



**BT's comments on Ofcom's
"Update on Annual licence fees for 900MHz and
1800MHz spectrum: German 2015 auction"**

(Issued by Ofcom on 9 July 2015)

Submitted to Ofcom on 7 August 2015

1. Introduction

BT has followed Ofcom's work on setting annual fees for 900/1800MHz spectrum with interest and has responded to some of the previous consultations. We have reviewed Ofcom's analysis of the 2015 German spectrum auction and offer our comments that we hope will be of assistance to Ofcom in its continuing work to develop suitable annual charges for the 900MHz and 1800MHz band spectrum in the UK.

2. Summary of BT's comments

We note that Ofcom's latest analysis is focused exclusively on consideration of the 2015 German auction rules, the bids made and prices paid. These are compared with the 2010 German auction prices to determine ratios to scale prices between bands, which in turn are applied to UK auction 800/2600MHz auction results to determine 900MHz and 1800MHz annual fees.

We believe Ofcom has materially underestimated the degree of strategic demand reduction that took place in the German auction and its impact on prices, in particular of the 900MHz band, but also more generally. As Ofcom notes in point 24 of the document, the 1800MHz / 900MHz price ratio observed in Germany is out of step with what has been observed in other auctions and we believe this is a consequence of strategic demand reduction, as will be explained in our detailed comments in section 3 below.

Our key further concern is that Ofcom's analysis of how the latest German auction results can be used does not consider the wider context, which in our view is also very important and relevant.

- a) In the period since the 2010 auction the number of operators in Germany has reduced from 4 to 3 and mobile data traffic has grown significantly (if similar to the UK perhaps c. 6 fold). With fewer bidders the spectrum may be less strongly contended in the 2015 auction, which could affect prices. The increase in traffic in the 5 year intervening period also means that the circumstances in which the 2010 and 2015 auction prices were established are rather different. These factors call in to question the validity of comparing the two auction results, held 5 years apart, to establish ratios of relative values of different frequency bands.
- b) The supply of low frequency spectrum in Germany is quite different to the UK (with 700MHz available now in Germany there is ~50% greater supply than in the UK). This must surely reduce the German market values of 800MHz / 900MHz relative to the UK. The availability of the 700MHz alternative affects the observed ratio of German 800MHz / 900MHz prices.
- c) The German 1800MHz award is for only 2x50MHz of the total 2x75MHz bandwidth and is spectrum already in use with committed investments in equipment, which is very different to the situation of bands that were previously awarded empty to which the

price is being compared. This must surely increase the German market values of 1800MHz relative to UK values.

These factors all suggest that, aside from the general concern of strategic demand reduction, added caution is needed when benchmarking German prices to the UK.

Our conclusion is therefore that it is not appropriate to rely on the 2015 German auction results to amend the proposed UK annual charges for 900MHz and 1800MHz spectrum. We believe that the German auction results should be included in Tier 2 for both 900MHz and 1800MHz.

3. Detailed comments on the analysis of the German 2015 auction

Potential for strategic demand reduction

Ofcom notes in its paper (e.g. para 14) that the results of the previous round, including the price and standing high bidder for each lot, were made available to bidders at the start of each round. It is our understanding however that bidders were not only given this information, but also a complete list of all bids made in the previous round, including the price bid and the identity of the bidder. This level of information disclosure presents bidders with considerable opportunity for signalling during the auction, and on the basis of the limited information that is in the public domain, it would appear to us that significant use was made of this opportunity by bidders during the auction.

An auction of this type, where there are only a small number of relatively homogeneous bidders, where there is ample opportunity for signalling between bidders, and there is complete transparency as to who is winning what at each stage of the auction, is more akin to a commercial negotiation than it is to a competitive market. Bidders in such an auction will generally aim to reach an 'acceptable' outcome, as regards who wins what spectrum and at what price, as quickly as possible at the lowest possible price. Bidders in such an auction are generally more interested in ensuring that their competitors pay a 'fair' price for the spectrum they win, by comparison with the price that they themselves have to pay, rather than with any notion of value per se. Moreover, so long as everyone pays roughly the same price for the same type of spectrum (which is not difficult to arrange in such an SMRA), the price of individual lots is far less important to bidders than is the overall amount that they each have to pay: provided that their competitors pay a 'fair' amount overall for the spectrum that they win, bidders are not overly concerned about the prices of individual lots.

As Ofcom itself notes, in the case of the 900MHz band it appears that the bidders very quickly (in round 29) identified the outcome, in terms of the distribution of the spectrum, that was acceptable to all of them. It seems clear to us that subsequent bids in this band that deviated

from the 'agreed' outcome were not actually attempting to change the agreed outcome, but rather where strategic bids related to unresolved 'negotiations' concerning other bands – e.g. bidders made bids in the 900MHz band to 'threaten' competitors that were being too demanding in other bands.

Given this insight, we find it not in the least surprising that the relative prices of 900MHz and 1800MHz spectrum in the German auction were abnormally reversed as compared with practically every other benchmark, with the price of 1800MHz spectrum being higher than that of 900MHz. We believe this is a clear indication that there was strategic bidding in the auction.

In light of this clear evidence of strategic bidding, we believe Ofcom has erred in its provisional view that the results of the German auction should be included in Tier 1. We believe that the German auction results should be included in Tier 2 for both 900MHz and 1800MHz.

