

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

In the Matter of)	
)	
Promoting Expanded Opportunities for Radio)	ET Docket No. 10-236
Experimentation and Market Trials under Part)	
5 of the Commission's Rules and Streamlining)	
Other Related Rules)	
)	
2006 Biennial Review of Telecommunications)	ET Docket No. 06-155
Regulations – Part 2 Administered by the)	
Office Of Engineering and Technology (OET))	

**REPLY COMMENTS OF
BAE SYSTEMS INFORMATION AND ELECTRONIC SYSTEMS
INTEGRATION INC.**

Respectfully submitted,

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SUMMARY

WCAI alleges that requiring service licensees to bear the initial burden of demonstrating a risk of interference is “an inefficient and wasteful process” that will require “thousands of licensees to spend thousands of hours monitoring” Research License registrations. While such concerns might have been relevant and appropriate 30 years ago in the absence of web-based filing and database search functionality, service licensees should be able to routinely search for and identify relevant filings in their authorized bands with only a few clicks of the mouse. As to the issue of inefficiency, BAE Systems respectfully submits that requiring Research Licensees to first obtain the consent of each and every CMRS carrier, or even to specifically require notices to be transmitted to each and every service licensee for each registration, would delay the Research License process substantially and thus be plainly contrary to the streamlining benefits that are at the core of the Commission’s proposals in this proceeding.

While it is true that the rules and policies proposed in this proceeding sufficiently address interference concerns to existing licensees, historical experience also demonstrates that imposing blanket prohibitions or consent requirements for CMRS, public safety and other licensed bands is simply unnecessary and anti-innovation. Having been issued numerous experimental licenses in the past, including licenses in CMRS, public safety and other licensed bands, BAE Systems is not aware of a single instance in which a complaint has been lodged against its operations demonstrating harmful interference to a service licensee. In addition, as a practical matter, many government/military contracts supported by experimental licenses require testing and experimentation of systems operating in CMRS, public safety and other licensed bands. In light of the Commission’s policies encouraging innovation through experimental licensing, and the importance of CMRS, public safety and other licensed bands to such innovation, allowing the licensing of Research Licenses on such bands through the proposed Web-based registration process is appropriate, as long as service licensees can object to such licensing based on valid interference showings.

BAE Systems agrees with Cisco that “[a] one size fits all maximum power flux density would ... both over and under protect licensees.” If a service licensee cannot provide a fully articulated technical demonstration as to why interference to the licensee’s operations is predicted to occur, then a blanket power limitation need not be imposed at the campus boundary. If power restrictions are necessary to ensure non-interference in a particular case, then BAE Systems does not oppose such restrictions. Because these issues apply whether an experiment is intended to be conducted indoors or outdoors, BAE Systems reiterates its position that “as long as the operating parameters for Research Licenses are clearly specified, and the rules are implemented to minimize interference to other licensed services, there should be no need to impose special rules for indoor vs. outdoor operation.

BAE Systems agrees with Cisco that Research Licenses should be generally limited to “a specified campus bounded by geographic coordinates or civic addresses representing a physical property owned or under the control of the institution”, with the additional comment that a radius of operation around a centerpoint might also be useful in defining the authorized area of operation.

Licensees should be allowed to provide alternative stop buzzer contacts to the Commission in the event the primary POC is unexpectedly unavailable. In addition, as long as stop buzzer contacts are available “at all times during experimentation”, and have the ability to cease operations in the event of interference, BAE Systems does not believe that such contacts should be required to, themselves, hold separate authority or licenses issued by the Commission.

Further, imposing a blanket two year limitation on the license term fails to recognize the varied circumstances underlying the need for program experimental licenses, including continuing research requirements specified under multi-year government contracts. Program experimental licensees should be permitted to justify five year initial terms, and renewals of such terms, at the time of registration. Finally, if the Commission requires the submission of experiment results as a part of a reporting requirement, the proprietary and sensitive nature of such experiment results dictates that this information should not be subject to public disclosure in any situation.

