

Vanu, Inc. has been engaged under various contracts with government agencies to develop various prototype software radio devices. The rationale for the development of these devices is to enable them to implement numerous communications protocols using different bands, bandwidths and modulation techniques among other things, including frequency hopping. Development of these devices will help to alleviate interoperability problems and enable more efficient use of the RF spectrum, among other things. The broad range of capabilities of the devices sought to be developed under our contracts cannot productively be captured under the table included as item 4 in FCC Form 442.

Vanu, Inc. proposes to limit all transmissions to a maximum of 100 milliwatts ERP. As a general matter these transmissions would take place in the ISM bands, but, for purposes of testing interoperability with traditional radio equipment, Vanu, Inc. will occasionally use spectrum licensed to third parties after obtaining the consent of those parties. These occasional uses will include usage of public safety and military frequencies. Any such usage will be coordinated with the appropriate frequency coordinator and/or all of the relevant public safety licensees.

The authorization applied for under this application will be used to fulfill the requirements of several government contracts with agencies of the United States Government. These contracts are described in greater detail below.

1. United States Air Force, Air Force Materiel Command, contract F30602-99-C-0173: under this contract, Vanu, Inc. is investigating the capacity of a low power handheld computing platform to meet the computational requirements for various software radio applications, including enhancements of such applications to reduce computational requirements where necessary and feasible, the technology available to enable the creation of a low power dissipation, high bandwidth I/O sub-system for use with a handheld computing platform in connection with such applications, and the power management capabilities of the handheld platform; and to develop a low power dissipation, suitable form factor RF front-end for the handheld platform in order to demonstrate a handheld software radio.
2. United States Department of Justice, National Institute of Justice, contract 1999-LT-VX-K009: under this contract Vanu, Inc. is developing a prototype software radio based interoperability device, which will enable interoperation between certain radios that employ otherwise incompatible frequencies, modulation techniques and bandwidths
3. United States Army, Communications-Electronics Command supporting the Joint Tactical Radio System Joint Program Office concerning the Joint Tactical Radio System Step 2B – Architecture Validation and Prototyping, contract DAAB15-00-9-0001: under this contract Vanu, Inc. is developing a prototype handheld software radio for purposes of determining the feasibility of producing handheld radios that are compliant with the Software Communication Architecture developed under Step 1 and Step 2A fo the Joint Tactical Radio System Program.

Each of the above contracts calls for the implementation of various actual or simulated commercial, public safety or military radio waveforms.