

Oversized Exhibit

Date: March 21, 2019

Committee: Senate Committee on Education

Bill Number/topic title: SB 283/Directs Department of Education to prepare and make available statement that discloses potential health risks of wireless network technology and requires public and private schools to distribute statement to employees, students and parents or guardians of students.

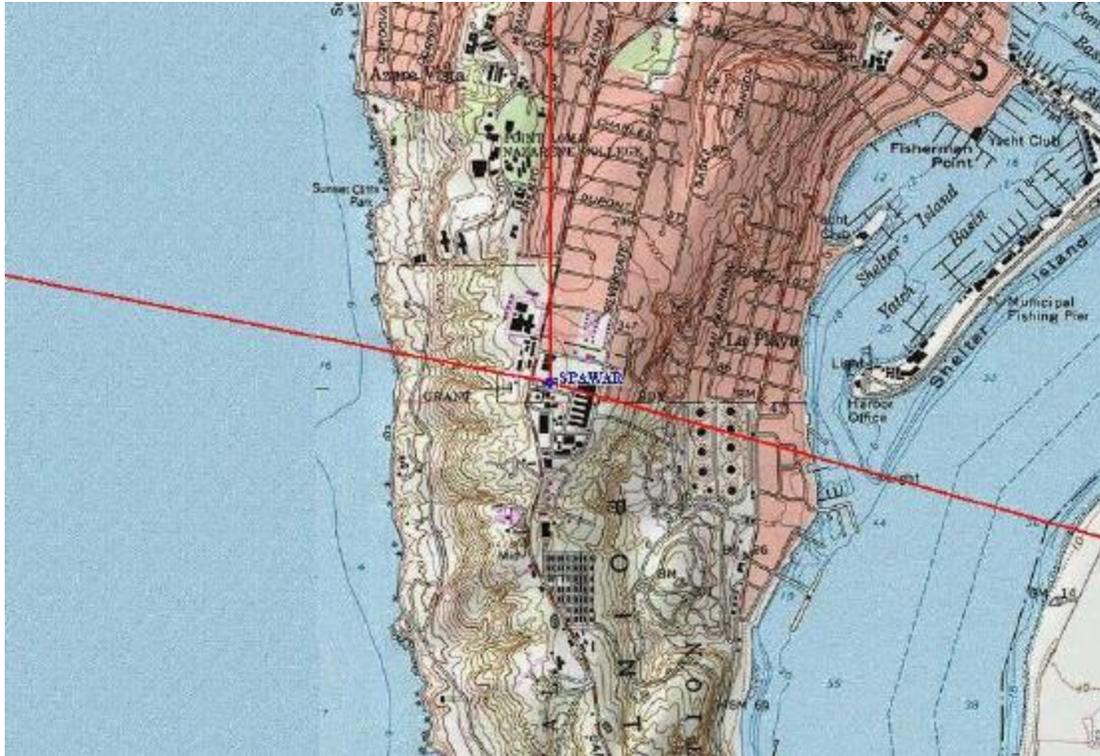
Submitted by: Virginia Farver, parent, Fort Collins, CO

Exhibit description/photo: Information packet – Wireless communications platform proposal

Proposal to establish an experimental wireless communications platform as a collaborative activity between SSC San Diego and UCSD/HPWREN

This collaborative proposal attempts to establish a 5.8GHz link with several tens of megabits per second capacity between SSC San Diego and San Clemente Island. This link will serve multiple independent applications of interest to SSC San Diego and UCSD/HPWREN. To reach UCSD/HPWREN, a separate 2.4GHz or 5.8GHz link is to be established between SSC San Diego and a UCSD location on Mt. Soledad. As a second priority, a further link to support UCSD sensor platforms on the Coronado Bridge is desired. While not directly integral to this current proposal, there may be other data communications opportunities in the future, such as an existing weather radar (CODAR) project at Pt. Loma and collaborations with the Cabrillo National Park.

The identified SSC San Diego location would be at 32.709N 117.248W and 364ft. altitude, connecting to the San Clemente Island location at 32.915N 118.488W with 1590ft. altitude. The link will be about 73.5 miles with a 281.49TN azimuth, relative to SSC San Diego. Mt. Soledad is about 9.1 miles away with a 359.94TN azimuth. The Coronado Bridge location would be at about 105.66TN and a distance of about 5.5 miles.



The antennas to be used are already purchased and available. They will be [Gabriel 8' antennas](#), which will need to be lifted by crane onto the SSC San Diego building, and moved by barge to the island, and moved by truck to the final destination on the island. For this link we expect to utilize [Redline AN-50 radios](#).

A rooftop location at SSC San Diego has been identified. An appropriate pole is already in place, which needs to be welded to a steel structure in existence already on the roof.



The antennas will have a mounting platform compatible with that pole. The link to Mt. Soledad will use a similar setup, likely with a 4' antenna. We will need to either utilize indoor space for the radios, or mount a weather-resistant box onto the roof, possibly the steel structure. All equipment is powered by 110V AC.

The Peak location is to be used on the island. This link would replace an existing 2.4GHz link to UCSD which has been in place since October, 2002. We request permission to mount an 8' Gabriel antenna onto the tower, perhaps right above the lower current dish antenna.



The FCC imposed limit for the license-exempt 5.8GHz band is 53dBm EIRP. The antenna has an about 40dBi gain, and the radio can be software-configured to match the 53dBm limit, taking antenna gain and connector/cable loss estimates into account.

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<http://hpwren.ucsd.edu>