With respect to Innovation Zone Licenses, BAE Systems agrees with commenters that eligibility for Innovation Zone Licenses be extended to also include for-profit entities – at a minimum BAE Systems believes that eligibility should be extended to for-profit entities at their exclusive use facilities (i) whose primary RF transmission activities support public safety, homeland security and defense priorities, and (ii) who can demonstrate to the Commission that they are sophisticated in the design and operation of RF systems, and in the use of various forms of attenuation to minimize the possibility of harmful interference (“Qualified Homeland Security Applicants”). BAE Systems supports the adoption of a seven day web-based registration process for Innovation Zone Licenses consistent with the following: BAE Systems supports the Commission’s proposal to allow Innovation Zone Licensees to conduct experiments on all frequencies, except Section 15.205(a) “restricted bands” and those frequencies above 38.6 GHz that are specifically listed in footnote US246 of the Table of Frequency Allocations; For stop buzzers, BAE Systems recommends that such points of contact and reporting institutions be designated on a per state basis, and that licensees should be allowed to provide alternative contacts to the Commission in the event the primary POC is unexpectedly unavailable; BAE Systems supports a seven day web-based registration process for Innovation Zone Licenses, without a specific prior-coordination requirement, which would allow service licensees to object to any proposal based on interference if: (i) the objection is based on interference concerns to the licensee’s actual current operations; and (ii) the objection is made in good faith and is accompanied by a fully articulated technical demonstration as to why interference to the licensee’s operations is predicted to occur. Further, BAE Systems agrees that the parties must be obligated to work in good faith to resolve the concerns raised in the objection. Beyond that, however, if the objection is not resolved between the parties within ten (10) working days, BAE Systems strongly believes that the Commission should allow either party to promptly schedule a Commission-monitored settlement conference. Finally, while it is critical to ensure that experimental operations do not cause interference to CMRS, public safety and other licensed services, blanket licensing prohibitions on these frequencies are not warranted.

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**REPLY COMMENTS OF
BAE SYSTEMS INFORMATION AND ELECTRONIC SYSTEMS
INTEGRATION INC.**

BAE Systems Information and Electronic Systems Integration Inc. (“BAE Systems”), by undersigned counsel, hereby submits these Reply Comments in the above-captioned proceeding, which was initiated by a Notice of Proposed Rulemaking¹ intended to adopt and implement rules and policies to promote innovation and efficiency in spectrum use in the Commission’s Part 5 Experimental Radio Service (ERS).

- I. **Research Program Experimental Licenses**
 - A. **If Clear Standards are Adopted for the Submission and Resolution of Valid Interference Objections, the Proposed Web-Based Registration Process Will Strike a Fair Balance Between Preventing Interference and Encouraging Innovation**

In its comments, BAE Systems demonstrated that as long as there are clear standards and processes for the submission of technically-justified interference objections

¹ 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. 10-326; 2006 Biennial Review of Telecommunications Regulations – Part 2 Administered by the Office Of Engineering and Technology (OET), ET Docket No. 06-155, FCC 10-197 (Rel. November 30, 2010) (“Notice”).

by service licensees,² and as long as the Commission adopts specific rules governing the resolution of such objections,³ the Commission's proposed web-based registration/notification procedures for Research Program Experimental Licenses ("Research Licenses") strikes a fair balance between safeguarding against interference and encouraging innovation through experimentation. Similarly, recognizing the ability of service licensees to object to Research License proposals based on valid interference showings, BAE Systems' and other comments support the Commission's proposal for the operation of Research Licenses on a wide-range of frequencies.⁴

Despite the proposed safeguards, a few commenters would prohibit the operation of CMRS frequencies for experimental purposes entirely,⁵ or require the consent of service licensees in every case,⁶ or allow experimental licensing on public safety and other licensed frequencies only on a case-by-case basis.⁷ These concerns are apparently founded upon generalized conclusions that experimentation on these types of frequencies "will result in harmful interference..."⁸ While it is critical to ensure that experimental operations do not cause interference to CMRS, public safety and other licensed services, such blanket conclusions and prohibitions are simply not warranted, given the proposals that have been set forth in this proceeding, as well as historical evidence.

² BAE Systems Comments at 12-13.

