

Information Notice

GSM Liberalisation Project: Publication of correspondence and other material provided by interested parties (and ComReg's written responses to same) relating to 'Transition' issues and Interim GSM 900 MHz licences dating from 18 September 2012 to 9 January 2013

Document No:	13/06
Date:	15 January 2013

A.1 Non-confidential correspondence and other material provided by interested parties relating to 'Transition' issues and Interim GSM 900 MHz licences (and ComReg written responses to same) from 18 September 2012 until 9 January 2013.

- 1. Telefonica: letter to ComReg "Auction Delay" (letter dated 18 September 2012)
- 2. ComReg: letter to Telefonica "Auction Delay" (letter dated 20 September 2012)
- 3. ComReg: letter to Telefonica "Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 3 October 2012)
- 4. Telefonica: letter to ComReg "Transition Planning and Rule Change" (letter dated 8 October 2012)
- 5. ComReg: letter to Telefonica "Transition Planning and Rule Change" (letter dated 15 October 2012)
- ComReg: letter to Telefonica "Information Requirements pursuant to section 13D(1) of the Communications Regulation Act 2002" (letter dated 17 October 2012)
- A&L Goodbod y: letter to ComReg "Telefonica Ireland Limited ("Telefonica")
   Transition Planning and Information Request (letter dated 24 October 2012)
- 8. ComReg: letter to A&L Goodbody "Information Requirement pursuant to section 13D(1) of the Communications Regulation Act 2002" (letter dated 26 October 2012)
- 9. Telefonica: letter to ComReg "Transition Planning and Interim GSM Licence Consultation" (letter dated 2 November 2012)
- 10. Telefonica: presentation sent to ComReg "Spectrum Transition Project" (presentation dated 2 November 2012)
- 11. ComReg: letter to Telefonica "Transition Planning and Interim GSM Licence Consultation – following ComReg's information request of 17 October 2012 to Telefonica Ireland Limited pursuant to 13D(1) of the Communications Regulation Act 2012" (letter dated 8 November 2012)
- 12. Telefonica: letter to ComReg "MBSA Assignment Transition" (letter dated 12 December 2012)
- 13. Telefonica: presentation sent to ComReg "MBSA Transition Discussions between Existing and New Licensees" (presentation dated 12 December 2012)
- 14. ComReg: letter to Telefonica "All MBSA Winning Bidders The Transition Project Proposal" (letter dated 21 December 2012)
- 15. Telefonica: letter to ComReg "MBSA Transition Project Proposal" (letter dated 10 January 2013)
- 16. McCann Fitzgerald: letter to ComReg "Vodafone: Custodian of Data/ Spectrum Auction/ Interim Licenses" (letter dated 8 May 2012)<sup>1</sup>
- 17. McCann Fitzgerald: letter to ComReg "Vodafone/Spectrum Auction/ Interim Licenses" (letter dated 17 May 2012)<sup>2</sup>
- 18. Voda fone: letter to ComReg "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 18 September 2012)
- 19. ComReg: reply to letter from Vodafone of 18 September 2012 (letter dated 20 September)
- 20. Voda fone: letter to ComReg "Letter to Paul Ryan of 20 September 2012: Multi-Band Spectrum Release: Postponement of Auction ("Postponement Letter"),

<sup>&</sup>lt;sup>1</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

<sup>&</sup>lt;sup>2</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

Letter to Paul Ryan of 20 September 2012: Amendment to ComReg document 12/52 Information Memorandum (IM) ("Amendment Letter"), Letter to Eileen Maher of 20 September 2012: Multi-Band Spectrum Release: Ongoing Technical Issues ("Technical Issues Letter")" (Redacted) (letter dated 27 September 2012)

