Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of

Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules	)	ET Docket No. 10-236
2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology (OET)	)	ET Docket No. 06-105

To: The Commission

REPLY COMMENTS OF THE SATELLITE INDUSTRY ASSOCIATION

The Satellite Industry Association ("SIA")[1] hereby replies to the comments filed in response to the Commission's Notice of Proposed Rule Making in the above-captioned proceeding concerning revisions to the Part 5 Experimental Radio Service ("ERS") rules.[2]

[1] SIA Executive Members include: Artel, Inc.; The Boeing Company; CapRock Communications, Inc.; The DIRECTV Group; Hughes Network Systems, LLC; DBSD North America, Inc.; Echostar Satellite Services, LLC; Integral Systems, Inc.; Intelsat, Ltd.; Iridium Communications Inc.; LightSquared; Lockheed Martin Corporation; Loral Space & Communications, Inc.; Northrop Grumman Corporation; Rockwell Collins Government Systems; SES WORLD SKIES; and TerreStar Networks, Inc. SIA Associate Members include: Arqiva Satellite and Media; ATK Inc.; Cisco; Cobham SATCOM Land Systems; Comtech EF Data Corp.; DRS Technologies, Inc.; Eutelsat, Inc.; GE Satellite; Globecomm Systems, Inc.; Glowlink Communications Technology, Inc.; iDirect Government Technologies; Inmarsat, Inc.; Marshall Communications Corporation.; Panasonic Avionics Corporation; Spacecom, Ltd.; Spacenet Inc.; Stratos Global Corporation; TeleCommunication Systems, Inc.; Telesat Canada; Trace Systems, Inc.; and ViaSat, Inc. Additional information about SIA can be found at http://www.sia.org.

[2] *Promoting Expanded Opportunities for Radio Experimentation and Market Trials under Part 5 of the Commission's Rules and Streamlining Other Related Rules; 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office of Engineering and Technology (OET)*, Notice of Proposed Rulemaking, ET Docket Nos. 10-236 and 06-105, FCC 10-197 (rel. Nov. 30, 2010) ("NPRM").

I. DISCUSSION

A. The Comments Overwhelmingly Support Opening Up Program Experimental Licenses To Commercial Interests.

In its comments, SIA proposed that, with safeguards in place to protect regularly authorized operations, the university and research program experimental license should be made available to commercial entities and that the innovation zone program experimental license should be open to companies for use within the confines of their exclusive-use facilities.[3] A significant number of commenting parties reached the same conclusion, and largely for the same reason – *i.e.*, that commercial enterprises often form the cutting edge of innovation.[4]

The Boeing Company, for example, believes that "[m]ost innovation and experimentation in the wireless arena takes place outside the academic field," and that "commercial entities, not research organizations or universities, are the driving force behind major advances in communications."[5] Motorola makes a similar case, and adds the cogent point that "during these times of austere budget constraints on all economic sectors, the U.S. Government should be working to promote private investment in research and development rather than erecting barriers to innovation."[6]

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[3] *See* Comments of Satellite Industry Association, ET Docket No. 10-236 (filed March 10, 2011), at 17-18 ("SIA Comments").

[4] *See, e.g.*, Comments of The Boeing Company, ET Docket No. 10-236 (filed March 10, 2011), at 4-10 ("Boeing Comments"); Comments of Qualcomm Incorporated, ET Docket No. 10-236 (filed March 10, 2011), at 8-9 ("Qualcomm Comments"); Comments of Motorola Solutions, Inc., ET Docket No. 10-236 (filed March 10, 2011), at 2-3 ("Motorola Comments"); Comments of AT&T Inc., ET Docket No. 10-236 (filed March 10, 2011), at 9-10 ("AT&T Comments"); Comments of CTIA – The Wireless Association, ET Docket No. 10-236 (filed March 10, 2011), at 7-8 ("CTIA Comments"); Comments of Telecommunications Industry Association, ET Docket No. 10-236 (filed March 10, 2011), at 3-5 ("TIA Comments").

[5] Boeing Comments at 5. *See also* TIA Comments at 4 ("[T]he majority of advances in technology have occurred in the private sector.").

[6] Motorola Comments at 3.

SIA agrees with these and other similar comments,[7] and accordingly urges the Commission to open up the proposed program experimental licenses to commercial companies – provided, as always, that operations of regularly authorized licensees remain protected at all times.[8] Further, the protection of regularly authorized licensees should address each of the issues discussed below.

