

SPORTVISION

Application for Special Temporary Authority

Description of Purpose of STA

File Number 1890-EX-ST-2022

Sportvision, a wholly-owned subsidiary of SMT (SportsMEDIA Technology) is and has been in the process of developing, refining and testing a Race Track Wireless Data System, to provide data communications between vehicles on a race track and one or more fixed base stations installed along the track. One application of this system is a video image enhancement for television broadcasting of automobile racing events. The system allows television viewers to see displayed on screen the real-time location of cars during a racing event. The vehicles are equipped with GPS receivers and other sensors that generate a data packet every 200 milliseconds. The wireless system is responsible for collecting those packets from all rovers and delivering them to a control station in real time. A small amount of outbound data from the control station is sent to all the vehicles as well.

The radio units to be installed at the base stations and rovers are identical. The radio itself is a direct sequence spread spectrum unit, using production radios for 2.4 GHz. The system may ultimately be deployed on an unlicensed basis in the 2.4 GHz band or elsewhere, but the high noise levels in that band in the test locations (commercial automobile race tracks) are unsuitable for development and testing of the product. In addition to the 2.4 GHz spectrum, Sportvision is currently experimenting with some similar purposed devices that operate in the 902-928 MHz band. This STA includes both bands inasmuch as the devices are not now certified to operate under Part 15 or otherwise under the Commission's equipment authorization program.

The application specifies test deployments at NASCAR and other automobile racing venues and one non-racing stadium event, in the next six months. The venues for testing the products are principally automobile racing events. A complete list of the locations and coordinates for racing events in the first half of 2023 at which the testing will occur is included, between the dates of January 26, 2023 through June 12, 2023.

An Intersil baseband processor performs the Direct Sequence modulation and demodulation. It is part of a five-chipset developed for the 802.11b standard. It uses 1/4th of the standard 802.11 speed resulting in a relatively narrow occupied RF bandwidth. The power supply generates 3.3 Volts to power all circuits of the board. The radio, including the power amplifier, amplifies the signal up to 30 dBm. Power measurement is active, and keeps the transmit power at the desired level. Transmitter output is programmable, from 0 to 28 dBm. The occupied bandwidth is 4.6 MHz.

The frequency band 2390-2402 MHz, part of the band 2390-2408 MHz requested is allocated on a primary basis to the Amateur Radio Service. There is a secondary allocation at 902-928 MHz for the Amateur Service as well. This is an exceptionally low-power system used over very short ranges within automobile racing tracks for short

periods. Though it is not believed to have any significant interference potential, all test deployments of this system will be coordinated in advance with ARRL, the National Association for Amateur Radio, through its regulatory affairs office in Newington, Connecticut. Any complaint of interference from licensed radio amateurs will result in cessation of operation until the interference is corrected. Similar STA grants have been authorized and conducted over the past few years without any interference reports whatsoever.

The events and the date of each event are on the attached list. An on-site engineer for interference resolution issues and the stop-buzzer contact is Phillip Cochran, Technical Production Manager, Sportvision, whose telephone number is 270-317-7445. Other inquiries can be addressed to the office of counsel for the applicant, as follows:

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