Before the
Federal Communications Commission
Washington, D.C. 20554

In the Matter of	)	
	)	
Amendment of Sections 87.131, 87.133	)	RM-11503
87.137, 87.345 and 87.349 of the	)	
Commission's Rules Regarding	)	
Aeronautical Utility Mobile Stations	)	

REPLY COMMENTS OF SENSIS CORPORATION

INTRODUCTION

Sensis Corporation ("Sensis") hereby submits these reply comments in response to the July 29, 2008 Petition for Rulemaking filed by the National Telecommunications and Information Administration (the "NTIA Petition"). With operations in numerous countries throughout the world, Sensis is a global provider of technology that significantly enhances human security and safety. Sensis is also a leading provider of surveillance, information technology, and simulation and modeling services to air traffic service providers, civil aviation authorities, airports, airlines and system integrators. In addition, Sensis is the prime contactor and design agent for the ASDE-X system. Accordingly, Sensis fully appreciates the need to commence, as soon as possible, a rulemaking with respect to the matters raised in the NTIA Petition.

DISCUSSION

For the reasons set forth herein, the Commission should take the following actions:

1. Promptly commence a rulemaking with regard to the matters set forth in the NTIA Petition.

2. In that rulemaking, specifically request comment on Sensis' modifications/clarifications (discussed in Section 2 below) to NTIA's proposed amendments to the rules.

1. The Commission Should Promptly Commence a Rulemaking

The Commission should commence a rulemaking – as soon as possible -- with respect to the matters raised in the NTIA Petition. Appropriate amendments to the Part 87 rules will enhance public safety for the flying public, airlines and airport employees.

Without a doubt, NTIA is correct that amendments to the rules can reduce the risk of aircrafts -- when departing, landing or taxiing -- colliding with snowplows, emergency vehicles or maintenance vehicles that operate on the runway movement area.[1] Amendments can also lessen the likelihood of airplane pilots being forced to make last-second evasive maneuvers to avoid a vehicle on the runway.[2] It is axiomatic that when collisions in the airport movement area occur, or even where last second evasive maneuvers by pilots are needed, there is a material risk of serious injuries (or in some instances, even deaths) occurring as a result.[3] And, in addition to the public safety

[1] NTIA Petition at 3.
[2] Id.
[3] See id.

concerns, any such collisions or last second pilot maneuvers can also lead to accidents causing significant property damage.

If appropriate amendments to the rules are adopted, however, even in extremely inclement weather, air traffic control will be able to quickly identify vehicles that operate on the airport movement area, such as snowplows, emergency vehicles and maintenance vehicles. This quick identification, particularly in adverse weather conditions, can help protect the public and airport and airline employees from serious harm. Accordingly, the Commission should commence a rulemaking as soon as possible so that it can promptly amend the Part 87 rules.

The Federal Aviation Administration ("FAA"), which is responsible for the safety of civil aviation in the United States, "strongly supports" the NTIA Petition.[4] In fact, the FAA has performed an analysis with respect to the proposed rules, and it concluded that NTIA's proposals would not degrade the performance of existing systems that rely on 1090 MHz spectrum.[5] Moreover, all commenters who have filed in this matter, including municipalities, airports, the Airports Council International-North America, and an aircraft manufacturer, support commencement of a rulemaking here.

Accordingly, the Commission has every reason to commence a rulemaking as quickly as possible. There should be no delay whatsoever in moving this proceeding forward. As the FAA stated, "[e]very year there are incidents and accidents involving aircraft and surface vehicles at airports that have potentially serious consequences .... [and the FAA is in the process of taking steps] to help reduce the number and severity of

[4] Id. at 1.
[5] Id. at 6.

these incidents."[6] Utilization in U.S. airports of the technology involved here, which use will occur if the Commission adopts appropriate amendments, is one such critical step towards enhancing public safety at airports.

2. In the Rulemaking, the Commission Should Request Comment on the Following Modifications/Clarifications to NTIA's Proposed Amendments

NTIA correctly explains why amendments to the Part 87 rules are needed here, and it proposes specific amendments to the current regulations. Sensis fully supports most of NTIA's proposed amendments. However, Sensis believes that it is necessary to modify/clarify NTIA proposed Amendment Nos. 4, 7(c) and 7(d) in the manner set forth below.

A. NTIA's Proposed Amendment Nos. 4 and 7(d) Should be Modified/Clarified to Be Consistent with the RTCA DO-260A ADS-B MOPS Requirements and the European EUROCAE Standard ED-102

(1) Amendment No. 4

NTIA's proposed Amendment No. 4 provides that the Commission should add a frequency stability requirement of one part per million for Aeronautical Utility Mobile Stations operating on 1090 MHz.[7] For numerous reasons, Sensis strongly believes that the stability requirement should be one part per thousand, not one part per million.

First, international standards issued by RTCA provide that the stability requirement should be one part per thousand for vehicle radios transmitting on 1090

[6] FAA Advisory Circular, AC No. 150/5220-XX.
[7] NTIA Petition at 2.

MHz.[8] Similarly, European countries where this technology is already utilized in accordance with EUROCAE standards require a stability requirement of one part per thousand for these systems, not one part per million.[9] There simply is no reason that a stability requirement stricter than one part per thousand is needed. European Air Navigation Service Providers controlling aircraft at airports that have deployed vehicle radio devices transmitting according to RTCA/EUROCAE standards[10] have not experienced any interference issues that have necessitated a tightening of the stability requirement to greater than one part per thousand. Moreover, if a stricter stability requirement was necessary, it would have already been imposed on avionics equipment operating on this frequency in the U.S. Yet, that equipment also has a stability requirement of one part per thousand, and any change to that requirement now would cause extraordinary disruption and expense relating to the use of avionics equipment throughout the U.S.

