



Trade of frequencies in the 1452-
1492 MHz band from Qualcomm UK
Spectrum Ltd to Vodafone Limited and
Hutchison 3G UK Limited

Statement
22 September 2015

About this document

This Statement sets out our decision to grant consent for the transfer of spectrum holdings from Qualcomm to Vodafone Ltd (in respect of the 1452-1472 MHz frequencies) and to Hutchinson 3G UK Ltd (in respect of the 1472-1492 MHz frequencies). In doing so it explains that we do not consider that these transfers raise sufficient competition concerns to justify further analysis.

Consideration of Mobile Trading Application received from Qualcomm UK Ltd, Vodafone Limited and Hutchison 3G UK Ltd

Introduction and Summary

- 1.1 Qualcomm UK Spectrum Ltd (“Qualcomm”) is the holder of a Wireless Telegraphy Act licence for the 1452-1492 MHz spectrum band. On 26 August 2015 Ofcom received notice of two proposed transfers of spectrum covered by the Qualcomm Wireless Telegraphy Act licence. In accordance with the requirements of Regulation 7 of the Wireless Telegraphy (Mobile Spectrum Trading) Regulations 2011¹ (as amended in 2015) (“the Regulations”), Qualcomm notified Ofcom of the following proposed transfers of spectrum holding:
- Qualcomm and Vodafone Limited (“Vodafone”) have applied to transfer from Qualcomm to Vodafone the rights and obligations which relate to the 1452-1472 MHz frequencies; and
 - Qualcomm and Hutchison 3G UK Ltd (“Three”) have applied to transfer from Qualcomm to Three the rights and obligations which relate to the 1472-1492 MHz frequencies.
- 1.2 In accordance with the Regulations, we have considered whether or not to consent to the proposed transfers. As part of this process, we have conducted an initial assessment of whether the proposed transfers raise sufficient competition issues to justify further analysis. In summary, we do not consider that either of the proposed transfers raises sufficient competition issues to justify further analysis. We have not identified any other reason to withhold consent from the proposed transfers being effected. We have therefore granted consent for the transfers.

Ofcom consent – Matters to be taken into account

- 1.3 Under the Regulations, transfers of rights and obligations under Wireless Telegraphy Act licences are subject to Ofcom’s consent before they may be completed. The matters which Ofcom is required to take into account in deciding whether or not to grant consent, set out in Regulation 8, are whether:
- a) the holder is, or the concurrent holders are, in breach of the terms of the wireless telegraphy licence under which the rights and obligations are to be transferred;
 - b) the transferee is able to meet the terms, provisions and limitations of the wireless telegraphy licence which is to be granted as a result of the transfer;

¹ <http://www.legislation.gov.uk/ukxi/2011/1507/contents/made>
http://www.legislation.gov.uk/ukxi/2015/1339/pdfs/ukxi_20151339_en.pdf

- c) in the case of a transfer authorised by Regulation 5 the transferor is able to meet the terms, provisions and limitations of the wireless telegraphy licence which is to be granted as a result of the transfer;
- d) the transferee is able to meet any criteria relating to the persons to whom a wireless telegraphy licence of the class under which rights and obligations are to be transferred may be granted;
- e) competition is likely to be distorted as a result of the transfer; and
- f) it is requisite or expedient to refuse consent to the transfer —
 - o in the interests of national security;
 - o for the purposes of complying with a Community obligation of the United Kingdom or with any international agreement or arrangements to which the United Kingdom is party; or
 - o for the purposes of complying with a direction by the Secretary of State given to OFCOM under section 5 of the Communications Act 2003 or section 5 of the Wireless Telegraphy Act 2006.

1.4 Ofcom has carefully considered each of these elements before reaching a decision on whether to consent to the proposed transfers.

Invitation to Comment

1.5 In considering whether competition is likely to be distorted as a result of the transfer, on 27 August 2015, Ofcom invited interested parties to submit comments by 11 September 2015 detailing any competition concerns they might have about the proposed transfers.²

1.6 One submission was received by the 11 September deadline. This expressed the view that the transfers would not harm competition and had the potential to make good use of the spectrum.

Licensing Issues

1.7 Regulation 8(a) to (d) concerns the extent to which the transferor may have breached a Wireless Telegraphy Act licence and whether or not the transferee may hold, and comply with, the licence³.

1.8 In respect of Regulation 8(a), Ofcom is not aware of any breaches by Qualcomm of the licence for the 1452-1492MHz spectrum band.