B. The Comments Recognize The Need To Protect The Superior Spectrum Rights Of Regularly Authorized Licensees.

SIA reiterates its strong support for the modification and streamlining of the ERS rules, provided that the benefits of a modernized experimental licensing program do not come at the expense of existing service licensees in the eligible bands. Indeed, the goal of allowing for more flexible experimental licensing while also protecting regularly authorized operations led SIA to propose a series of refinements to the NRPM's proposals.[9] Chief among these refinements was rejection of the proposal that regularly authorized service licensees be made responsible for monitoring a web-based experimental registration system and for raising interference concerns with the experimental license applicant within a seven-day period.[10] As SIA explained in its

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[7] In this regard, and on reflection, SIA clarifies that it is not necessary to restrict permission to operate low-power experimental radios to trade shows. Instead, such devices can safely operate in environments that are consistent with Part 15 frequency assignments, power limits, and other Part 15 rules. *See* Comments of Lockheed Martin Corporation, ET Docket No. 10-236 (filed March 10, 2011), at 6.

[8] *See* Qualcomm Comments at 9 ("While additional flexibility in the Part 5 experimental licensing regime . . . above will help to facilitate additional wireless innovation, appropriate safeguards are needed to fully protect incumbent licensees.").

[9] SIA also offered one suggestion that did not specifically address an NRPM proposal – namely, that experimental license applications be routinely granted within 14 calendar days of submission in the absence of an objection by the National Telecommunications and Information Administration ("NTIA"). *See* SIA Comments at 19. Another party to this proceeding agreed with SIA's observation that reform should include facilitating interagency FCC-NTIA coordination. *See* Comments of Marcus Spectrum Solutions LLC, ET Docket No. 10-236 (filed March 10, 2011), at 7-11.

[10] *See* SIA Comments at 12.

comments, this proposal improperly shifts the burden of policing compliance with the Commission's interference-avoidance requirements to parties with superior spectrum rights.

A significant number of comments in this proceeding, filed by a cross section of licensed service interests, echo SIA's concern regarding the importance of protecting regularly authorized operations.[11] Like SIA, these parties sharply oppose the proposal that existing licensees be required to monitor for possible interfering operations and to bear the burden of demonstrating that harmful interference will result from them. For example, AT&T believes that giving preference in this way to undeveloped future services over existing services is "nonsensical," and that a party which proposes to experiment in licensed bands that are used by millions of consumers and which support safety of life and other emergency services should bear the burden to demonstrate that the experimental use it proposes will not result in harmful interference.[12] The Engineers for the Integrity of Broadcast Auxiliary Services Spectrum, among others, oppose the proposal for technical reasons, explaining that "[g]iven the non-standard nature of experimental operations, it would be unreasonable to require existing Commission licensees to 'prove' that a proposed [program experimental licensee] would cause interference."[13]

In contrast to this sound reasoning, no adequate policy or technical justification is offered by the small number of parties filing comments in favor of shifting the burden to regularly authorized licensees – notwithstanding the fact that experimental licensees are, in the appropriate

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[11] *See, e.g.*, AT&T Comments at 3-4; TIA Comments at 6; Motorola Comments at 4; Qualcomm Comments at 9; Comments of EIBASS, ET Docket No. 10-236 (filed March 10, 2011), at 9-10 ("EIBASS Comments"); Comments of Wireless Communications Association International, Inc., ET Docket No. 10-236 (filed March 10, 2011), at 8 ("WCA Comments").

[12] AT&T Comments at 6.

[13] EIBASS Comments at 9. *See also* WCA Comments at 8 (observing that a program experimental license applicant "is in the best position to make a showing regarding its proposed experiment" and that an applicant "would be the most familiar with the details of its proposal and would likely have already considered or created the types of models that would the most useful in analyzing interference issues.").

words of one such party, mere "guests in the band."[14] SIA urges the Commission to heed the majority viewpoint expressed in the comments regarding the superior spectrum status of regularly authorized operations and require that each new programmatic licensee under the regime proposed in the NPRM: (1) affirmatively notify affected licensees of planned experiments that will occur under its authorization; and (2) demonstrate that its proposed experiment will not cause harmful interference in the event interference concerns are raised.[15]

For example, SIA proposed in its comments that the Commission could implement a system that permits service licensees to register bands of interest and their geographic locations on a common FCC website with respect to particular program licenses.[16] Any proposed experiment under that license in the registered band and applicable geographic area would then trigger a seven-day advance notice requirement. As SIA explained, this approach has the advantage of imposing only minimal administrative burdens on program license applicants, while adequately protecting regularly authorized licensees.

