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Via email:

Jack Hindley
Ofcom

Dear Jack,

Three's Response to Ofcom's Consultation on Mobile Phone Repeaters

Three is pleased to respond to Ofcom's consultation on Mobile Phone Repeaters. We support Ofcom's intentions to improve mobile coverage; however, we are concerned about Ofcom's proposals, as set out in its consultation.

Three supports the principle of a multi-operator repeater for increasing coverage

Three is committed to investing in network improvements that deliver increased mobile coverage and improve the quality of services offered to customers. We are continuously increasing our 4G footprint and we currently offer Voice over LTE (VoLTE) to address customer demand for improved coverage and increased data speeds.

We provide our customers innovative ways to improve their coverage - our Three In Touch app has recently been upgraded to allow customers to seamlessly switch to Wi-Fi calling where mobile signal is not available. Further, all our existing customers who purchased a compatible device from Three and have the latest software will automatically have Three In Touch installed on their devices.

Three has been working with Ofcom and industry to help develop an industry-approved multi-operator repeater. We will continue to provide our support to develop a solution for a consumer self-install repeater, one which does not lead to additional operational and maintenance complexities for operators. As we have previously proposed, a recommendation should be produced by an independent third party and then endorsed by mobile operators.

There are some shortcomings with existing proposals

(i) Current proposals are underdeveloped at this stage

We recognise Ofcom's intention to offer customers solutions to improve their mobile coverage. Further, we support the inclusion in Ofcom's repeater proposals of standards that will make permitted repeaters more robust to prevent interference to existing MNO networks. However:

- While we understand that the FCC technical specification has been used for a similar purpose in the US, and this is a good starting point, these standards are not appropriate for wholesale transfer to the UK. For example, proposals do not adequately deal with the situation where multiple repeaters are located in close proximity to one another. These standards need further study before they can be implemented in the UK.
- Ofcom does not estimate the cost of modifications to decrease interference, but increasing these specification enhancements will undoubtedly increase the cost of these repeaters substantially relative to the illegal repeaters unanimously understood to cause significant interference to MNOs. Therefore, a proposal aimed at addressing the issue of interference from illegal repeaters with a more expensive alternative must also include continued enforcement action by Ofcom to remove the existence of illegal repeaters in the UK.
- The case presented by Ofcom for in-vehicle repeaters is weak, and does not merit action without provision of further evidence of its value.

(ii) Proposals must require repeater owners to provide accurate and up to date geo-location information relating to their repeaters.

Ofcom's current proposal allows customers to purchase and self-install repeaters without prior permission. This may result in multiple co-located repeaters being installed in certain locations unknown to mobile operators. Ofcom's consultation does not set out how the installation of devices will be managed, or how interference caused as a result of multiple repeaters installed in close proximity will be identified and resolved.

It is a complex and challenging task for mobile operators to identify and isolate existing network interference. Further increasing this complexity of this task will have the effect of unnecessarily prolonging service degradation to nearby customers.

Ofcom needs to find a mechanism that will prevent co-location of repeaters resulting in undue interference. One step in doing this is to ensure that there is a central record containing accurate geo-location information on any self-installed devices. Knowing where repeaters are located is important insight for operators when investigating interference issues on their networks.

Three will remain engaged on this important issue for the mobile industry

Three is happy to continue working with Ofcom to ensure a technical specification is developed that will address operator and Ofcom's needs. A proposal provided by a third party which is informed by input from Ofcom, industry and repeater manufacturers will identify and achieve a solution that will be beneficial to all parties involved.

Regards,

Eimear Sexton
Head of Regulation: Spectrum