² <http://stakeholders.ofcom.org.uk/consultations/mobile-trading-regs-apr-15/trading-update-270815/>

³ Regulation 8(c) relates to a situation where a transferor will retain rights and obligations in respect of part of the frequencies covered by its licence. In those circumstances, Ofcom is required to consider whether the transferor will be able to comply with the terms of its revised licence. In the present case, Qualcomm will not retain any rights and obligations and therefore it is not necessary to consider the extent to which Qualcomm would be able to comply with any licence.

- 1.9 As regards the proposed transferees' ability to meet the terms, provisions and limitations of Wireless Telegraphy Act licences, as set out in Regulation 8(b), we note that the proposed transfers would involve issuing two new licences, one for the 1452-1472 MHz spectrum band and one for the 1472-1492 MHz band to Vodafone and Three respectively. Those licences will contain the same rights and obligations as the licence currently held by Qualcomm save in respect of the frequencies to which they apply.
- 1.10 Vodafone and Three already hold a number of Wireless Telegraphy Act licences in a range of mobile spectrum bands.⁴ Ofcom has not to date taken formal enforcement action against either Vodafone or Three in respect of any of these licences. Further, we have no reason to believe that either Vodafone or Three would not be in a position to meet the conditions which would be included in any Wireless Telegraphy Act licence issued as a result of the proposed transfers. We therefore consider that the conditions on Regulation 8 (b) are likely to be met.
- 1.11 Both Vodafone and Three already hold Wireless Telegraphy Act licences and are therefore able to meet the criteria for persons that may hold the licence currently held by Qualcomm. We are not therefore of the view that the consideration in Regulation 8(d) gives rise to concern.
- 1.12 In light of the above assessment, we are satisfied that both Vodafone and Three are able to meet the terms, provisions and limitations which will be included in any Wireless Telegraphy Act licence as a result of the proposed transfers and that they meet the criteria required for holding such licences.

Impact on competition

- 1.13 Under Regulation 8(e), we are also required to consider whether competition is likely to be distorted as a result of the proposed transfers. In line with the Guidance note on procedures for competition assessments⁵, we have therefore conducted an initial assessment of whether or not the proposed trades raise sufficient competition issues to justify further analysis. We have invited stakeholders to comment on any competition concerns arising and no party has opposed the proposed transfers.
- 1.14 In our initial assessment, we have considered the extent to which the proposed transactions may give rise to a distortion of competition. In doing so, we are mindful of the fact that two potential mergers involving holders of Wireless Telegraphy Act licences for mobile spectrum are in progress. BT Group plc has notified the Competition and Markets Authority ("CMA") of its intention to acquire EE Limited ("EE"). The CMA is considering the transaction and is expected to reach a final decision in November 2015.⁶ In addition, Hutchison 3G UK Investments Limited

⁴ Vodafone holds licences covering: 801.0-811.0 MHz / 842.0-852.0 MHz in the 800 MHz band; 925.1-930.1 MHz / 880.1-885.1 MHz, 935.1 - 939.7 MHz / 890.1 - 894.7 MHz and 947.3 - 955.1 MHz / 902.3 - 910.1 MHz in the 900 MHz band; 1810.9 - 1816.7 MHz / 1715.9 - 1721.7 MHz in the 1800 MHz band; 2134.9 - 2149.7 MHz / 1944.9 - 1959.7 MHz in the 2100 MHz band; 2570.0 - 2595.0 MHz and 2620.0 - 2640.0 MHz / 2500.0 - 2520.0 MHz in the 2.6 GHz band. Three holds licences covering: 791.0 - 796.0 MHz / 832.0 - 837.0 MHz in 800 MHz band; 1816.7 - 1826.7 MHz / 1721.7 - 1731.7 MHz and (from October 2015) 1826.7 - 1831.7 / 1731.7 - 1736.7 MHz in 1800 MHz band; 1914.9 - 1920.3 MHz and 2110.3 - 2124.9 MHz / 1920.3 - 1934.9 MHz in the 2100 MHz band.

⁵ <http://stakeholders.ofcom.org.uk/binaries/consultations/trading-900-1800-2100/statement/900-1800-2100-statement.pdf> at Annex 1

⁶ <https://www.gov.uk/cma-cases/bt-ee-merger-inquiry>

(owner of Three) has recently notified the European Commission of its intention to acquire Telefonica Europe Plc (owned by Telefonica and operating under the O2 brand) and the European Commission is conducting an investigation.⁷

- 1.15 Our assessment of the impact of these proposed transfers does not, however, take into account the effect of either transaction being completed. Neither transaction has been completed and both are subject to regulatory clearance⁸. In both cases, the relevant authority (the CMA or the European Commission) will be able to take account of Ofcom's decision in relation to the proposed trades in deciding whether or not there are competition concerns raised as a result of the mergers which warrant further action. Accordingly, to the extent that either of the proposed transfers raises any concerns in relation to the mergers under consideration, it will be for the relevant authority to consider this at that time.