We note that in its February consultation, Ofcom itself chose to include the 2010 German auction result for 1800MHz spectrum in Tier 2, in part at least because of its conclusion that prices did not necessarily reflect the market value of the band as a result of strategic bidding (para A8.116).

Further reasons to not include the German auction results in Ofcom's Tier 1 category, aside from the reason of strategic demand reduction, are set out below.

900MHz benchmarking

Ofcom essentially uses the ratio of the 2015 German 900MHz price to the 2010 German 800MHz price (with appropriate adjustments) to multiply the 2013 UK 800MHz price to deduce UK 900MHz market value.

This approach does not account for the fact that 700MHz spectrum is available in Germany (unlike the UK) and was included in the 2015 German auction. Furthermore, with three operators vying for the 2x30MHz of 700MHz available, the competitive intensity is likely to be different to a UK scenario of four operators and this could also have affected the 700MHz price (three operators neatly fit in to the available spectrum with 2x10MHz each). The 700MHz is an alternative band for LTE to 800MHz and is a longer term alternative to 900MHz (or takes pressure off the need to re-farm 900MHz). There is a risk therefore that the 900MHz price in the 2015 German auction is low because of the availability of 700MHz. This, together with the fact that there are only 3 operators now whereas the 2010 German 800MHz prices were set with 4 competing operators, means that to derive a German price ratio with which to scale UK 800MHz prices to 900MHz prices gives a distorted result.

1800MHz benchmarking

Ofcom essentially uses the ratio of the difference between the 2015 German 1800MHz and 2010 German 2600MHz prices, to the difference between the 2010 German 800MHz and 2600MHz prices), multiplied by the difference between UK 2600MHz and 800MHz prices to deduce UK 1800MHz market value.

This raises a significant concern because Ofcom is using ratios of results from two different German auctions, held five years apart, and in very different market circumstances. For example in 2010 there were four MNOs in Germany, whereas in 2015 there were only three. The market for high speed mobile broadband also evolved and matured considerably between the auction in 2010 and the one in 2015. We do not believe that these ratios can be relied upon to give reliable estimates of the ratio of values in the UK today. We believe Ofcom must place a lower weight on ratios of prices derived from auctions held at materially different times, and particularly so if there have been material changes in the market between the two auctions concerned. We believe this is a further reason why Ofcom should consider the evidence from the German auctions to be only Tier 2 evidence and not Tier 1.

A further consideration is whether the 1800MHz price in the 2015 German auction is affected by the facts that:

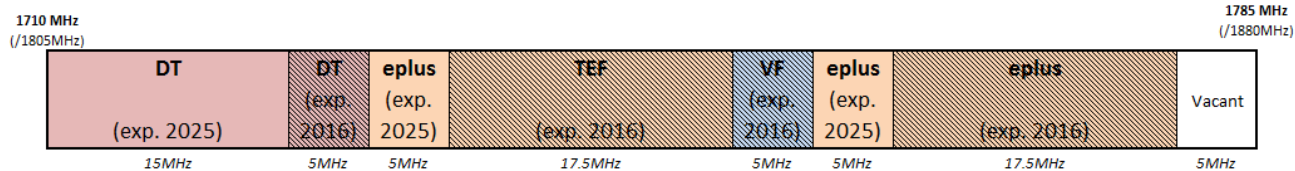
- not all of the 1800MHz bandwidth was included the auction (affecting competitive intensity), for example Vodafone competed to win half of the auctioned spectrum to secure a third of the band.
- the amount of spectrum bid for would be likely to affect the position within the band, which might have affected bidders demand and valuations in terms of protecting existing equipment investments in specific parts of the band even if this at the same time would adversely affect other bidders' similar investments. For example, Vodafone won the "specific" lot located at the top of the band and since it also secured a further 4 abstract lots it seems it may achieve a contiguous assignment that could encompass parts of the band that span expiring as well as an existing licence that was assigned to ePlus. See Annex 1 for an illustration of the situation as we understand it.

The above considerations lead us to the view that the 1800MHz prices in the 2015 German auction might be higher than would be the case if the spectrum were empty and had been awarded on the same basis and at the same time as the spectrum to which it is being compared. We therefore suggest that Ofcom should not include the latest German auction results to adjust the proposed UK 1800MHz spectrum values.

ANNEX 1

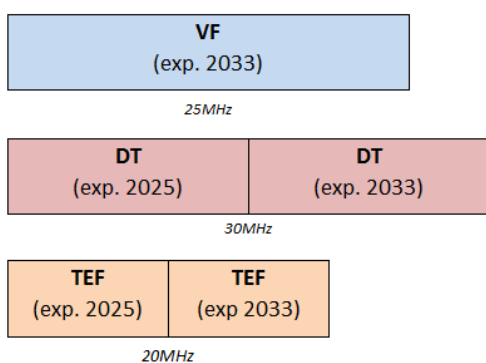
Illustration of German spectrum assignments in the 1800MHz band

Pre-auction spectrum holdings



Note: For simplicity, uplink and downlink spectrum is not separately illustrated
Expiring licences are shown shaded, representing spectrum for re-auction

Post-auction spectrum holdings (actual position in band not yet announced)



Vodafone won the specific lot located at the top of the band.
Other lots are abstract lots, to be assigned within one month of the auction, preferably as contiguous spectrum.

Source: BT (from CEPT ECO Report 03 and Bundesnetzagentur web site)