- 21. ComReg: letter to Vodafone "Transition Activities associated with the Multi-Band Spectrum Award (MBSA) Process" (letter dated 3 October 2012)<sup>3</sup>
- 22. ComReg: reply to Vodafone letter of 27 September 2012 "Letter of the 27 September 2012" (letter dated 5 October 2012)<sup>4</sup>
- 23. Voda fone: letter to ComReg "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 10 October 2012)<sup>5</sup>
- 24. ComReg: reply to Vodafone letter of 5 October 2012 "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 12 October 2012)<sup>6</sup>
- 25. ComReg: letter to Voda fone "Information Requirement Pursuant to Section 13D(1) of the Communications Regulation Act 2002" (letter dated 17 October 2012)<sup>7</sup>
- 26. Voda fone: letter to ComReg "Response to Information Requirement pursuant to section 13D(1) of the Communication Regulation Act 2002" (letter dated 26 October 2012)<sup>8</sup>
- 27. Vodafone: Further material submitted by Vodafone in response to the Information Requirement pursuant to section 13D(1) of the Communications Regulation Act 2002<sup>9</sup>
- 28. ComReg: letter to Vodafone "MBSA Process" (letter dated 20 November 2012)<sup>10</sup>
- 29. Voda fone: letter to ComReg "Multi-Band Spectrum Auction ("MBSA") Process" (letter dated 21 November 2012)<sup>11</sup>
- 30. ComReg: letter Vodafone "MBSA Process" (letter dated 23 November 2012)<sup>12</sup>
- 31. Voda fone: letter to ComReg "Transitional Project Proposal" (letter dated 12 December 2012)<sup>13</sup>
- 32. ComReg: letter to Voda fone "All MBSA Winning Bidders The Transition Project Proposal" (letter dated 21 December 2012)

<sup>&</sup>lt;sup>3</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

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<sup>&</sup>lt;sup>13</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

- 33. Matheson Ormsby Prentice: letter to ComReg "Multi-Band Spectrum Award Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 3 October 2012)
- 34. ComReg: reply to Matheson Ormsby Prentice letter of 3 October 2012 (letter dated 10 October 2012)
- 35. Matheson Ormsby Prentice: letter to ComReg "Multi-Band Spectrum Award Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 16 October 2012)
- 36. ComReg: reply to Matheson Ormsby Prentice letter of 16 October 2012 (letter dated 22 October 2012)
- Matheson: letter to ComReg "Multi-Band Spectrum Award Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 13 November 2012)
- 38. Hutchinson 3G Ireland ("H3GI"): email to ComReg "MBSA Preparatory and Test and Trial Licences" (email dated 21 November 2012)
- 39. ComReg: reply to Matheson letter of 13 November 2012 (letter dated 22 November 2012)
- 40. ComReg: reply to H3GI email of 21 November 2012 (letter dated 23 November 2012)
- 41. H3GI: letter to ComReg "MBSA Transitional Project Plan" (letter dated 12 December 2012)
- 42. ComReg: letter to H3GI "All MBSA Winning Bidders The Transition Project Proposal" (letter dated 21 December 2012)
- 43. H3GI: reply to ComReg's letter of 21 December 2012 "MBSA Transition Project Proposal" (letter dated 8 January 2013)
- 44. ComReg: letter to Meteor Mobile Communications ("MMC") "Transition activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 3 October 2012)
- 45. MMC: letter to ComReg "Transitional Activities" (letter dated 5 October 2012)
- 46. ComReg: letter to MMC "Information Requirement pursuant to section 13D(1) of the Communications Regulations Act 2002" (letter dated 17 October 2012)
- 47. MMC: letter to ComReg "Transition activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 26 October 2012)
- 48. MMC: letter to ComReg "Multi-Band Spectrum Award Transition Project Proposal (letter dated 12 December 2012)
- 49. MMC: Presentation sent to ComReg "Draft Transition Project Proposal" (presentation dated the 12 December 2012)
- 50. ComReg: letter to MMC "All MBSA Winning Bidders The Transition Project Proposal" (letter dated 21 December 2012)
- 51. MMC: reply to ComReg's letter of 21 December 2012 "Re: Transition Project Proposal" (letter dated 9 January 2013)

A.1 Non-confidential correspondence and other material provided by interested parties relating to 'Transition' issues and Interim GSM 900 MHz licences (and ComReg written responses to same) from 18 September 2012 until 9 January 2013.

