



Commission for
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DotEcon's assessment of comments on ComReg Document 16/22

A report for ComReg

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An Coimisiún um Rialáil Cumarsáide
Commission for Communications Regulation

Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 Ireland

Telephone +353 1 804 9600 Fax +353 1 804 9680 Email info@comreg.ie Web www.comreg.ie

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DotEcon's summary, assessment and recommendations
August 2016

1. As ComReg's expert economic adviser, in this document DotEcon sets out its understanding of the comments received by ComReg on the 3.6GHz award Draft Information Memorandum (IM) that relate to issues on which DotEcon is advising ComReg, and our recommendations in relation to same. This document does not deal with comments received that may be relevant to the IM but which have already been addressed by ComReg in its response to consultation and Decision document (Document 16/57).
2. In this note we summarise the comments received from respondents grouping them by topic, and provide our assessment and recommendations for each of these topics. The topics covered in this note are:
 - 1 Auction rules
 - 2 Split assignments
 - 3 Eligibility points
 - 4 Winner Determination and Pricing software
 - 5 Deposit requirements
 - 6 Excluded bidders
 - 7 WDP algorithm
 - 8 Scheduling

1 Auction rules

3. Vodafone supports the proposed bandplan and a technology/service neutral auction. However, it argues that a CCA with regional lots is likely to be complex and requests that auction format and rules are kept stable for as long as possible before the start of the auction. It also demands that the timetable is not compressed to allow operators sufficient time to fully prepare.

Assessment and recommendations

4. Based on the comments received there does not seem to be any need to make substantive changes to the auction rules. DotEcon also understands that there will be:
 - a presentation to interested parties on the award process and auction rules; and
 - mock auctions for all bidders to help operators familiarise themselves with the auction rules.

2 Split assignments

5. In its response to ComReg Document 15/140, Vodafone argued that the difference in availability of equipment supporting frequencies above and below 3.6GHz means it might be desirable to have spectrum rights in both parts of the band. Vodafone reiterated its view in its comments on the Draft IM, and expanded on this point with the suggestion that the negotiation phase could allow for non-contiguous assignments, if approved by other winning bidders.

Assessment and recommendations

6. Allowing for split assignments would materially increase the complexity of the award process. Moreover, increasing the flexibility for negotiating more complex, non-contiguous, frequency assignments in the negotiation phase would require a more in depth consideration by ComReg before approval. In particular, where there are concerns that an alternative assignment could constitute an undesirable award outcome (e.g. if it might impair ComReg's ability to conduct effective spectrum management in the future without any clear benefit to the market), ComReg would need to make a careful assessment before determining whether or not to allow the negotiated alternative. Such assessments can be complex and time consuming and may even require consultation with stakeholders. Such a process may therefore not be feasible within the time currently allocated for the negotiation phase, and could result in delays to the conclusion of the award.
7. We note that requests for alternative frequency assignments may be submitted to ComReg after the conclusion of the award process. Rearrangements of frequency assignments that involve options not currently allowed for by the auction rules can be requested and dealt with separately, outside of the award process. This should not in any way impact on the outcome of the award, as at the time of the negotiation phase all bids would have already been submitted and processed, and (provisional) frequency assignments established. Therefore, even if the award process does not offer the possibility for

a bidder to obtain a split assignment, this does not preclude bidders from subsequently pursuing such an option.

8. Given the above considerations, we recommend that complex rearrangements of frequency assignments such as that proposed by Vodafone are not allowed during the negotiation phase, in order to facilitate a timely award process and avoid any delays to the issuing of licences.

3 Eligibility points

9. 3IHL expected a constant relationship between eligibility points and the reserve price of a lot and requests an explanation of the logic used to determine eligibility points.

Assessment and recommendations

10. Differences in eligibility points create impediments to switching. As a very simple example, suppose there are three lots, A, B and C, which have been assigned corresponding eligibility points of 5, 6 and 10 respectively. Eligibility points have been set to align exactly with the relative difference between the minimum prices of the licences (i.e. A and B have very similar, but slightly different, estimated value, and together are expected to be worth roughly the same as the single C lot). It is not unreasonable to expect that a bidder might wish to switch between A and B, or between AB and C as prices develop. With the activity rules proposed, it is always possible to switch demand from B to A or from AB to C, but switching demand the other way would require submitting a relaxed primary bid (and any corresponding chain bids) and would only be allowed under specific conditions. Even if the relaxed activity rules already mitigate switching impediments, restricting switching between similar lots seems unnecessary, adds to the complexity of bidding, and in this context is likely to have little or no benefit.¹
11. The eligibility points we have proposed are therefore loosely but not directly related to minimum prices. We have recommended

¹ Switching between lots is restricted through the use of eligibility points (and by assigning eligibility points to lots in a way that roughly reflects estimated relative values) to help to ensure bidders cannot hide their demand by bidding for less valuable lots early in the primary bid rounds and then only switching to the more valuable lots later on. This is not a concern where values across lots are expected to be similar, and restricting switching between lots based on small differences in estimated values is unlikely to be beneficial to the outcome of the award process, but may increase complexity for bidders by requiring relaxed primary bids that could otherwise be reasonably avoided.

