Parts 2 and 15 of the Rules With Regard To Spread Spectrum Systems, (Report and Order), 8 FCC Rcd 4123 (1990); Revision of Part 15 (Notice of Proposed Rule Making), 2 FCC Rcd 6135 (1987); Revision of Part 15 (First Report and Order), 66 R.R.2d 295 (1989).

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reconcile, in a manner which will withstand judicial scrutiny, the Commission's history of encouraging the proliferation of Part 15 devices and of defending Part 15 unlicensed operations as it did again just recently in its Report to the Secretary of Commerce^{19/} on the one hand, with the devastating impact on Part 15 devices which will result from the introduction of LMS into the 902-928 MHz band as proposed in this proceeding, on the other.

Respectfully submitted,



Henry M. Rivera
Larry S. Solomon
Counsel For
METRICOM, INC.
SOUTHERN CALIFORNIA EDISON CO.

cc: Chairman Hundt
Commissioner Quello
Commissioner Barrett
Commissioner Ness
Commissioner Chong
Ralph Haller
Rosalind K. Allen
Thomas P. Stanley
Bruce A. Franca
Richard M. Smith
Michael J. Marcus
F. Ronald Netro

^{19/} In the Matter of Report to Ronald H. Brown, Secretary, United States Department of Commerce, Regarding the Preliminary Spectrum Reallocation Report, rel. August 9, 1994, ¶ 39 and n.76.