

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, DC 20554**

In the Matter of	)	
	)	
Amendment of Section 90.20(e)(6) of the	)	WT Docket No. 06-142
Commission's Rules	)	RM-11135

To: The Commission

**JOINT REPLY COMMENTS OF THE  
ASSOCIATION FOR MAXIMUM SERVICE TELEVISION, INC.  
AND THE  
NATIONAL ASSOCIATION OF BROADCASTERS**

The Association for Maximum Service Television, Inc. (“MSTV”)<sup>1</sup> and the National Association of Broadcasters (“NAB”)<sup>2</sup> hereby file in reply to the comments filed concerning the Commission’s Notice of Proposed Rulemaking in the above-captioned proceeding.<sup>3</sup> MSTV and NAB are concerned that the numerous rule changes that LoJack Corporation (“LoJack”) seeks – including an elimination of the Channel 7 interference study requirement, increased power, liberalized duty cycles, authority to use digital emissions, and expansion of permissible services – raise serious risks of interference to Channel 7 television operations. These concerns are considerable when each proposal is considered separately, and become more acute when considered together in the sweeping package of changes that LoJack

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<sup>1</sup> MSTV is a nonprofit trade association of local broadcast television stations committed to achieving and maintaining the highest technical quality for the local broadcast system.

<sup>2</sup> NAB is a nonprofit trade association that advocates on behalf of more than 8,300 free, local radio and television stations and also broadcast networks before Congress, the Federal Communications Commission, the Courts, and other federal agencies.

<sup>3</sup> See *Amendment of Section 90.20(e)(6) of the Commission’s Rules*, Notice of Proposed Rulemaking, WT Dkt. No. 06-142, RM-11135 (rel. July 24, 2006) (“*SVRS NPRM*”).

seeks. MSTV and NAB's concerns are reinforced by other commenters, and LoJack has failed adequately to address them.

MSTV and NAB agree with the ABC Owned Television Stations ("ABC") that retention of the Channel 7 interference studies is essential, and that the interference studies to date have been inadequate.<sup>4</sup> In fact, as both ABC and MSTV and NAB have suggested, LoJack should be required to submit more rigorous and meaningful studies than it has done in the past, and it should serve such studies on affected Channel 7 television stations. LoJack has not demonstrated that its duty cycle proposal will have "no appreciable impact on the potential for interference with Channel 7 TV reception,"<sup>5</sup> especially in light of its requests for increased power and digital emissions. In any case, LoJack has failed to justify and properly test its other requests, such as those for increased power and digital emissions, both of which create a serious risk of interference to Channel 7 television reception. In light of LoJack's history of submitting perfunctory, flawed interference studies and given its inadequately tested technical proposals, an expansion of permissible SVRS services would be unwarranted.

**A. The Requirement Of Performing Channel 7 Interference Studies Should Be Preserved, And All Affected Parties Should Be Given Notice.**

LoJack purports to find the interference study requirement "technically and financially onerous."<sup>6</sup> Given the cursory nature of, and the flaws contained in, the studies submitted by LoJack to date, claims of financial and technical burdens are suspect. As ABC

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<sup>4</sup> See Comments of ABC Owned Television Stations, *Amendment of Section 90.20(e)(6) of the Commission's Rules*, WT Dkt. No. 06-142, RM-11135 (filed Sept. 22, 2006) ("ABC Comments"), at 7-8.

<sup>5</sup> See Comments of LoJack Corporation ("LoJack"), *Amendment of Section 90.20(e)(6) of the Commission's Rules*, WT Dkt. No. 06-142, RM-11135 (filed Sept. 22, 2006) ("LoJack Comments"), at i.

