Google Inc.
Public Policy Department
1101 New York Avenue, NW
Second Floor
Washington, DC 20005

Phone 202.346.1100
Fax 202.346.1101
www.google.com

October 31, 2008

Ex Parte via Electronic Filing

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Ex Parte Communication – Unlicensed Operation in the TV Broadcast Bands (ET Docket No. 04-186); Additional Spectrum for Unlicensed Devices Below 900 MHz and In the 3 GHz Band (ET Docket No. 02-380)

Dear Ms. Dortch:

On October 31, 2008, the undersigned attorney from Google Inc. ("Google") spoke by telephone or in person with Charles Mathias (wireless legal advisor to Chairman Martin), Renee Crittendon (wireless legal advisor to Commissioner Adelstein), Wayne Leighton (wireless legal advisor to Commissioner Tate), Bruce Gottlieb (wireless legal advisor to Commissioner Copps), and Angela Giancarlo (wireless legal advisor to Commissioner McDowell), regarding the above-referenced proceedings. Our conversation focused on Google's proposal to include the specifics of a variable power control mechanism in the final order and rules.

In addition, we discussed proposals by several parties to use the TV white spaces, in whole or in part, to provide a high-powered licensed backhaul services. As we detailed in our January 22, 2008 *ex parte* letter, such proposals make little sense as an engineering matter.[1] Further, a proposal in the white spaces docket to set aside valuable spectrum for a licensed or "hybrid" licensed backhaul service is inconsistent with, and poses interference concerns for, potential unlicensed business models utilizing the white spaces. Such a proposal also introduces tremendous uncertainty for the future commercial viability of new networks and devices designed and built to provide unlicensed rural broadband service using that same spectrum.

That said, Google recognizes that to many parties, the lack of backhaul options -- particularly in the more rural areas of the country -- is a persistent problem. The

[1] *See* Ex Parte letter from Richard Whitt, Google Inc., to Marlene Dortch, FCC, ET Docket 04-186, submitted on January 22, 2008 (attached).

Commission has several ways to address the issue, including opening a generic proceeding, on a strict time-bound basis, that encompasses comprehensively all potential wireline and spectrum-based backhaul solutions for rural regions. The agency also could add this particular issue to the ongoing special access reform docket. However, within the context of the white spaces proceeding itself, as mentioned above, we strongly oppose injecting damaging uncertainty into the future of the white spaces with a licensed or hybrid licensed set-aside for backhaul service.

Should you have any questions, please do not hesitate to contact the undersigned.

Respectfully submitted,

Richard S. Whitt, Esq.
Washington Telecom and
Media Counsel
Google Inc.

Google Inc.
Public Policy Department
1101 New York Avenue, N.W.
Second Floor
Washington, DC 20005

Main 202 346-1200
Direct 202 346-1236
Fax 650 618-1806
www.google.com

January 22, 2008

Ex Parte via Electronic Filing

Marlene H. Dortch
Office of the Secretary
Federal Communications Commission
445 12th Street, SW
Washington, D.C. 20554

Re: Unlicensed Operation in the TV Broadcast Bands (ET Docket No. 04-186); Additional Spectrum for Unlicensed Devices Below 900 MHz and In the 3 GHz Band (ET Docket No. 02-380); Wireline Special Access (WC Docket No. 05-25, RM-10593)

Dear Ms. Dortch:

Google Inc. ("Google"), by its attorney, respectfully submits this letter in response to several recent *ex parte* filings submitted in the above-referenced dockets. In particular, Google wishes to address a January 3rd letter submitted jointly by Sprint Nextel and T-Mobile,[1] which in turn supports an earlier proposal by FiberTower Corporation and the Rural Telecommunications Group, Inc.[2]

Despite our strong opposition to the proposal, we do sympathize with the plight faced by Sprint, T-Mobile, and countless other wireless providers, ISPs, CLECs, and businesses large and small. While the special access issue goes unaddressed by the FCC, the record shows that large incumbent local exchange carriers (ILECs) continue to charge excessive prices and carry out unreasonable provisioning for their data transmission offerings, including backhaul for wireless services.[3] Nonetheless, for a host of reasons,

[1] Letter from Lawrence R. Krevor, Sprint Nextel Corporation, and Thomas S. Sugrue, T-Mobile USA, Inc., to Marlene H. Dortch, FCC, dated January 3, 2008 ("Joint Letter").