C. The Commission Should Be Wary Of Comments Proposing The Expansion Of Program Experimental Licensing.

SIA's concern for protection of regularly authorized operations also leads it to oppose those comments that would expand the concept of experimental license reform rather than refine it in the modest and practical way SIA proposed. BAE Systems Information and Electronic Systems Integration Inc., for example, would have the proposed university and research program

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[14] Comments of Cisco Systems, Inc., ET Docket No. 10-236 (filed March 10, 2011), at 4. *See also* Comments of BAE Systems Information and Electronic Systems Integration Inc., ET Docket No. 10-236 (filed March 10, 2011), at 13 ("BAE Systems Comments").

[15] Again, this proposal is only for new programmatic licenses; SIA believes the current individual experimental licensing approach works acceptably in this regard, and does not need to be modified to include these additional safeguards.

[16] *See* SIA Comments at 12.

experimental license cover all campuses in a single state, on the grounds that authorization on a statewide basis forms a "logical" geographic boundary.[17] The Mayo Clinic goes further by advocating that one research license should apply to a given institution for experiments it conducts "over multiple campuses in varying geographic regions" without apparent regard even to state boundaries.[18] But as SIA explained in its comments, a major research institution can consist of multiple "campuses" spread across wide geographic regions.[19] Even limiting operations to within a state's boundaries will not ameliorate the significant obstacles that service licensees face when attempting to effectively monitor and manage an experimental licensee's operations. It also begs the question whether a program licensee with far-flung operations can effectively oversee operations nominally under its aegis. The Commission should define "campus" to mean a single, well-articulated geographic area.[20]

SIA also opposes those comments that favor medical program experimental licensing parameters that go beyond what the Commission proposed in the NPRM. The Commission tentatively concluded that this license option should only be granted to institutions that create and manage the test bed environment and only for tests involving therapeutic, monitoring and diagnostic equipment.[21] CTIA – The Wireless Association, by contrast, maintains that such

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[17] BEA Systems Comments at 8.

[18] *See also* Mayo Clinic Response to Notice of Proposed Rulemaking with Regard to Radio Experimentation and Market Trials Under Part 5 of the Commission's Rules and Streamlining Other Related Rules, ET Docket No. 10-236 (filed March 10, 2011), at 5 ("Mayo Clinic Comments").

[19] *See* SIA Comments at 14.

[20] For similar reasons, SIA believes the comments of the Mayo Clinic calling for medical experimentation in patient homes and continuing care retirement facilities are misguided. *See* Mayo Clinic Comments at 4. Such open-ended experimentation would make identifying a source of interference a considerable challenge. Instead, the Commission should limit experimentation under a medical research program license to a single facility clearly described and under control of the licensee.

[21] *See* NPRM at ¶¶ 51, 54.

licenses should be available for testing of all devices "with a general medical purpose."[22] SIA disagrees. As the Commission has noted, test-bed institutions are in the best position to control all testing being conducting and to exercise control over their test-bed facilities, which warrants limiting medical program experimental licenses to them exclusively.[23] Allowing any device "with a general medical purpose" to be tested under a medical program experimental license invites abuse because that vague standard could open the door to the testing of equipment with a multiplicity of uses, only one of which may be a nominal medical use. As this result would contradict the clear purpose of an experimental authorization specifically created for medical testing, the Commission should clarify that experiments conducted under the medical research program license involve devices that are uniquely medical in nature.

II. CONCLUSION

For the foregoing reasons, SIA urges the Commission to recognize the considerable support in the record for modifying the Experimental Radio Service rules in a manner that both promotes innovation and protects regularly authorized operations, and to adopt final rules in this proceeding consistent with these two objectives.

Respectfully submitted,

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[22] CTIA Comments at 12.

[23] *See* NPRM at ¶ 51. Manufacturers of medical devices would, however, be eligible for production testing licenses on terms similar to those conceived for other equipment makers.