

Exhibit A: Narrative Statement for Falcon Nano's Research on Sideband Mitigation  
6/22/14

a. The complete program of research and experimentation proposed including description of equipment and theory of operation.

The purpose of the purpose of the Experimental Radio Service License is to experimentally validate the computer simulations of Falcon Nano's Sideband Mitigation technology. The simulations are shown US Patent 8,437,414 and US Patent Application **20130142281**. In the Patent and Patent Application, the carrier frequency is 1GHz and the mask bandwidth is 250 kHz. To save on hardware development costs, the experiment will be done at a carrier frequency of 1MHz and the mask bandwidth is 250 Hz with 100mW power as requested in this ERS.

This proprietary wireless communications technology Falcon Nano is developing will enable:

- increased data communications speeds,
- improved noise immunity, and
- increased spectral efficiency.

Earlier development work on Falcon Nano's technology was done under Falcon Nano's ERS File Numbers 0180-EX-RR-2011 and 0057-EX-ML-2013.

The project engineer is Al Hastings and the RF engineer is Jim Horn. The two engineers originally met 26 years ago while working as project and RF engineers respectively for Motorola. Both have extensive experience in experimental electronics and RF on projects for the US Navy, US Air Force, NASA, Motorola, Sony, Toshiba, General Electric and many others. Hastings (KD7EAG) has held an FCC amateur license for 14 years and Horn (WB9SYN) for over 30.

The technology uses a combination of amplitude and phase modulation. Any wireless data communications at any transmission frequency will benefit from this technology.

Because the technology relies on proprietary digital signal processing algorithms which are computation intensive, these low frequencies are easier to work with at this early stage. The technologies early stage receiver prototypes are not as sensitive as future receivers will be.

Ultimately, custom designed silicon-germanium chips will enable this technology to be implemented at higher transmission speeds (VHF, UHF and SHF) and with more sensitive receivers.

Engineering development is to be done in North Las Vegas, NV.

b. The specific objectives sought to be accomplished.

1. Test the technology in a "field" environment. We need to transmit a distance larger than a laboratory bench. We need to gather data on how the technology performs when transmitting through objects, subjected multipath and dealing with other real world issues.
2. Have third party validation of test results of our prototype. This validation will be useful in attracting investors and customers.

3. Specific performance objectives we expect to achieve on each frequency band are as follows.

Spectral Efficiency = (Data Transmission Rate) / (20 dB bandwidth) = 20 ((bits/s)/Hz)  
(See [http://en.wikipedia.org/wiki/Spectral\\_efficiency](http://en.wikipedia.org/wiki/Spectral_efficiency) reference. Specifically, "Link spectral efficiency.")

Transmission Distance = 10 meters.

All transmissions will be of short durations, normally, less than 3 minutes. There will never be more than 50 transmissions in an hour. On rare occasions, there will be transmissions that may last up to 10 minutes but there would be less than 20 of those in a day.

c. How the program of experimentation has a reasonable promise of contribution to the development, extension, expansion or utilization of the radio art, or is along line not already investigated.

Falcon Nano is a startup company founded to develop and ultimately commercialize this technology. The founder and CEO of the company, Hastings, has a proven track record of developing innovative technologies and companies. His first startup company developed an innovative computer display technology with Horn's technical assistance. A Kodak spin-off acquired the company to have access to the technology. Today the technology the company helped pioneer is commercially available in project TVs and is the standard Sony uses for all projection TV's for images over 60 inches.

Falcon Nano's first patent has been awarded and another is expected to be awarded in the next 90 days.

It is not surprising that we have already had customers express interest in this technology. Naturally, they want to see further development which this ERS license will help enable.

The point of contact person for any information or to terminate transmission if interference occurs is:

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