³ *Id.*

⁴ For example, BAE Systems supports the Commission's proposal to allow Research Licenses to be operated on all frequencies except Section 15.205(a) "restricted bands" and those frequencies above 38.6 GHz that are specifically listed in footnote US246 of the Table of Frequency (See BAE Systems Comments at p.7), while Boeing supports operation of Research Licenses on all frequencies (See Comments of The Boeing Company ("Boeing") dated March 10, 2011, p. 10-11).

⁵ See, e.g., Comments of V-COMM, L.L.C. ("V-Comm") dated March 10, 2011, p. 6.

⁶ See, e.g., Comments of The Wireless Communications Association International, Inc. ("WCAI") dated March 10, 2011, p. 4-7.

⁷ See, e.g., Comments of The Satellite Industry Association ("SIA") dated March 10, 2011, p.16.

⁸ See e.g., Comments of V-Comm at 5.

As explained in its Comments, BAE Systems supports a seven day web-based registration process for Research Licenses which would allow service licensees to object to any proposal based on interference if:

(i) the objection is based on interference concerns to the licensee's actual current operations (i.e., if the service licensee is not actually operating under its license or has not yet constructed, the objection is not valid); **and**

(ii) the objection is made in good faith and is accompanied by a fully articulated technical demonstration as to why interference to the licensee's operations is predicted to occur (i.e., an unsupported and generalized allegation of interference is not a valid basis for an objection).⁹

In addition, to help avoid interference to bands used for the provision of commercial mobile services, emergency notifications, or public safety purposes on a licensee's grounds, BAE Systems generally supports the Commission's proposals to require the holder of a Research License to develop and submit a written plan to the Commission in conjunction with its web-based registration,¹⁰ and to require "stop-buzzer" contacts.¹¹ Finally, as proposed by BAE Systems, valid interference objections raised by service licensees would be addressed in good faith by the parties and if not resolved between the parties within ten (10) working days, the Commission would be allowed to monitor such discussions to ensure a timely resolution.¹² If such procedures are adopted by the Commission, the risk of interference to existing service licensees is sufficiently mitigated. In addition, the Commission's existing rules - which require (i) that experiments be conducted on a non-interference basis to primary and secondary licensees; and (ii) that experimental licensees take all necessary technical and operational

⁹ BAE Systems Comments at 12-13.

¹⁰ *Id.* at 13-14.

¹¹ *Id.* at 8.

¹² *Id.* at 13.

steps to avoid harmful interference to authorized services – ensure that any operations causing unforeseen interference issues can be promptly terminated.

WCAI alleges that requiring service licensees to bear the initial burden of demonstrating a risk of interference is “an inefficient and wasteful process” that will require “thousands of licensees to spend thousands of hours monitoring” Research License registrations.¹³ While such concerns might have been relevant and appropriate 30 years ago in the absence of web-based filing and database search functionality, service licensees should be able to routinely search for and identify relevant filings in their authorized bands with only a few clicks of the mouse. As to the issue of inefficiency, BAE Systems respectfully submits that requiring Research Licensees to first obtain the consent of each and every CMRS carrier, or even to specifically require notices to be transmitted to each and every service licensee for each registration, would delay the Research License process substantially and thus be plainly contrary to the streamlining benefits that are at the core of the Commission’s proposals in this proceeding.

While it is true that the rules and policies proposed in this proceeding sufficiently address interference concerns to existing licensees, historical experience also demonstrates that imposing blanket prohibitions or consent requirements for CMRS, public safety and other licensed bands is simply unnecessary and anti-innovation. Having been issued numerous experimental licenses in the past, including licenses in CMRS, public safety and other licensed bands, BAE Systems is not aware of a single instance in which a complaint has been lodged against its operations demonstrating harmful interference to a service licensee. In addition, as a practical matter, many government/military contracts supported by experimental licenses require testing and

¹³ See WCAI Comments at 3.

experimentation of systems operating in CMRS, public safety and other licensed bands. In light of the Commission's policies encouraging innovation through experimental licensing, and the importance of CMRS, public safety and other licensed bands to such innovation, allowing the licensing of Research Licenses on such bands through the proposed Web-based registration process is appropriate, as long as service licensees can object to such licensing based on valid interference showings.