Ofcom's assessment of whether trades raise sufficient competition concerns

- 1.16 In our award of spectrum in the 800MHz and 2.6 GHz bands ("the 4G award"), we identified potential competition concerns where there were significant asymmetries in spectrum holdings between MNOs. As part of the measures we introduced to promote competition in the 4G award, we imposed an overall spectrum cap on spectrum falling within the Regulations at that time, and also a cap on holdings of sub 1 GHz spectrum.⁹
- 1.17 Below we first consider whether the proposed trades of the 1452-1492 MHz spectrum could raise competition concerns due to asymmetries in overall mobile spectrum holdings. We then consider whether the proposed trades could raise competition concerns due to asymmetries in holdings of "low frequency spectrum" if the 1452-1492 MHz spectrum were to be considered sufficiently similar to the 800 MHz and 900 MHz mobile bands for it to be viewed as "low frequency spectrum" in this context. Considering the issues in this way is consistent with how we discussed them in our September 2014 consultation on the variation of the licence for the 1452-1492MHz spectrum.¹⁰
- 1.18 For reference, the spectrum holdings that each MNO would have following the trades are shown in Figure 1 and Table 1 below.

⁷ http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=2_M_7612

⁸ For the BT/EE merger, see the Competition and Markets Authority's website: <https://www.gov.uk/cma-cases/bt-ee-merger-inquiry>. For the H3G/O2 merger, see the European Commission's website:

http://ec.europa.eu/competition/elojade/isef/case_details.cfm?proc_code=2_M_7612

⁹ See paragraph 4.255, *Assessment of future mobile competition and award of 800 MHz and 2.6 GHz Statement*, Ofcom, 24 July 2012, <http://stakeholders.ofcom.org.uk/binaries/consultations/award-800mhz/statement/statement.pdf>

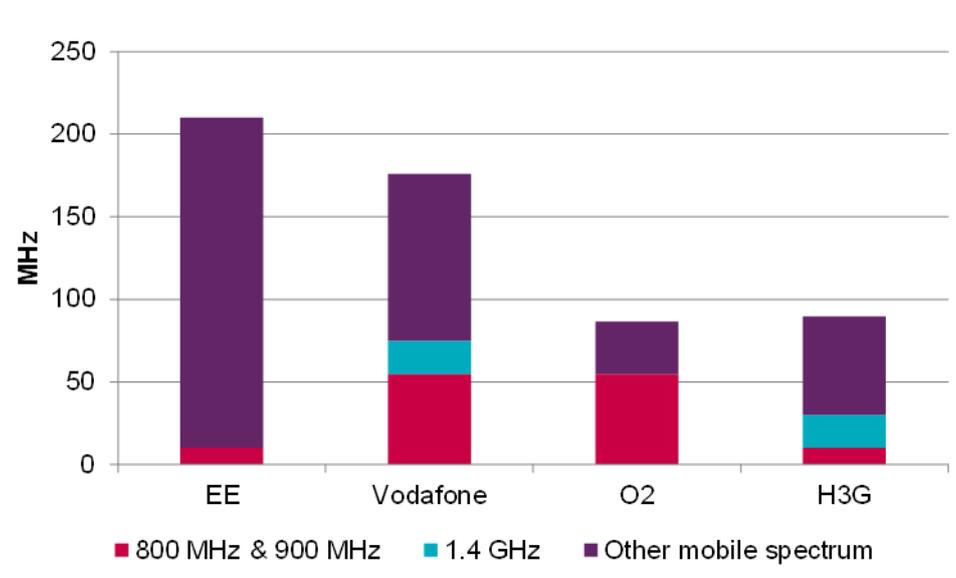
¹⁰ See paragraphs 4.49 to 4.58 in *Variation of the Spectrum Access Licence for 1452-1492MHz and changes for fixed link use in the paired bands 1350-1375 MHz and 1492-1517 MHz*, Consultation, Ofcom, 30 September 2014, <http://stakeholders.ofcom.org.uk/binaries/consultations/licence-variation-1.4ghz/summary/1.4ghz-consultation.pdf>

Table 1: Holdings of mobile spectrum after 1452-1492 MHz spectrum trades (MHz)