<sup>6</sup> LoJack Comments at 10.

observes, it is simply “contradictory for LoJack to assert that the study requirement is financially and technically ‘onerous’ when the only studies it submits are virtually identical and lacking in any reliable technical details.”<sup>7</sup> MSTV and NAB, as well as ABC, have noted that LoJack’s interference studies discount serious interference concerns and fail to provide an adequate plan for responding to interference problems.<sup>8</sup> Some SVRS applications have requested authority for hundreds of thousands of VLU transmitters, the studies typically dismiss serious interference concerns on the basis of erroneous and unfounded assumptions, and the studies omit critical showings and details.<sup>9</sup>

Among other things, the studies assert that the actual population suffering interference would be smaller than predicted because the signal strength of the studied TV Channel 7 station could be stronger than predicted or because the TV receivers could have better rejection of the undesired SVRS signals than specified in the MicroLogic Report.<sup>10</sup> Such optimistic assumptions are unwarranted. The TV Channel 7 signal strength could just as easily be weaker than predicted (due to terrain obstruction or, in urban areas, attenuation by man-made structures), and the TV Channel 7 receiver might have worse rejection of the undesired SVRS signal (the MicroLogic Report was based on median receiver performance).<sup>11</sup> Meaningful

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<sup>7</sup> ABC Comments at 7-8.

<sup>8</sup> See Joint Comments of MSTV and NAB, *Amendment of Section 90.20(e)(6) of the Commission’s Rules*, WT Dkt. No. 06-142, RM-11135 (filed Sept. 22, 2006) (“MSTV and NAB Comments”), at 2-3; see also ABC Comments at 7-8.

<sup>9</sup> None of the examined interference studies included any details on LoJack’s plan for addressing interference or on the performance characteristics of the filter. See Statement of Hammett & Edison, Inc., Consulting Engineers, attached to the MSTV and NAB Comments as an Appendix, at ¶ 9.

<sup>10</sup> *Id.* at ¶ 7.

<sup>11</sup> *Id.* at ¶ 8.

interference studies, as well as service of these studies on affected Channel 7 stations, would permit the Commission and the stations to evaluate LoJack's proposals and to protect the viewing public.

Further, LoJack has no basis for its claim that it has an "unbroken record of success in avoiding interference to Channel 7 reception."<sup>12</sup> As pointed out in the ABC Comments, the lack of documented complaints demonstrates nothing more than that viewers do not know the source of interference or that the interference is fleeting enough to discourage the average household from making the effort of documenting a complaint.<sup>13</sup> The Commission has stated that "the public interest is better served by minimizing the potential for interference prior to its occurrence rather than afterwards."<sup>14</sup> It should accordingly retain – and revise – the Channel 7 interference study requirement as described in both the ABC and the MSTV and NAB comments.<sup>15</sup>

**B. Relaxation Of The Duty Cycle Limits Would Pose An Unjustified Risk.**

MSTV and NAB disagree with LoJack's suggestion that the duty cycle relief proposed in the *SVRS NPRM* should be extended to all vehicle location units ("VLUs") and object to LoJack's statement that such revisions to the duty cycle restrictions would "reflect a

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<sup>12</sup> LoJack Comments at 11.

<sup>13</sup> ABC Comments at 5.

<sup>14</sup> *Amendment of Section 90.20(e)(6) of the Commission's Rules to Revise the Authorized Duty Cycle on 173.075 MHz*, Report and Order, WT Dkt. No. 01-97, RM-9798, 17 FCC Rcd 16938 (2002), at ¶ 15.

<sup>15</sup> See MSTV and NAB Comments at 2-5 and ABC Comments at 7-8. MSTV and NAB reiterate that if LoJack plans to rely on providing notch filters to resolve Channel 7 reception problems, it should test the impact that such a filter has on digital television signals: unlike analog television reception, digital television reception may be fatally impaired by the proposed notch filter. See MSTV and NAB Comments, Appendix at ¶ 12.

conservative approach” that would provide “ample protection for Channel 7 TV reception.”<sup>16</sup> In fact, the risks posed by LoJack’s approach are serious, and the ABC Comments correctly conclude that “to relax the duty cycle limits without first settling on the agreed-upon interference calculation methodology – and documenting the likely interference under such methodology – would be premature.”<sup>17</sup>

Even if LoJack were correct in its dubious assertion that its operations historically have avoided causing interference to analog Channel 7 television reception, such a history could not be extrapolated to digital Channel 7 operations. With digital television service “all or nothing,” any alterations in SVRS duty cycles should be carefully studied. In particular, “[l]aboratory tests are ... needed to ensure that consumer-grade DTV receivers do not have duty cycle windows where the effect of a non-steady state signal is worse for certain duty cycles.”<sup>18</sup> Without this prior scrutiny, LoJack’s proposals pose unjustified risks to the free, over-the-air television service provided on Channel 7.