B. Power Limitations and Indoor/Outdoor Distinctions

With regard to the Commission's inquiry as to whether power limitations should be imposed at the boundaries of a program experimental license, BAE Systems agrees with Cisco that "[a] one size fits all maximum power flux density would ... both over and under protect licensees. The experimental authorization should be revocable if the FCC finds that in the exercise of the authorization, harmful interference to licensees occurred, and the FCC should have the capability to stop research activity at any stage and at any time based on complaints about harmful interference."¹⁴ If a service licensee cannot provide a fully articulated technical demonstration as to why interference to the licensee's operations is predicted to occur, then a blanket power limitation need not be imposed at the campus boundary. If power restrictions are necessary to ensure non-interference in a particular case, then BAE Systems does not oppose such restrictions. Because these issues apply whether an experiment is intended to be conducted indoors or outdoors, BAE Systems reiterates its position that "as long as the operating parameters for Research Licenses are clearly specified, and the rules are implemented to minimize

¹⁴ See Comments of Cisco Systems, Inc. ("Cisco") dated March 10, 2011, p.3.

interference to other licensed services, there should be no need to impose special rules for indoor vs. outdoor operation.”¹⁵

C. Restricting Operation to Campus Locations

BAE Systems agrees with Cisco that Research Licenses should be generally limited to “a specified campus bounded by geographic coordinates or civic addresses representing a physical property owned or under the control of the institution”,¹⁶ with the additional comment that a radius of operation around a centerpoint might also be useful in defining the authorized area of operation. In its comments, BAE Systems noted that “the operating area of transmitters operating under Research Licenses should be restricted to specific sites, either to fixed sites at specific geographic coordinates, or to temporary fixed locations within a specified radius of a centerpoint.”¹⁷

D. Stop Buzzer Point of Contact

In its comments, BAE Systems supported the concept of identifying a single point of contact who is ultimately responsible for all experiments conducted under a Research License – including reporting requirements and compliance with applicable rules. Similarly, BAE Systems agreed with the Commission’s proposal to require only one institution to fulfill the reporting requirements associated with the research conducted across different campuses. However, BAE Systems suggested that such points of contact and reporting institutions be designated on a per state basis, and that licensees should be allowed to provide alternative contacts to the Commission in the event the primary POC is unexpectedly unavailable.¹⁸ As long as such contacts are available “at all times during

¹⁵ BAE Systems Comments at 10.

¹⁶ Cisco Comments at 2.

¹⁷ BAE Systems Comments at 9.

¹⁸ BAE Systems Comments at 8.

experimentation”,¹⁹ and have the ability to cease operations in the event of interference, BAE Systems does not believe that such contacts should be required to, themselves, hold separate authority or licenses issued by the Commission.²⁰

E. Term of Licenses

In its comments, BAE Systems supported the issuance of Research Licenses for five-year terms, for both initial licenses and renewals. CTIA, however, proposes that all program experimental licenses be issued for maximum two-year license terms.²¹ BAE Systems notes that imposing such a blanket two year limitation on the license term fails to recognize the varied circumstances underlying the need for program experimental licenses, including continuing research requirements specified under multi-year government contracts. Program experimental licensees should be permitted to justify five year initial terms, and renewals of such terms, at the time of registration.

F. Reporting Requirement

In its comments, BAE Systems supported the imposition of a reporting requirement for the narrow purpose of demonstrating compliance with the rules, but opposed the concept of requiring licensees to publicly file narrative statements describing the results of their tests.²² Several commenters similarly oppose requiring program experimental licensees to make experiment results publicly available.²³ Accordingly, if the Commission requires the submission of experiment results as a part of a reporting

¹⁹ See Comments of SIA at 11.

²⁰ *Id.*, suggesting that “the Commission should consider requiring that the custodian be a designated frequency manager (either on staff or a direct contractor for the licensee) who can demonstrate knowledge of the Commission’s rules concerning experimentation and public safety, such as by holding a General Radiotelephone Operators License.”

²¹ Comments of CTIA dated March 10, 2011, p.7.

²² BAE Systems Comments at 14-15.

