RESPONSE TO QUESTION 6:
STATEMENT OF RESEARCH PROJECT

Brief Introduction

ODIN technologies is dedicated to providing expert RFID solutions and supreme satisfaction to clients all over the world. RFID technology is maturing with technological advancement and ratification of global standards. Different geographical regions have allocated different frequencies for operation of RFID systems, e.g. the FCC has allocated 902-928 MHz for RFID use, Europe has allocated the 865-868 MHz band and Japan the 950-956 MHz band for RFID operation. Adoption of the EPC global Generation 2 standard enables RFID systems to operate across the 860-960 MHz frequency range breaking the barriers of geographic and regulatory boundaries.

A Description of the nature of the research project and why the test facilities requested are necessary

Despite the ratification of a globally synchronized air interface protocol, achieving optimal RFID performance in the UHF band is still a non-trivial task. ODIN technologies is focused on helping end-users of RFID technology overcome the technical barriers of widespread adoption by helping them:

- **Select the right RFID tag:** RFID tag performance is frequency-dependent. One tag design may work great in Europe (865-868 MHz), but perform poorly in Japan (950-956 MHz). ODIN technologies is helping the world identify tags that work across international regulatory boundaries for companies such as Kraft, which manufactures products in Europe and distributes them across North America. *The only way to accurately test tag performance and make informed recommendations is by using the same frequencies that will be employed overseas at the point of interrogation.*
- **Select the right RFID reader**: Today, about 15 different readers are available from companies large and small. Some of these companies are relatively new to the RFID space and have unproven product lines, while others have been designing readers for decades. ODIN technologies is the only company that has produced benchmarking research to assist end-users in making the difficult decision of which reader to purchase for their RFID application. ODIN technologies' cliental is asking that we expand the scope of this research to include readers designed for other regulatory environments. *This task is impossible without the ability to test reader performance using the same frequencies allocated for use in other nations.*

Why the existing communications facilities are inadequate

1. Due to the frequency dependence of RFID tag performance, we cannot study the effectiveness of various tags in other regulatory environments without interrogating them using the relevant frequency bands.

Why the FCC should grant this license

1. None of the components tested under this license will be distributed or deployed within the US. We need this license to conduct scientific testing within the four walls of our test facility only.
2. RFID equipment operates at relatively low power levels (See below), which eliminates the concern of interference with other in-band devices.
3. ODIN technologies is helping improve global supply-chain efficiency by encouraging adoption of RFID through objective, third-party analysis of RFID readers and tags. This will have a direct, positive impact on companies within the FCC's jurisdiction.

Details of requested spectrum

The region for which devices are manufactured	Europe	New Zealand	Singapore	Japan
Frequency of operation	865 –868 MHz	864 – 868 MHz	866-869 MHz	950-956 MHz
Effective Radiated Power	8 W	8 W	8 W	8 W
Emission Type	Double Side Band ASK, Single Side Band ASK or Phase Reversal ASK			
Location of Experiment	Ashburn, Virginia			

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