1. Telefonica: letter to ComReg "Auction Delay" (letter dated 18 September 2012)

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#### Strictly confidential

**By Hand** Dr Samuel Ritchie Commission for Communication Regulation Abbey Court, Irish Life Centre Dublin 1

18<sup>th</sup> September 2012

02/4891-7

#### **Re: Auction Delay**

Dear Dr Ritchie

We refer to your letter dated 14<sup>th</sup> September 2012, informing Telefonica Ireland Limited ("Telefonica") of the delay to the start of the Multi-Band Spectrum auction until 16<sup>th</sup> October 2012.

#### Impact of the auction delay on other Qualified Bidders

We appreciate that ComReg considered it appropriate to facilitate the request for a further mock auction from a Qualified Bidder. It is unclear however why this could not have been staged well before 21<sup>st</sup> September, or else the decision to delay the auction communicated to Qualified Bidders much sooner. As Telefonica has previously informed ComReg, participation in the auction is a major logistical exercise, requiring the participation of external advisors and senior executives from Telefonica Group in Spain and the UK. The rescheduling of the auction at such short notice has serious implications for Telefonica's ability to ensure the availability of all necessary participants, and will result in additional costs for Telefonica. We would once again ask ComReg to take account of this impact on Qualified Bidders when it is making decisions of this nature.

We would also note that in the previous time-table, the EAS was to have opened on a Friday with bidding starting on a Monday. This sensibly allowed an additional two days over the weekend to address any technical problems that might arise when the system is live for the real auction, before bidding was due to start. We request that ComReg reconsider its latest schedule and open the EAS on Friday 12<sup>th</sup> October for this reason, which would minimise the risk of further delay to the start of bidding.

#### **Rule Change**

We note that ComReg has identified what it terms an "omission" in the Auction Rules as they relate to Relaxed Primary Bids. As ComReg will be well aware, both Telefonica and other consultation participants have repeatedly flagged the heightened risk of omission, error and unforeseen consequences as a result of the implementation of such a complex auction design. This latest omission serves only to increase Telefonica's concerns in this regard, particularly as it appears to result directly from the unique time-slice structure. We had an expectation that ComReg had carried out all appropriate testing prior to publication of the Information Memorandum, to ensure that the

Telefónica Ireland Limited Registered in Ireland no. 234895 Registered Office: 28-29 Sir John Rogerson's Quay Dublin 2 Ireland Directors: Tony Hanway, Paul Whelan, Alan Brown, Ashley Cook (UK), Danuta Gray (UK)(Chairman).

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rules were complete, and that its EAS would be capable of actually implementing the Auction Rules as published. We are concerned to note that testing was still being carried out and omissions found following publication of the final rules and the conclusion of the Q&A process. We request that ComReg now confirm that all testing is complete and that there are no other omissions or errors in the functioning of the EAS or the Auction Rules, and that the EAS accurately reflects the Auction Rules. We also request that ComReg now publish an updated and corrected final version of the Information Memorandum.

Further, while we appreciate that ComReg cannot predict issues that may be raised by Qualified Bidders, ComReg's own actions are within its control. Can ComReg now confirm that it will not, on its own initiative, be making any further changes to the Auction Rules or technical systems and that it will not, on its own initiative, further delay the auction beyond 16<sup>th</sup> October?

Finally we would also note that while prepared to address this omission, ComReg has refused to take steps to meet the genuine concerns about the auction format raised by Telefonica. These include concerns about the information provided to calculate more affordable knock-out bids, and the rebate in relation to party-specific lot liberalisation. Concerns previously raised in correspondence remain unresolved. We would note that this delay and forthcoming notification of rule changes presents an opportunity to ComReg to look again at these concerns, and we request that it do so.