²³ See, e.g., Comments of Boeing at 14-15; Cisco at 4.

requirement, the proprietary and sensitive nature of such experiment results dictates that this information should not be subject to public disclosure in any situation.

II. Innovation Zone Program Experimental Licenses

A. Eligibility for Single Entities at Exclusive-Use Facilities

In the Notice, the Commission tentatively concluded that eligibility for Innovation Zone Program Experimental Licenses (“Innovation Zone Licenses”) should not be extended to a single entity at its exclusive-use facility (such as within a large manufacturer’s plant grounds).²⁴ Numerous commenters, however, have proposed that if eligibility for Research Licenses is not extended to for-profit research organizations, then such for-profit researchers should be eligible to operate under Innovation Zone Licenses at their exclusive use facilities.²⁵ BAE Systems agrees with these suggestions, and proposes that – at a minimum – eligibility for Innovation Zone Licenses be extended to also include for-profit entities at their exclusive use facilities (i) whose primary RF transmission activities support public safety, homeland security and defense priorities, and (ii) who can demonstrate to the Commission that they are sophisticated in the design and operation of RF systems, and in the use of various forms of attenuation to minimize the possibility of harmful interference. These additional eligible entities will be referred to herein as “Qualified Homeland Security Applicants”. The public policy reasons for granting eligibility to Qualified Homeland Security Applicants for Research Licenses apply equally for extending eligibility to Qualified Homeland Security Applicants for

²⁴ See Notice at para. 41.

²⁵ See Comments of Boeing at 6-10; Comments of Qualcomm Incorporated (“Qualcomm”) dated March 10, 2011, p.9; Comments of TechAmerica dated March 10, 2011, p.4-5; Comments of the Telecommunications Industry Association (“TIA”) dated March 10, 2011, p.5; CTIA at 9-10; Comments of AT&T dated March 10, 2011, p.9-10.

Innovation Zone Licenses. These reasons, discussed at pages 4-6 of BAE Systems' Comments, are incorporated herein by reference.

B. Licensing Procedures and Rules for Innovation Zone Licenses

Numerous commenters addressed not only the licensing procedures and rules for Research Licenses, but also for Innovation Zone Licenses. In reply to the numerous comments that were submitted addressing the rules that would apply to Innovation Zone Licenses, BAE Systems supports the adoption of a seven day web-based registration process for Innovation Zone Licenses consistent with the following:

1. Authorized Frequencies

As explained above with respect to Research Licenses (See pages 2-5, *supra.*), while it is critical to ensure that experimental operations do not cause interference to CMRS, public safety and other licensed services, the ability of service licensees to object to web-based registrations based on fully articulated interference demonstrations should allow licensing on such frequencies without imposing over-broad blanket frequency exclusions, or requiring consent or explicit notification in every case – as was proposed by a few commenters. Accordingly, BAE Systems supports the Commission's proposal to allow Innovation Zone Licensees to conduct experiments on all frequencies, except Section 15.205(a) "restricted bands" and those frequencies above 38.6 GHz that are specifically listed in footnote US246 of the Table of Frequency Allocations.²⁶ In light of the streamlining goals sought to be achieved, BAE Systems does not support other frequencies being categorically excluded from Innovation Zone Licenses.

²⁶ Notice at para. 21.

2. Single Point of Contact and Single Institution Reporting/Defining the Campus Location

As long as the designated points of contact are available “at all times during experimentation”,²⁷ and have the ability to cease operations in the event of interference, BAE Systems does not believe that such contacts should be required to, themselves, hold separate authority or licenses issued by the Commission, as suggested by one commenter.²⁸ BAE Systems agrees with the concept of identifying a single point of contact who is ultimately responsible for all experiments conducted under an Innovation Zone License – including reporting requirements and compliance with applicable rules. Similarly, BAE Systems agrees with the Commission’s proposal to require only one institution to fulfill the reporting requirements associated with the research conducted across different campuses.²⁹ Consistent with its comments in the preceding subsection, BAE Systems recommends, however, that such points of contact and reporting institutions be designated on a per state basis. In addition, BAE Systems notes that despite a licensee’s best efforts to ensure that the POC is available at all times for Commission inquiries, including interference issues, licensees should be allowed to provide alternative contacts to the Commission in the event the primary POC is unexpectedly unavailable.

