Microsoft Corporation's response to Ofcom's consultation on the future of the UHF bands

7th June 2012

Microsoft wholeheartedly supports the joint comments submitted by the Cambridge White Spaces Consortium and Google on the future of the UHF bands. Microsoft concurs that Ofcom should facilitate licence-exempt access to the unused portions of the UHF bands – the TV white spaces – with access enabled by geolocation databases. We agree that enabling licence-exempt access to the TV white spaces will increase the efficiency of spectrum use in the UHF bands and help address growing consumer demand for voice, video, and data applications and services.

Rather than repeat all the views expressed in the Cambridge Consortium's comments, Microsoft takes this opportunity to share with Ofcom a paper prepared for release this week by the economist, Richard Thanki, entitled*The Economic Significance of Licence-Exempt Spectrum to the Future of the Internet*. Expanding upon a paper he authored in 2009,Mr. Thanki'slatest paperprovides a comprehensive review of the extent to which consumers are now relying on licence-exempt spectrum access for fixed and mobile broadband connectivity. As the paper notes, the amount of traffic now transmitted over Wi-Fi dwarfs the amount of traffic transmitted over either fixed or cellular broadband connections. For example, according to Thanki: "the aggregate spectral efficiency of the 2.4GHz band is at least 30 times greater than the overall efficiency of any cellular band".

In his paper, Mr. Thanki looks at the contribution licence-exempt spectrum access, particularly below 1 GHz and in the TV white spaces, couldmake in addressing three policy challenges: (1) Delivering universal and affordable broadband access; (2) Enabling the machine-to-machine networks of the future; and (3) Ensuring that communications networks are resilient, particularly in the face of natural and manmade disasters. Mr. Thanki poses the following question to policy-makers, which is pertinent to Ofcom's consideration of the future of the UHF bands:

> *Before acting, policy-makers should consider a central question: what balance of additional licensed/exclusive-use and licence-exempt/open access usage rights is most likely to expand access to broadband and meet the growing demand for data?*

Mr. Thanki concludes that increased licence-exempt spectrum access will be necessary to help address these challenges and therefore both licence-exempt and licensed access should be a part of regulators' future spectrum planning. Specifically, Mr. Thanki recommends that policymakers make use of the power of dynamic spectrum sharing technology (including geolocation databases) to extended licence-exempt access to spectrum across as full a range bands as possible, including the TV white spaces.