[2] Letter from Michele C. Farquhar, Special Counsel to FiberTower Corporation and Rural Telecommunications Group, Inc., to Marlene H. Dortch, FCC, dated October 2, 2007, attaching "Optimizing the TV Bands White Spaces" white paper.

[3] *See, e.g.*, *FCC Needs to Improve Its Ability to Monitor and Determine the Extent of Competition in Dedicated Access Services*, U.S. GAO Report to the Chairman, Committee on Government Reform, House of Representatives, GAO-07-80, November 2006, at 1 ("GAO Report"); Letter from Colleen Boothby, Ad Hoc Telecommunications Users Committee, to Marlene Dortch, FCC, WC Docket 06-125, dated October 9, 2007 ("Ad Hoc Letter").

the notion of licensing the TV white spaces as a substitute for wireline backhaul simply is no answer to the wireless carriers' special access problem.

It must be pointed out that the two-page Joint Letter lacks requisite specificity for a meaningful review. However, even what apparently is proposed there makes little sense. For starters, the notion of employing a licensing regime ignores the fact that granting exclusive licensing rights in the white spaces spectrum would actually bring licensees, as primary users, into direct conflict with each other, thus creating significant interference issues. In addition, in order to guarantee the outcome that Sprint and T-Mobile claim they desire – an independent platform for providing backhaul service -- the incumbent providers of special access services would need to be prohibited from bidding in any resulting auction. It is not clear that the Commission would sanction an auction of spectrum while prohibiting the participation of the two largest wireless providers.

Moreover, backhaul simply is not the most efficient, or even marginal, use of the white spaces spectrum. The favorable propagation characteristics of this spectrum for localized high-bandwidth service offerings do not translate well into backhauling voice and data traffic over considerable distances. Moreover, a higher proportion of backhaul utilization could lead to a greater likelihood of harmful interference to incumbent licensees and other significant users.[4] Further, in addition to reforming the existing special access regime for wireline-based backhaul services, there are ready spectrum-based alternatives. For example, Sprint already has acquired 2.5 GHz spectrum for its proposed WiMAX network, which the company now is in the early stages of deploying. In addition, there is suitable spectrum available at 3.65 GHz, which would work far better than white spaces for a point-to-point transmission service.

Sprint and T-Mobile also fail to note that the FCC already is engaged in a generic special access reform proceeding. Indeed, the FCC's "refresh" notice in July 2007 highlights the need for additional review of wireline special access due to recent market changes, including ILEC mergers.[5] Although the Commission has not yet acted, the current record evidence in that separate wireline proceeding appears more than sufficient to support various proposals to reform the current ILEC special access pricing and provisioning rules.[6] Google suggests that Sprint and T-Mobile continue to focus their advocacy attention to that proceeding, not here.[7]

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[4] *See* Erik Boch, *Choosing the Right Frequency for Point-to-Point Radio Connection*, CommsDesign, December 17, 2003 (http://www.commsdesign.com/showArticle.jhtml;jsessionid=UP15I3DR3NXVQQSNDLOSKHSCJUNN2JVN?articleID=17000057).

[5] "Parties Asked to Refresh Record in the *Special Access Notice of Proposed Rulemaking*," Public Notice, FCC 07-123, WC Docket No. 05-25, RM-10593 (rel. July 9, 2007).

[6] *See* GAO Report; Ad Hoc Letter; *see also* Comments of the Ad Hoc Telecommunications Users Committee, WC Docket No. 05-25, filed August 8, 2007; Letter from CompTel to Chairman John D. Dingell, Edward J. Markey, Fred Upton, Honorable Joe Barton, House Committee on Energy and Commerce, dated October 1, 2007.

Further, Sprint and T-Mobile are simply mistaken with regards to the supposed interference aspects of unlicensed mobile use of the white spaces spectrum. Google's own tests clearly show that digital televisions and wireless microphones would be amply protected from harmful interference by unlicensed personal/portable devices, using reasonable power levels and sensing thresholds.[8] Proposals in the proceeding from other parties fall well within this common understanding. Thus, the premise that there is any need to fall back to a licensed regime – let alone for wireless backhaul services – is simply misplaced.