In addition, should the Commission agree to extend eligibility for Innovation Zone Licenses to single entities at their exclusive-use facilities, BAE Systems agrees that

²⁷ See SIA Comments at 11.

²⁸ Id.

²⁹ Notice at para 33-35.

– consistent with Cisco’s comment - Innovation Zone Licenses should be limited to “a specified campus bounded by geographic coordinates or civic addresses representing a physical property owned or under the control of the institution”,³⁰ with the additional comment that a radius of operation around a centerpoint might also be useful in defining the authorized area of operation.

3. Situations Where Research Licenses Should Not Be Permitted

Consistent with the comments of various entities confirming the need to protect the proprietary information of program experimental licensees,³¹ BAE Systems strongly disagrees with the Commission’s proposal (See Notice at para. 24) to prohibit the issuance of program experimental licenses where submissions are required to request non-disclosure of proprietary information. The reasons in support of this position, set forth at BAE Systems’ Comments in connection with Research Licenses (See BAE Systems Comments at 10), are hereby incorporated by reference.

4. Registration/Coordination/Reporting Requirements

a. Registration/Coordination

A few commenters would prohibit the operation of CMRS frequencies for experimental purposes entirely, or require the prior consent of service licensees in every case, or allow experimental licensing on public safety and other licensed frequencies only on a case-by-case basis.³² However, as long as there are clear standards and processes for the submission of technically-justified interference objections by service licensees, and as long as the Commission adopts specific rules governing the resolution of such objections, BAE Systems believes that the Commission’s proposed web-based

³⁰ Cisco Comments at 2.

³¹ See n.23, *supra*.

³² See n. 5-7, *supra*.

registration/notification procedures for Innovation Zone strikes a fair balance between safeguarding against interference and encouraging innovation through experimentation.

In this regard, BAE Systems supports a seven day web-based registration process for Innovation Zone Licenses, without a specific prior-coordination requirement, which would allow service licensees to object to any proposal based on interference if:

- (i) the objection is based on interference concerns to the licensee's actual current operations (i.e., if the service licensee is not actually operating under its license or has not yet constructed, the objection is not valid); **and**
- (ii) the objection is made in good faith and is accompanied by a fully articulated technical demonstration as to why interference to the licensee's operations is predicted to occur (i.e., an unsupported and generalized allegation of interference is not a valid basis for an objection).³³

BAE Systems agrees that the parties must be obligated to work in good faith to resolve the concerns raised in the objection. Beyond that, however, if the objection is not resolved between the parties within ten (10) working days, BAE Systems strongly believes that the Commission should allow either party to promptly schedule a Commission-monitored settlement conference, similar to the procedure currently set forth in the Commission's rules at Section 1.956. Contrary to the concerns of WCAI regarding the shifting of the initial burden of demonstrating interference to service licensees,³⁴ this notification process – coupled with the ability of service licensees to pose legitimate

³³ As long as the basic technical parameters of an Innovation Zone License experiment (geographic location, frequencies, power levels, emissions, bandwidth, modulation) and stop buzzer details are made publicly available in a registration, detailed proprietary program information or other program information that may be classified or otherwise sensitive from a homeland security perspective should be allowed to be protected from disclosure as part of an Innovation Zone License registration filing. Accordingly, the Commission's proposal (see Notice at para. 29) to require the information listed at Section 5.63(b) and (c) to be included in an Innovation Zone License registration should not apply where such information is proprietary information, or classified or otherwise sensitive from a homeland security perspective. Filing such information under a request for confidentiality or through the Commission's Security Office under classified procedures should not adversely impact the ability of the Commission to process and grant an Innovation Zone License in a streamlined manner as proposed in this proceeding.

