

FEDERAL COMMUNICATIONS COMMISSION

Experimental Licensing Branch

445 12th Street, S.W.
Washington, D.C. 20554

March 17, 2016

Ed Friedman
42 Stevens Rd.
Bowdoinham, ME 04008
207-666-3372
edfomb@comcast.net

RE: Google Inc.'s Experimental License (File No. 0747-EX-PL-2015)

Dear Mr. Friedman:

On November 24, 2015, Google Inc. ("Google") filed the above-referenced license application in the Experimental Radio Service to test the operation of its balloon-borne transmitters using millimeter wave spectrum. On December 17, 2015, the Global Union Against Radiation Deployment from Space ("GUARDS") filed an informal objection asking the Commission to deny granting the requested experimental license to Google based on its concerns regarding the health impact of RF radiation from Google's transmitters to humans and wildlife, environmental degradation from the radiation, and risk of harm to life and property resulting from the potential for balloons to crash to the ground or collide or interfere with airplane operations. In addition, we note that other parties have filed informal objections voicing similar concerns to that of GUARDS.

On January 26, 2016 Google responded to the informal objections. In its letter, Google states that its proposed operations present no meaningful health or environmental risks. It bases this claim on several reasons: 1. for the terrestrial stations, the antennas will be pointed skyward which greatly reduces RF exposure on the ground; 2. for the airborne stations, the large transmission distances ensure that only very low signal levels reach the ground; and 3. its antennas are compliant with the antenna standards in section 101.115(b) of the Commission's rules which require that all radiation off boresight be greatly reduced. We agree with Google that the proposed operations are compliant with the FCC's RF safety standards. Nonetheless, to provide an additional level of assurance regarding RF exposure, we will specifically condition the license grant on compliance with all Commission RF safety standards.

Issues regarding the risk of harm to life and property from the balloon potentially crashing or interference with airplane operations are outside the regulatory authority of the FCC and should be referred to the Federal Aviation Administration (FAA) as they have authority over those matters. FCC authority is restricted to ensuring that proposed experimental operations do not cause harmful interference to

authorized services and that operations under experimental licenses are compliant with FCC regulations and policies regarding RF safety.

In view of the foregoing, we find that grant of the license with the following condition would be consistent with the public interest: Operation under this license shall comply with the RF safety standards set forth in FCC rule section 101.1525 (47 CFR § 101.1525). We believe that the concerns of GUARDS and others have been adequately addressed and find no reason to delay or deny granting the experimental license to Google. Accordingly, it is ordered that Google's license is **GRANTED**.

Sincerely,

A handwritten signature in black ink, appearing to be 'Nnake Nweke', written in a cursive style.

Nnake Nweke, Ph.D. (Engr.), Esq.
Chief, Experimental Licensing Branch
Office of Engineering and Technology