Spectrum Band	type	EE	Vodafone	O2	H3G	Total
800 MHz	FDD	10	20	20	10	60
900 MHz	FDD	0	34.8	34.8	0	69.6
1452-1492 MHz	SDL	0	20	0	20	40
1800 MHz	FDD	90	11.6	11.6	30	143.2
2100 MHz	FDD	40	29.6	20	29.5	119.1
2.6 GHz (paired)	FDD	70	40	0	0	110
2.6 GHz (unpaired)	TDD	0	20 ¹¹	0	0	20
Total (MHz)		210	176	86.4	89.5	561.9

Notes: (1) In Table 1 and Figure 1 we have only shown the spectrum holdings of the four MNOs. In addition to the MNOs spectrum holdings, BT holds paired and unpaired 2.6 GHz spectrum and UK Broadband holds 3.4 GHz spectrum. (2) As in our assessment for the 4G award, we consider the unpaired 1900 MHz spectrum is unlikely to be relevant to competition in the mobile market at present. To date, these frequencies have not been used for mobile broadband in the UK (or anywhere else, as far as we are aware); nor are we aware of plans to do so.

Figure 1: Holdings of mobile spectrum after 1452-1492 MHz spectrum trades



Asymmetries in overall mobile spectrum holdings

1.19 As a result of the transfer of this spectrum, Vodafone's total spectrum holdings would increase to 176 MHz and H3G's to 89.5 MHz. These new holdings would still be

¹¹ As for the overall spectrum cap for the 4G award, we have not included all of the 50 MHz of the unpaired 2.6 GHz spectrum as being relevant mobile spectrum. This is because the top 5 MHz of 2.6 GHz and the lowest 5 MHz of any individual company's holding in the unpaired 2.6 GHz band are restricted, to manage the risk of interference between users of unpaired spectrum as well as between users of unpaired spectrum and users of paired spectrum. For more explanation of the treatment of the unpaired 2.6 GHz in the overall spectrum cap in the 4G award, see paragraphs 6.67 and 6.68 and Section 10 of the 4G award competition assessment.

below the existing holdings of EE (of 210 MHz). We therefore consider that there are no competition issues caused by the trade in terms of asymmetries in overall mobile spectrum holdings.

Asymmetries in holdings of “low frequency spectrum”

- 1.20 In the 4G award we concluded that sub-1 GHz spectrum in the 800 MHz and 900 MHz bands had particular characteristics which made it appropriate to impose a cap on the maximum amount of sub-1 GHz spectrum which might be held by a single operator (in addition to the overall spectrum cap). In the 4G award, we set a sub-1 GHz spectrum cap of 2 x 27.5 MHz. This cap was most relevant for Vodafone and Telefónica and meant that each could acquire up to 2 x 10 MHz of the 2 x 30 MHz of 800 MHz spectrum in the award. They both acquired this maximum amount. These caps only applied at the time of the auction, although we regard them as useful points of reference.
- 1.21 The 1452-1492 MHz spectrum is clearly above 1 GHz. Nevertheless, in a response to the September 2014 consultation, a stakeholder argued that the 1452-1492 MHz band was sufficiently similar to the 800 MHz and 900 MHz mobile bands for it to be viewed as “low frequency spectrum”, and that this raised a question as to whether there could be competition concerns over asymmetries in holdings of “low frequency spectrum”.
- 1.22 If the 1452-1492 MHz spectrum were to be considered as “low frequency spectrum” in this context, then Vodafone may hold an amount of low frequency spectrum which exceeded a comparable cap to that imposed in the 4G award. Vodafone currently holds the maximum amount of sub-1 GHz spectrum which was permitted in the 4G award and the proposed transaction would add a further 20 MHz of low frequency spectrum, if the 1452-1492 MHz band were to be treated as low frequency spectrum.
- 1.23 This issue does not arise for H3G, as its existing holding of sub 1 GHz spectrum is more limited at 2 x 5 MHz and the addition of 20 MHz of low frequency spectrum would not exceed a comparable cap.
- 1.24 We do not consider that it is necessary in the present case to reach any conclusion as to whether or not the 1452-1492 MHz spectrum should be regarded as “low frequency spectrum” in this context.¹² This is because, even if it were to be, we do not consider that the proposed trade to Vodafone of 20 MHz of this spectrum would raise a sufficient competition concern to justify further analysis, as discussed below.
- 1.25 We note that the sub 1 GHz cap in the 4G award of 2 x 27.5 MHz applied when there was 129.6 MHz of low frequency spectrum for mobile use, which means the cap

