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October 8, 2008

Ms. Marlene H. Dortch, Secretary
Federal Communications Commission
445 12th Street SW
Washington DC 20554

**Re: WP Docket No. 08-63, *ReconRobotics Inc., Request for Waiver*
*Ex Parte Communication***

Dear Ms. Dortch:

On behalf of ReconRobotics, Inc., pursuant to Section 1.1206(b)(1) of the Commission's Rules, I am electronically filing this written *ex parte* communication in the above-referenced docket.

Yesterday, Patrick McKinney and Andrew Drenner of ReconRobotics and I met with Jeff Cohen, Aaron Garza, Ira Keltz, Julius Knapp, Timothy Maguire, Geraldine Matisse, Zenji Nakazawa, Mark Settle, and Scot Stone of the Commission staff.

We reviewed the issues presented in our pleadings. A copy of our presentation is attached. We also distributed copies of supporting comments selected from the docket and demonstrated the Recon Scout device.

Please do not hesitate to contact me with any questions.

Respectfully submitted,

Mitchell Lazarus
Counsel for ReconRobotics, Inc.

cc: Meeting participants

RECON  **ROBOTICS**



RECON SCOUT™

Know Before You Go™

ReconRobotics

Federal Communications Commission

WP Docket No. 08-63

October 7, 2008

RECON SCOUT

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Overview

- The company
- Recon Scout
- Specifications
- Sample civilian applications
- Spectrum issues
- FCC waiver request
- Comments from first responders
- Interference considerations
- Waiver details and conditions.



The Company

- Founded as a spin-off from the University of Minnesota in mid 2006
- Began operations in January 2007
- Alan Bignall, President and CEO
- Locations in Minnesota (HQ) and Florida
- Recon Scout™ robot is the product of a successful DARPA project – developed by Minnesota university students at the Center for Distributed Robotics.



Recon Scout

Tactical, hardened reconnaissance robot

- Throwable, launchable
- Maneuvers by remote control
- Transmits video to the control unit
- Can be used as sensor platform:
audio, infrared, biological,
chemical, heat, radiation, etc.

Used in theatre for the past five years – popular with combat troops.





Police Field Tests





Specifications

- 1.2 lb (0.54 Kg)
- 7 in (17.8 cm) long, 3 in (7.6 cm) high at the wheel
- 1 hour battery, rechargeable
- Survives 30 ft (9.1 m) drop to concrete
- Ultra low light capable
- Stealthy operation
- Commercial COTS product.



Sample Civilian Applications

- Police checking building interior prior to forced entry
- Active shooter identification
- S.W.A.T. team ascertaining positioning of hostages, hostiles, officers, bystanders prior to rescue
- Firefighters checking for survivors in a burning building
- Hazmat workers investigating site of a chemical or nuclear release where entry may be dangerous.

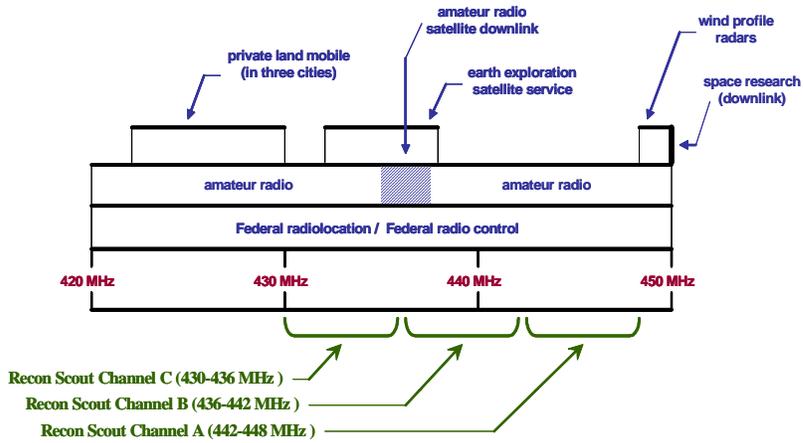


Spectrum Issues

- Video/audio from robot: 6 MHz NTSC channels
 - Three channels needed for collocated operation
 - Must be below 450 MHz for building penetration
 - robot can maneuver deep into building
 - robot can descend stairs to basement
- Analog video required:
 - No room in robot for digital transmitter
 - Cut-off at edge of range would be catastrophic
 - Digital circuitry too costly for public safety users.



Spectrum Usage Proposal



Power: 1/4 Watt avg., 1 Watt peak



Channel Priorities

- Channel A version shipped first to any customer
 - B and C shipped only as second and third units
- Channel A version is always the first (or only) used
 - version B deployed only if channel A is in use
 - likewise for version C
- All training uses channel A
- Avoids interference to private land mobile and wind profile radars
- Minimizes interference to amateurs.



FCC Waiver Request

- FCC waiver required for civilian use
 - application and bandwidth are outside FCC rules
- ReconRobotics seeks licensed use only
 - proposes restrictions on eligible licensees
 - licensing gives control over locations of use
- Have met with:
 - Wireless Telecommunications Bur. (Feb. 25, 2008)
 - NTIA (March 7, 2008)
 - Dept. of Defense (July 16, 2008).



Waiver Proceeding

- Request filed January 11, 2008
 - WP Docket No. 08-63
- More than 35 first responders filed in support (samples on next slide)
- Sole opposition came from amateur radio operators
 - ReconRobotics replied on June 6, 2008.



Sample Supporting Comments

- "The Recon Scout is number one on the list of life saving tools that we introduced this year."
- "It will save lives."
- "The size makes it easy to carry and deploy."
- "[T]here is no adequate alternative technology."
- "It the best tool I have seen on the market for law enforcement."
- "[T]he perfect item to aid in rapid deployment."
- "[S]aves us from putting officers and service dogs lives at risk unnecessarily."
- "This greatly reduces the risk of injury to officers and suspects."
- "Currently this is the best technology available."
- "We don't feel comfortable without this thing now."



Interference Considerations

- Recon Scout uses 1/4 Watt average power
 - each use is time-limited
 - unlikely to be deployed at the same location twice
- Other secondary co-channel users operate at far higher power
 - amateur: 1500 Watts or 50 Watts PEP
 - private radar: hundreds or thousands of Watts
- Can bar use near sensitive locations.



Waiver Details

- Waiver may have to cover:
 - Sections 90.20 and 90.35 (frequency usage)
 - Section 90.205(q) (power)
 - Section 90.207 (modulation)
 - Section 90.209 (bandwidth)
- Goal: allow manufacturer to certify, eligible user to license, without further proceedings.



Proposed Waiver Conditions

- Sales limited to law enforcement, firefighting, security personnel in critical infrastructure
- Use limited to safety of life and necessary training
- Use of minimum units for minimum duration consistent with human safety
- Fixed use prohibited
- Channel priorities as above
- ***Secondary to Federal users and amateurs***
 - no interference protection from any licensed user
- Limited to 2,000 units during the first twelve months, 8,000 units during the second twelve months.



Moving Forward

- How can ReconRobotics best advance a grant of the waiver?



Conclusion

- Recon Scout saves lives
 - unquestionably in the public interest
- Short-duration, infrequent use at low power minimizes risk of harmful interference
- Licensing regime and proposed waiver conditions further limit interference risk.

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Thank You!

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