**C. The Commission Should Reject LoJack’s Requests For Power Increases.**

LoJack claims that the coverage and performance of its new Narrowband System is worse than its Wideband System. To overcome its performance shortfall, LoJack proposes to increase its base station ERP to 500 watts and double the output power of its VLU. Specifically, LoJack claims that the power increase is needed only to compensate for the performance degradation in high Carrier-to-Noise Ratio (“CNR”) conditions, while claiming that for low Received Signal Level (“RSL”) regions, the performance between the Wideband and

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<sup>16</sup> LoJack Comments at 9-10.

<sup>17</sup> ABC Comments at 5.

<sup>18</sup> MSTV and NAB Comments, Appendix at ¶ 15.

Narrowband system is the same.<sup>19</sup> Such an analysis is incorrect and contradictory. As the ABC comments observe, the reduction in bandwidth does not compel a corresponding increase in power, but rather a reduction in power.<sup>20</sup> ABC points out that “the 12.5 kHz bandwidth enjoys a 2.08 dB advantage in noise power over the 20.0 kHz bandwidth,” and concludes that signal-to-noise ratio would remain the same if transmitter power were to be reduced by 2 dB.<sup>21</sup> Moreover, LoJack justifies its power increase proposal based on an analysis of its system performance degradation in high signal level conditions. Such levels by definition are where the probability of reception and detection is high and where excess margin is usually available to compensate for impairments caused by the Narrowband System. Therefore, an increase in power is unwarranted.

**D. Expanding Permissible SVRS Services Would Compound All Of The Problems Discussed Herein.**

Given LoJack’s failure to justify its requests for liberalized rules on duty cycles, increased power, digital emissions, and history of inadequate interference studies, the Commission should decline to permit expanded SVRS operations. Broadening the permissible uses of this spectrum would magnify the already significant interference risks that LoJack’s proposals create.<sup>22</sup> As MSTV and NAB have already noted, “it is impossible to gauge the impact of a possible 3 dB power increase, a 7 dB duty cycle increase, and the switch from FM to digital

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<sup>19</sup> See LoJack Comments, Attachment A at 1.

<sup>20</sup> ABC Comments at 3.

<sup>21</sup> *Id.*

<sup>22</sup> See MSTV and NAB Comments, Appendix ¶ 10 (observing that as the number of VLU transmitters increases, it undermines the assumption that signals from VLU transmitters are unlikely to pose a significant interference threat; at some point a large number of VLU transmitters used for purposes ranging from tracking and monitoring to “location on demand” services would create, effectively, a steady-state or near steady-state interfering signal); see also *id.* at ¶ 16 (pointing out dangers of permitting expanded uses).

modulation by an interfering 173.075 MHz SVRS signal to a digital TV Channel 7 signal without detailed laboratory measurements of the susceptibility of consumer-grade 8VSB receivers to the new SVRS signals....”<sup>23</sup> MSTV and NAB thus agree with the ABC Comments that the “Commission should not expand the use of the spectrum without first having a solid understanding of the interference associated with SVRS.”<sup>24</sup> LoJack has proposed an array of changes to the SVRS rules, any one of which would be troubling when considered alone and which, in combination, could interfere quite seriously with Channel 7 operations. All of these problems would be intensified if the Commission were to allow dramatically expanded uses of the SVRS spectrum.

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<sup>23</sup> *Id.* at ¶ 5.

<sup>24</sup> ABC Comments at 8.

**CONCLUSION**

The Commission should prevent harmful interference to Channel 7 television operations by retaining and revising the service rules and technical study requirements applicable to SVRS.

Respectfully submitted,



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