#### Deposits

By the 16<sup>th</sup> October, ComReg will have been holding the deposits for all Qualified Bidders for three months. This is a very long time for a regulator to hold cash deposits for such large sums without holding an auction. We would reiterate to ComReg the serious cash-flow and balance sheet implications for any bidder of large amounts of cash being held in this way. These implications may be exacerbated in the event that the auction is not concluded until January 2013, a new financial year for many companies. This is now a possibility, depending upon whether the auction start is further delayed and the length of the Primary Rounds. As previously flagged, in the event of any further delay, Telefonica reserves its rights to seek, by whatever route necessary, the return of its deposit until shortly before the auction will definitively take place.

#### Interim licences and new licence start dates

Telefonica has been flagging in consultation responses and correspondence since at least 2011 its belief that (a) the new licences will not be ready to start on 1 February 2013 and (b) consequently that the current interim GSM licences expiring on 31 January 2013 will need to be extended, to ensure continuity of services to customers. These concerns have been repeatedly dismissed by ComReg, most recently in the Q&A responses.

According to the time-table set out in the Information Memorandum, it appears that the earliest the full auction process can now end is December 2012. ComReg will be aware that December is the busiest month of the year for all mobile networks and that a network technology freeze is implemented from the beginning of December to avoid disruption to networks and to customers. In the circumstances we have no choice but to reiterate the view that the new licences will not be ready to start in all bands and that interim licences will need to be extended.

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We request that ComReg now properly engage with this issue, instead of simply dismissing our concerns as unfounded or unlikely to materialise. We note the view expressed most recently by ComReg that some preparatory transition work can begin pre-auction and so could still conclude in time for January. We trust however that ComReg accepts that actual transition to a new allocation and location cannot physically begin until new spectrum allocations and locations are known after the auction.

We are aware that ComReg's position on an interim licence consultation was set out in its response to Telefonica where it stated that "ComReg does not anticipate commencing any consultation on the issue of potential extensions to existing Interim GSM 90 MHz rights of use.....until after the auction outcome is known". This now means however that ComReg would not begin consulting on whether to extend the current interim licences until December at the very earliest, with these licences due to expire the following month, in January. We would ask that ComReg, as sector regulator, in light of the current auction timing, now take on board the views of operators with genuine concerns about service and customer disruption, recognise the considerable uncertainty created by the present situation and at a minimum now initiate the consultation process on the possibility of extending interim licenses without delay.

We would also note that a delayed start to the new licences will also trigger questions of licence fee rebates and staggered licence start dates. Telefonica has already made clear its concerns about these issues.

Telefonica notes that ComReg's approach to correspondence related to the spectrum auction has been to dismiss genuine concerns raised by Telefonica and decline to engage constructively with the issues raised. The issues outlined above are real concerns, and, with this latest delay, have become even more pressing. In its role as regulator, with statutory obligations towards Telefonica and the industry as a whole we request that ComReg now engage seriously with them and provide a considered response.

In light of the urgency of the matter and the short time-frames involved, we request that ComReg respond to this letter by close of business this Thursday 20<sup>th</sup> September 2012. In the interim Telefonica fully reserves all rights to take all appropriate steps to safeguard its legal rights, including by means of legal action without further notice.

Yours sincerely

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2. ComReg: letter to Telefonica "Auction Delay" (letter dated 20 September 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

20 September 2012

By Hand - Confidential

Dr. Gary Healy Head of Regulation and Public Policy Telefonica Ireland limited 28/29 Sir John Rogerson's Quay Dublin 2

Dear Mr. Healy

# **Auction Delay**

I refer to the above matter and to your letter of 18 September 2012. ComReg notes the concerns raised in your letter and addresses them in turn below under the same headings.

# Impact of the auction on other Qualified Bidders

ComReg notes the suggestion that the adjustment to the timetable was aimed at facilitating a particular Qualified Bidder which had requested an additional mock auction. Telefonica Ireland Limited ("Telefonica") might note that there were other fundamental justifications given for the adjustment to the timetable noted in ComReg's letter of 14 September. For the avoidance of doubt, ComReg confirms that the adjustment is justified and would have been necessary irrespective of whether a further mock auction had been requested.