It also must be pointed out that Sprint and T-Mobile are filing their joint proposal quite late in the day of a multi-year process involving dozens of parties. The FCC first opened the white spaces proceeding with a notice of inquiry in 2002, and in the intervening years has issued two separate notices of proposed rulemaking (in May 2004 and October 2006), and an October 2006 Report and Order. In its order, the FCC concluded that it is "reasonable to expect that existing technology, such as that used for spectrum sensing, can be adapted to allow devices to identify unused spectrum in a given geographic area and thus allow sharing of the TV bands."[9] To that end, the FCC's Office of Engineering and Technology (OET) is undertaking a second series of bench and field tests of several proof-of-concept unlicensed devices, following on initial testing last year. The current testing schedule should allow the Commission to address and resolve the remaining unlicensed technical issues this coming Spring 2008. The late-filed Sprint/T-Mobile Joint Letter runs directly against the grain of this activity.

This is especially the case now that Ofcom, the UK regulator, has issued a detailed report endorsing unlicensed uses of white spaces ("interleaved") spectrum. As Ofcom has declared, "cognitive devices could make flexible use of interleaved spectrum without causing harmful interference to licensed users."[10] The Ofcom Statement explains that the white spaces spectrum is a substantial untapped resource, and the total value generated by allowing license-exempt cognitive access would be greater than any possible opportunity cost. The report further notes that license-exempt cognitive access to white spaces would be beneficial for a multitude of high bandwidth services, including

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[7] Google takes no position at this time, however, on specific proposals made by parties such as Sprint and T-Mobile in the wireline special access proceeding.

[8] *See, e.g.*, Letter of Richard S. Whitt, Google Inc., to Marlene H. Dortch, Secretary, FCC, dated December 5, 2007 ("Google December 5 Ex Parte").

[9] *Unlicensed Operation in the TV Broadcast Bands; Additional Spectrum for Unlicensed Devices Below 900 MHz and in the 3 GHz Band*, First Report and Order and Further Notice of Proposed Rule Making, ET Docket No. 04-186, released October 18, 2006, at ¶17 ("Further Notice").

[10] *See Digital Dividend Review: A Statement on our Approach to Awarding the Digital Dividend*, Ofcom, at ¶ 6.26 (Dec. 13, 2007) ("Ofcom Statement").

home and business networks, community and campus networks, and municipal Wi-Fi, and that "other applications and innovations might also be spurred by the availability of a large pool of interleaved spectrum for license exempt use."[11] Ofcom also points out that a number of cognitive devices being presented before the FCC employ spectrum sensing technology that would avoid transmitting in channels used by licensed services.[12] Seen against this backdrop, it would be ironic indeed for the FCC to take a giant step backward to an ill-fitting licensed regime, just as the United Kingdom is moving forward to embrace the beneficial innovations made possible by a flexible unlicensed regime.[13]

For all these reasons, Google respectfully asks the Commission to set aside the January 3, 2008 letter from Sprint and T-Mobile as an unsupported and ultimately counterproductive proposal.

Should you have any questions, please do not hesitate to contact the undersigned. In accordance with FCC *ex parte* rules, one copy of this letter has been submitted electronically into each of the above-referenced dockets.

Respectfully submitted,

Richard S. Whitt, Esq.
Washington Telecom and
Media Counsel
Google Inc.

[11] Ofcom Statement at ¶ 6.26.

[12] Ofcom Statement at ¶ 6.27.

[13] In addition, there are a number of leading examples of the success of unlicensed use of spectrum. *See* Matt Barranca, *Unlicensed Wireless Broadband Profiles*, New America Foundation Spectrum Policy Program, April 2004 (illustrating how and why commercial Wireless Internet Service Providers have utilized unlicensed spectrum in the 2.4GHz, 5 GHz, and 900 MHz to offer high-speed Internet access to rural and low income areas nationwide.) The Commission also recognizes the tangible benefits and innovative services that unlicensed spectrum can bring to rural communities. A 2003 white paper found that rural communities benefit from unlicensed spectrum where broadband or dialup services are not readily available or slow to develop. *See* Kenneth R. Carter, Ahmed Lahjouji, and Neal McNeil. Unlicensed and Unshackled: A Joint OSP-OET White Paper On Unlicensed Devices and Their Regulatory Issues, Federal Communications Commission, May 2003, at 39.