³⁴ See WCAI Comments at 2-3.

interference objections and have such objections timely resolved - is fully consistent with the Commission's goals³⁵ in this proceeding.

b. Reporting

Several commenters oppose requiring program experimental licensees to make experiment results publicly available.³⁶ Similarly, in its Comments with respect to Research Licenses, BAE Systems supported the imposition of a reporting requirement for the narrow purpose of demonstrating compliance with the rules, but opposed the concept of requiring licensees to publicly file narrative statements describing the results of their tests.³⁷ Accordingly, if the Commission requires the submission of experiment results as a part of a reporting requirement for Innovation Zone licenses, the proprietary and sensitive nature of such experiment results dictates that this information should not be subject to public disclosure in any situation.

III. Streamlining Rules for Conventional Experimental Radio Licenses

A. Streamlining of Coordination Procedures

BAE Systems agrees with Lockheed Martin that “[t]his is the appropriate proceeding for the Commission to amend its rules to make clear that incumbents may not refuse to coordinate absent objective concerns about harmful interference. Establishing clear rules for coordination procedures will provide greater certainty for both experimental licensees and incumbents.”³⁸ To that end, BAE Systems has made specific recommendations which will achieve that result, namely:

³⁵ See “The Important Public Policy Concerns That Must Apply To All ERS Rules”, BAE Systems Comments at 3.

³⁶ See n.23, *supra*.

³⁷ BAE Systems Comments at 14-15.

³⁸ Comments of Lockheed Martin Corporation dated March 10, 2011, p.4.

- Service licensees should be permitted to object to proposed conventional experimental operations **only if**: (i) the objection is based on interference concerns to the licensee's actual current operations; and (ii) the objection is made in good faith and is accompanied by a fully articulated technical demonstration as to why interference to the licensee's operations is predicted to occur. BAE Systems Comments at 18.
- The Commission should expressly clarify in its rules that that the only valid basis for a service licensee objection to a coordination request is a fully articulated technical demonstration that interference will occur, and the failure to provide such showing within the timeframe requested by the coordinator will be deemed to constitute the licensee's consent or a waiver of the coordination requirement. Id.
- The Commission should expressly clarify in its rules that service licensees are not permitted to require payments (i.e., payoffs) from experimental applicants nor may service licensees require the execution of spectrum leases or other similar instruments in response to a request for coordination. Id.
- Coordination conditions should be imposed only when absolutely necessary based on a prior substantive technical review of the proposed experiment. Id. at 17. For any coordination condition that is imposed, the Commission should expressly specify - in the language of that condition - which particular frequencies must be coordinated pursuant to that condition. Id. at 18.
- The Commission should adopt specific rules and procedures to allow for resolution of disputes between experimental applicants/licensees and service licensees on the issue of interference protection, where the issue cannot be resolved within a specified timeframe. In addition to requiring the parties to work in good faith to resolve concerns raised in a valid objection, if the objection is not resolved between the parties within ten (10) working days, BAE Systems strongly believes that the Commission should allow either party to promptly schedule a Commission-monitored settlement conference. Id. at 19.

B. As Long as Service Licensees Can Object Based on Technical Demonstrations of Interference, Experimentation on CMRS, Public Safety and Other Licensed Frequencies Should Be Permitted

As explained above, a few commenters appear to support prohibiting experimental operation on CMRS frequencies entirely, or would require the consent of service licensees in every case, or would allow experimental licensing on public safety

and other licensed frequencies only on a case-by-case basis.³⁹ These concerns – which appear to apply even in the conventional experimental licensing context - are apparently founded upon generalized conclusions that experimentation on these types of frequencies “will result in harmful interference...”⁴⁰ As explained in detail above at 2-5, *supra*. (such discussion is incorporated herein by reference), while it is critical to ensure that experimental operations do not cause interference to CMRS, public safety and other licensed services, such blanket conclusions and prohibitions are simply not warranted. If service licensees are permitted to object to conventional experimental applications based on technical demonstrations of predicted interference, and if such objections are required to be resolved in a timely manner, as proposed by BAE Systems, then there is no reason to prohibit, or require prior consent for, experimental operations on CMRS, public safety or other licensed frequencies.

