UK telecoms regulator studies possibility of 5G

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A cell phone tower. Credit: Wikipedia

(Phys.org)—Minding the need for more and more mobile spectrum in a post-4G environment, Ofcom, the UK telecoms regulator, announced on Friday that it is preparing to support the release of spectrum for future mobile services, possibly 5G, when the spectrum becomes available. It's all about needed support for future mobile network capacity needs. Ofcom said it is looking into a way to avert the risk of a capacity crunch in mobile data as people consume more bandwidth on mobile devices, making sure that the mobile infrastructure in the UK can continue to support the growth in consumer demand.

Ed Richards, Ofcom chief executive, said: 'Within the coming months we will hold the UK's largest-ever auction of mobile spectrum for 4G.

However, that may not be enough to meet consumers' future data demands, which is why we are already making significant efforts to prepare to go beyond 4G."

Ofcom reckoned that, by 2030, demand for mobile data could be 80 times higher than today. An estimated 20 million Gigabytes of data is consumed per month over mobile networks in the UK, which is over twice (nine million Gigabytes) the monthly consumption rate last year.

The BBC said the rise could be traced to "users' love of video, TV and films while on the move." Ofcom, meanwhile, said half of all data transmitted in the UK is consumed by a "hungry hardcore of surfers" who account for only 10 percent of Internet users. (Ofcom also revealed that Northern Ireland is leading the way in superfast broadband, with higher takeup (11.4%) and coverage (95%) than any other part of the UK.)

So where will the spectrum come from? The 700MHz frequency band, currently used by digital terrestrial television (DTT), is in the plan. This band for digital DTT could be moved to a new set of frequencies, Ofcom said, freeing up the 700 MHz band. In other words, alternative frequencies will need to be provided for DTT. Ofcom said the spectrum drawn from this band would support 5G services without requiring any switchover, as with 4G; Richards, called the change "a migration." In most cases it would only require a re-tune of existing TV equipment.

The UK's first 4G network has only just got under way—with the October announcement that the UK's first 4G mobile service launched in 11 cities by EE. Ofcom anticipates the next generation of mobile tech will be introduced towards the end of the decade; the spectrum plan would not happen before 2018.

Ofcom pointed to another reason, alongside consumer data demands, for

looking into future spectrum plans. Drawing on the 700 MHz band would align with future harmonized spectrum planning across Europe. Ofcom said that harmonizing spectrum frequencies used for mobile broadband with other countries could "create economies of scale and widen the availability of handsets, which should in turn reduce prices for consumers."

Ofcom suggested there is also an "untapped opportunity" for public Wi-Fi to meet consumer data demands. About 25 times more data is currently downloaded over mobile networks than Wi-Fi hotspots, but Wi-Fi could play a bigger role in meeting future data demands and avoiding a mobile network capacity crunch. UK has presently 16,000 Wi-Fi hotspots.

Ofcom is an independent regulator and competition authority for the UK communications industries. Ofcom operates under the Communications Act 2003, an Act of Parliament. Accountable to Parliament, Ofcom is funded by fees from industry for regulating broadcasting and communications networks, and grant-in-aid from the government.

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