Intel's Response to Ofcom's consultation "Licence Exempt spectrum use in the 2400 MHz band"

2.4 GHz licensed exempt (RLAN, Wi-Fi) spectrum is widely used to connect Wi-Fi-enabled devices to the Internet. 2.4 GHz Wi-Fi today is generally available globally with cell sizes ranging from a few metres to much larger coverage areas requiring a group of access points with overlapping coverage. Outdoor public Wi-Fi technology is also increasingly being deployed in urban areas. Wi-Fi provides wireless internet connectivity within private homes, businesses, transportation networks, as well as in public spaces through Wi-Fi hotspots. The societal and economic benefits from being able to access the internet using Wi-Fi under a license exempt regulatory regime are difficult to quantify. However, it is clear that 2.4 GHz Wi-Fi today, and 5 GHz Wi-Fi increasingly so, is beneficial and from an end-user perspective a fundamental and expected communication option in today's fast-paced world. Intel fully understands the benefits from license-exempt spectrum as recognised via our global campaign around "Intel® Centrino®" and the creation of associated Wi-Fi hotspots globally.

Intel acknowledges that any utilization of 2.4 GHz spectrum for licensed exempt (RLAN, Wi-Fi) use is on an unprotected basis and that there is no guarantee of interference operation. We do however note that the 2.4 GHz band is intensively throughout the UK for personal use and also extensively used by businesses. Wi-Fi technology is embedded into practically every mobile device, smartphone, tablet, laptop, and Ultrabook™ which connect to wireless routers in most homes, business premises and public Wi-Fi hotspots.

We support the desire to maximise the commercial opportunities to utilise as much as possible of the 2.3 GHz band. We note that 2.4 GHz band is license exempt and therefore doesn't have the status to require/request protection from primary services. Given the importance of Wi-Fi, we also support providing additional spectrum (e.g. through additional 5 GHz spectrum) to allow users to migrate to 5 GHz if there are any instances of performance degradation due to new 2.3 GHz deployments.

We further note that ITU-R WP5A has just completed work on WRC-15 Agenda Item 1.1 on spectrum estimates for RLAN networks through 2018: they concluded that as a minimum 880 MHz total Wi-Fi spectrum is needed in the 5 GHz frequency range meaning that an additional ~200 MHz in 5 GHz is required.