¹² If we did need to reach a conclusion on this point, the factors to consider would include: the propagation characteristics of the different bands (noting that it will be possible to use the 1452-1492 MHz spectrum at higher maximum power than 800 MHz and 900 MHz spectrum and that this may compensate for the fall off in propagation characteristics that generally happens as frequency increases); the prospective development of the equipment ecosystems for the different frequency bands (for the 1452-1492 MHz band, compared to the 800 MHz and 900 MHz bands); and the different roles that FDD and SDL spectrum can play in delivery of mobile services (noting that the 1452-1492 MHz band is configured for SDL and the 800 MHz and 900 MHz bands are configured for FDD).

represented around 42% of the relevant amount available at that time.¹³ If we were now to count the 1452-1492 MHz spectrum as low frequency spectrum in this context, there would be 169.6 MHz of low frequency mobile spectrum in total (consisting of 129.6 MHz at 800 MHz and 900 MHz, and 40 MHz at 1452-1492 MHz). In acquiring half of the 1452-1492 MHz spectrum, Vodafone would have 74.8 MHz of this. This would represent around 44% of the total low frequency spectrum.¹⁴ Vodafone's share of low frequency spectrum therefore would increase from around 42% to around 44%.

- 1.26 Taking into account pre-auction holdings of 900 MHz spectrum and the fact that the smallest 800 MHz lot available in the award was 2 x 5 MHz, this implied that Vodafone and Telefónica were able to obtain up to a maximum of 2 x 10 MHz of 800 MHz spectrum (and other bidders, without any 900 MHz spectrum holdings, were able to acquire 800 MHz spectrum up to the level of the cap, subject to lot sizes). We note that the effect of the cap on the amounts that bidders were able to acquire would in practice have been no different, given the lot sizes available, if it had been set at 2 x 28.5 MHz (44%) of the sub-1 GHz bands, and we did not therefore need to consider such a level at that time.
- 1.27 All national wholesalers now have low frequency spectrum. At the time of the 4G award, our main competition concern related to there being fewer than four credible national wholesalers after the award. However, we also had less important competition concerns relating to one or more of the national wholesalers being at a disadvantage in competing for some services, even if there were four credible national wholesalers. One of these lesser concerns related to the distribution of low frequency spectrum. For example, we were concerned that competition could be weaker if one or more national wholesalers did not have low frequency spectrum.¹⁵ Given the outcome of that award, all four national wholesalers now have low frequency spectrum. Currently, Three and EE have the least, with 2 x 5 MHz of 800 MHz spectrum each. If the 1452-1492 MHz spectrum were regarded as low frequency spectrum, Three would have more following the trade, leaving EE with the smallest holdings of low frequency spectrum. As all four of the national wholesalers now hold low frequency spectrum, this reduces concerns about there being asymmetric holdings of this low frequency spectrum.¹⁶
- 1.28 In light of the above, we do not consider that either of the proposed trades would raise sufficient competition issues to justify further analysis.

¹³ Before the auction Vodafone and Telefónica each held 2 x 17.4 MHz in the 900 MHz band. In the 4G award, there were four blocks of 2 x 5 MHz of 800 MHz spectrum with no coverage obligation, and one block of 2 x 10 MHz of 800 MHz spectrum with a coverage obligation.

¹⁴ We have also considered how Vodafone's share would change if we considered only the downlink capability of the low frequency spectrum (so ignoring the uplink component of the paired 800 MHz and 900 MHz spectrum). It is only fractionally higher, with Vodafone having 45% of low frequency downlink spectrum.

¹⁵ See paragraphs 4.215 to 4.221 and particularly Competition concern 4 in Table 4.10 of the 4G award competition assessment.

¹⁶ However, we do not consider that it necessarily eliminates concerns about the distribution of low frequency spectrum. For example, 2 x 5 MHz cannot provide much sub-1 GHz spectrum capacity (e.g. see paragraph 4.145 of the 4G award competition assessment).

Other Considerations

1.29 Regulation 8(f) sets out a number of additional considerations which Ofcom must take into account in considering whether or not to grant consent to a proposed transfer. None of those matters apply in relation to the proposed trades.

Conclusion

1.30 In light of the above, we consider that it would be appropriate to consent to each of the proposed trades and will proceed to issue licences to Vodafone and Three in respect of the relevant frequency bands. In accordance with Regulation 7(5), the proposed transfers may now be effected by Qualcomm surrendering its licence to Ofcom. Ofcom will then proceed to issue new licences to:

- Vodafone in respect of the 1452-1472 MHz spectrum band; and.
- Three in respect of the 1472-1492 MHz spectrum band.