assigning the same eligibility points to lots in regions that have a broadly similar minimum price, to facilitate switching across regions and to simplify bidding in the auction. For example, whilst the minimum prices for spectrum lots in Limerick, Waterford and Galway differ, they are of a similar magnitude; we therefore recommend assigning the same eligibility points to spectrum lots of the same type in these regions, allowing bidders the flexibility to easily switch between those regions. Similarly, where eligibility points differ across regions, the relativities have been set to facilitate switching between combinations of regions of similar value. This approach however does mean that there is not a precise constant relationship between minimum prices and eligibility points, as pointed out by 3IHL. In this regard, we also note that using a constant relationship does not guarantee that eligibility points reflect the value differences across lots for all bidders, as actual relative values might differ (to a degree) across bidders and relative to the market value estimates taken as reference when setting minimum prices.

4 Winner Determination and Pricing software

12. 3IHL requests clarification on whether the standalone winner and price determination (WDP) software could be run on standard PCs or whether a higher specification would be required.

Assessment and recommendations

13. Our current expectation is to provide access to the winner determination and pricing (WDP) software as an online tool, accessible using an internet browser, rather than as an executable file to be run on a bidder's computer. In this case the hardware required for running the backend of the software would be provided by ComReg, and there would be no special hardware requirements for users. The precise approach for providing access to the WDP software will be determined by ComReg in consultation with DotEcon during the implementation of the project, and bidders will be notified as soon as possible of any relevant requirements.

5 Deposit requirements

14. 3IHL would like clarification on deposit requirements following the Assignment Round. Specifically, it asks whether the intention is *"to ensure that the standing deposit is as large as the Base Price plus the amount of the highest bid"*.

Assessment and recommendations

15. If a deposit call is made following the Assignment Round, a bidder may be required to top up its deposit to an amount that covers the

total of its base price plus the highest assignment bid it submitted during the assignment round. As currently drafted, the auction rules do not allow any flexibility regarding the level of the top-up – if there is a deposit call, then the amount required would have to cover the full amount of a bidder's base price plus its highest assignment bid. This contrasts with the approach taken in the main stage of the auction, where ComReg may ask for a deposit top-up that is less than the highest bid submitted by the bidder.

16. We recommend amending the auction rules to provide the same flexibility to ComReg in determining the deposit requirements following the Assignment Round. We recommend, however, that the level of the deposit call (within the bounds of the auction rules) should be at the sole discretion of ComReg and, for the avoidance of doubt, that ComReg should still be able to require that each bidder must increase its deposit to cover the full amount of its base price plus its highest assignment bid following the assignment round.

6 Excluded bidders

17. 3IHL requests that if a bidder is excluded, other bidders should be informed of this to avoid misleading bidders. Additionally, it claims that it would be inappropriate to allow the auction to continue while including the bids of an excluded bidder.

Assessment and recommendations

18. We cannot anticipate all circumstances in which a bidder might be excluded from the auction. Therefore, the appropriate course of action following exclusion of a bidder, including the information provided to other bidders and how to progress with the award process, would need to be determined on a case-by-case basis, depending on the specific circumstances. We would not recommend including specific provisions in the IM for providing information to bidders in these cases or for invalidating bids of excluded bidders, as this could prevent ComReg from taking the most appropriate action which could be detrimental to the award process. The relevant decisions should be made as necessary at ComReg's discretion.

7 WDP algorithm

19. 3IHL suggests that random selection in the WDP process is inappropriate, and ComReg should develop an alternative method. Additionally, it suggests that ComReg should notify affected bidders in a situation where the WDP algorithm does not produce a unique set of winning bids.

Assessment and recommendations

20. No information has been provided by 3IHL as to why ComReg's approach is inappropriate. Random selection is a standard approach when using the CCA format (as for the MBSA) and other spectrum auction formats. It is a last resort option to be applied when all other reasonable and fair approaches to choosing between outcomes have been exhausted. We do not believe there is a better method that is fairer to bidders, and we do not consider it appropriate to change this for the 3.6GHz award.
21. We do not recommend adopting 3IHL's proposal to inform bidders that are involved in a tie, as this could reveal sensitive information about other bidders' valuations without offering any clear benefits to the award process.

8 Scheduling

22. 3IHL in general approves of the schedule set out by ComReg, but suggests that a "longer than normal period should be left between revealing the result of the application round and the first bidding round".

Assessment and recommendations

23. 3IHL provides no indication of what it considers to be "a normal period" or what an appropriate length of time would be. We note that the indicative timetable for the award is set out in Table 9 of the Draft IM (and will also be provided in the Final IM), and that the scheduling of the primary bid rounds is at the discretion of ComReg, as per paragraph 4.24 of the Draft IM. We do not see any basis for recommending that ComReg amends its proposals in this regard.