Second, in light of the RTCA/EUROCAE requirements, Sensis and other suppliers have relied on a stability requirement of one part per thousand, and have designed their products to comply with such a requirement. Accordingly, if the requirement were one part per million instead, Sensis alone (without even considering the harm to other suppliers) would be saddled with hundreds of thousands (and possibly millions) of dollars in sunk costs for U.S. products that would no longer have any utility here, despite their full compliance with the RTCA/EUROCAE standards. Moreover, by providing that the stability requirement will be the same as that set forth in the

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[8] See RTCA DO--260A and associated DO-181C Mode – S MOPS.
[9] See *EUROCAE Standard ED-102 and associated ED 73-A.*
[10] The RTCA and EUROCAE standards are materially identical in all respects related to the matters at issue here, and therefore may be referred to herein as the RTCA/EUROCAE standards.

RTCA/EUROCAE standards, there are significant economies of scale from which everyone involved can benefit.

Third, if the stability requirement is one part per million it will be far more costly to develop such systems (approximately ten times more costly, and perhaps more). Therefore, if such a requirement is imposed, suppliers may conclude that the necessary redesigns are so cost-prohibitive that they forego offering these products altogether, which would completely undermine the objectives behind the proposed rule amendments. Moreover, even if the systems are designed at tremendously higher costs, airports would be forced to incur significant additional expense relating to such technology. As a result, many airports would purchase far fewer stations (or in many instances no equipment at all) because they simply cannot afford it. Given the important public safety benefits involved, the Commission should ensure that the amendments to the rules do not result in substantially less than full deployment (and possibly even no deployment) of this technology.

Finally, if the stability requirement was one part per million, and suppliers redesigned their systems at far greater costs, such redesigns would inevitably lead to significant delays in the implementation of the technology. As discussed earlier, any unnecessary delay in the use of these systems at airports should not be tolerated.

(2) Amendment No. 7(d)

NTIA's proposed Amendment No. 7(d) provides that the Commission should limit transmissions to a maximum of twice per second if the vehicle is in motion or a maximum of once every five seconds if the vehicle is stationary.[11]

[11] NTIA Petition at 3.

Sensis recommends that the message transition rates should be segregated by position, status and Aircraft identification messages as follows:

ADS-B Message	**Rate when Moving**	**Rate when Stationary**
Surface Position Message (Types 5, 6, 7 and 8)	Every 0.4 to 0.6 seconds	Every 4.8 to 5.2 seconds
Aircraft Operational Status (Type 31)	Every 4.8 to 5.2 seconds	
Aircraft Identification and Type (Type 2)	Every 4.8 to 5.2 seconds	Every 9.8 to 10.2 seconds

The reasons for Sensis' modification/clarification here are similar to the justifications for the modification requested with respect to proposed Amendment No. 4. Sensis' proposal with regard to Amendment No. 7(d) is fully consistent with the RTCA/EUROCAE standards.[12] As these standards require, it is imperative that the message transmission rates distinguish between position, status and Aircraft identification messages. It would be more expensive to design a system that does not distinguish between those messages with regard to transmission rates.

Further, in developing its technology Sensis has relied on the RTCA/EUROCAE requirements with regard to transmission rates, and once again it would be burdened with unrecoverable sunk costs with respect to its U.S. operations if it needed to abandon its work that has been in full compliance with the RTCA/EUROCAE standards. Moreover, the economy of scale benefits would also be lost by having different transmission rate requirements in Europe and the U.S. In addition, such a modification to the standards could cause delays in the use of these products at U.S. airports.

[12] See *Do-260A, ADS-B MOPS; EUROCAE Standard ED-102.*

B. *NTIA's Proposed Amendment No. 7(c) Should be Clarified To Ensure that the Use of this Technology is for Public Safety, and Not Administrative Convenience*

NTIA's proposed Amendment No. 7(d) provides that the Commission should "limit the license to only those locations that are within the vicinity of an FAA ASDE-X multilateration system or ADS-B equipment, and/or where the primary purpose for seeking transmit authorization is to provide surface data to aircraft and air traffic control authorities."[13] Sensis recommends that the amendment should be clarified/strengthened to explicitly limit use of the technology to vehicles then located in the movement area. That is, the amendment should expressly prohibit use of the technology on vehicles or other equipment not located in the airport movement area.

Given the important public safety benefits of this technology, the Commission should ensure that these systems are only used to further such safety concerns, and are not deployed for other, i.e., administrative convenience-related, purposes. For example, an operator may wish to use the technology to track baggage carts to achieve operational efficiencies in the Gate/Apron areas of an airport. But given the important public safety issues involved here, as well as the limit on the number of stations per location (see proposed Amendment No. 7(b)), use of this spectrum should be limited to enhancing identification of vehicles and aircraft operating on the airport movement area. Administrative convenience cannot, and should not, be permitted to trump public safety. Indeed, NTIA made it clear throughout the NTIA Petition that the purpose of this technology is for use on vehicles in the movement area in order to enhance public

[13] NTIA Petition at 3.

safety.[14] Accordingly, the limitation must make it equally clear that other uses, which NTIA does not appear to contemplate, are prohibited.

CONCLUSION

For all of the foregoing reasons, the Commission should (1) promptly commence a rulemaking with regard to the matters set forth in the NTIA Petition, and (2) in that rulemaking, specifically request comment on Sensis' modifications/clarifications to NTIA's proposed amendments to the rules.

Respectfully submitted,

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Date: December 30, 2008

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[14] Id. at 6-7.