C. Streamlining Agency Review of Experimental Applications

Marcus Spectrum, in its comments, expresses concerns regarding application processing delays resulting from joint NTIA/FAA/FCC review, and the impact of such delays on the deployment of technology.⁴¹ While BAE Systems understands the significant logistics and resources required for NTIA and its stakeholders to coordinate with the Commission with respect to hundreds of experimental applications annually, BAE Systems agrees that the Commission should take reasonable steps in this proceeding to help streamline the NTIA coordination process as much as possible. To that end, BAE Systems hereby reiterates the following suggestions made in its Comments:

³⁹ See, n.5-7, *supra*.

⁴⁰ See e.g., Comments of V-Comm at 5.

⁴¹ See Comments of Marcus Spectrum Solutions LLC, p.7-11.

- In BAE Systems' experience, a reviewing agency (FCC, FAA, NTIA, etc.) concern, objection, or frequency carve-out is rarely addressed with the applicant prior to the Commission taking action on the experimental filing. At the same time, however, in BAE Systems' experience most agency concerns, objections, or proposed frequency carve-outs can be resolved with limited discussion and reasonable adjustments to the proposal in a very brief timeframe.
- Therefore, BAE Systems requests that the Commission's rules should be revised to expressly provide conventional experimental applicants (for both STAs and regular licenses) an opportunity for the resolution of agency concerns, objections, or proposed frequency carve-outs prior to grant. The applicant should be allowed to address any such objections directly with a technical representative from the objecting agency, for the sake of efficiency and to prevent inordinate delay. Such consultation should be made available promptly, and no later than seven calendar days after the concern or objection has been identified by the reviewing agency.
- The Commission's processes should be revised to allow for greater transparency and real-time monitoring of the status of STA and regular license applications during processing. Often, it is difficult to determine where an application is in the review process, and whether any agency objections or concerns have been identified to that point. Accordingly, BAE Systems requests that the Commission make available to conventional experimental license applicants greater access to application status details which would, ideally, include descriptions of what processing steps have been concluded, where processing is occurring at the present time, and what concerns or objections have been raised to that point and by whom.
- In sum, a conventional experimental application (STA or regular license application) should not be granted with a carve-out or denial of a requested parameter, unless, and until, until the applicant has been advised of the issue and is allowed to first resolve the issue as described above. BAE Systems Comments at 19-21.

D. Experimental Radio Equipment

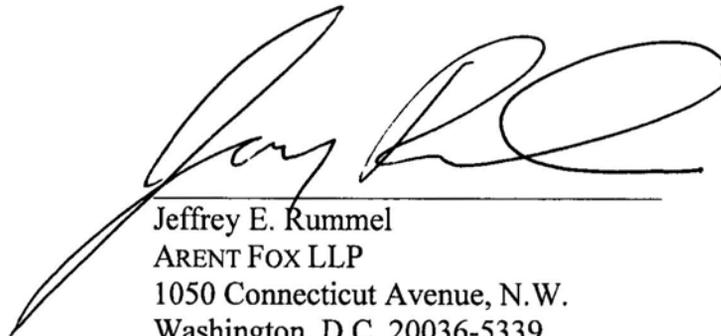
The inherent nature of experimental radio research often requires operation of equipment at technical parameters differing from the usual equipment authorization standards set forth in the Commission's rules. Thus, as long as a proposed experiment undergoes appropriate technical review and will not pose a risk of harmful interference to existing licensed users, the Commission does not require experimental licensees to obtain equipment authorizations or to demonstrate compliance with applicable equipment

authorization standards in the rules. This is an appropriately flexible policy that provides, as the Commission notes, “a fertile ground for testing innovative ideas that have led to new services and new devices for all sectors of the economy.”⁴² V-Comm’s suggestion, therefore, that “all experimental radio equipment should comply with applicable FCC rules for the intended bands of operation...[and that any] non-compliant radio equipment should be required to obtain specific waivers for experimental operation”⁴³ does not appear consistent with the purposes and policies underlying the entire experimental licensing regime and should be rejected.

IV. Conclusion

For the foregoing reasons, BAE Systems respectfully requests that the Commission revise its experimental licensing rules and policies consistent with BAE Systems’ Comments and Reply Comments in this proceeding.

Respectfully submitted,



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⁴² Notice at para. 1.

⁴³ Comments of V-Comm at 9.