ComReg notes Telefonica's concern that the decision to adjust the Auction timetable should have been communicated sooner. In response, ComReg would point out that the need to adjust the Auction timetable was communicated to Qualified Bidders as soon as possible after the requirement to adjust the timetable became clear to ComReg.

ComReg notes Telefonica's concerns around logistics and costs in respect of same. In that regard, ComReg would bring your attention to, in particular, paragraphs 5.3, 5.8, 5.9, 5.25 and 5.30 of the Information Memorandum. These provisions, amongst others, serve to

clarify that it is the responsibility of Telefonica to engage and ensure the availability of relevant advisors before, during and after the Auction, as required. In respect of costs, ComReg would bring your attention to paragraph 5.28 of the Information Memorandum. Notwithstanding this, ComReg is conscious of the expense incurred by Qualified Bidders and has sought to adjust the timetable by the minimum amount that it considers necessary to ensure that the Auction Rules can be modified and all Qualified Bidders are appropriately prepared to participate in the Auction.

ComReg notes Telefonica's suggestion that the EAS be opened on Friday 12 October and reasons for same. As you are aware, a third mock auction is being made available to you in the week of 8 October 2012. Given the timeframe allocated by ComReg for third mock auctions for Bidders, it is not feasible for the EAS to be opened on 12 October. In this regard, ComReg notes that it has a day for Bidders to access the EAS prior to the commencement of the live auction.

Accordingly, ComReg reiterates that the Main Stage of the auction will start on Tuesday 16 October, with access to the Electronic Auction System (EAS) being made available from Monday 15 October.

#### **Rule Change**

At no point did ComReg suggest that it had carried out all testing prior to publication of the Information Memorandum, so Telefonica's expectation regarding same is misplaced. Furthermore, ComReg is not obliged to confirm that all testing is complete or that there are no other omissions or errors in the functioning of the EAS or the Auction Rules, or that the EAS accurately reflects the Auction Rules. As Telefonica is aware, ComReg has clearly, in the Information Memorandum, reserved all its rights in this regard. Notwithstanding this, ComReg can confirm that it does not at this stage anticipate any further modifications to the Auction Rules, further material changes to the EAS or changes to the Auction timetable but, in the event that it is necessary to do so, ComReg will provide adequate notice to all Qualified Bidders.

As has been its practice to date, ComReg does not propose to publish a consolidated Information Memorandum.

In relation to the final paragraph under this heading, ComReg notes that the Bidder seeks to raise matters which have previously been consulted upon, addressed and decided by ComReg. ComReg rejects the assertion that it has refused to address these issues in the past or that they remain unresolved and considers it unnecessary and inappropriate to reopen them.

# Deposits

ComReg would note that at no point did it guarantee that the Auction would commence on or be completed by a certain date. This is explicit in the wording of the Information Memorandum and, indeed, in ComReg's notification to Telefonica of 24 August 2012. In that regard, Bidders understood that an adjustment to the Auction timetable, such as the three week adjustment proposed, was possible and Bidders should have prepared accordingly.

ComReg would remind Telefonica that it has agreed to participate in the Auction in accordance with the Auction Rules including those rules governing the provision of Deposits. In that regard, the Bidder is not entitled to a return of its Deposit, if such an entitlement arises, until after the completion of the Auction.

#### Interim Licences and new licence start dates

In respect of the "network technology freeze" noted under this heading, ComReg would point out that, despite multiple consultations on the topic, this matter has not been raised previously by the Bidder or any other Interested Party in the consultation process and that it has been known for some time that December 2012 would fall within any transition period leading up to the commencement of Time Slice 1.

ComReg also notes your suggestion that the Auction could not be completed until December at the very earliest. The Auction is currently proposed to commence on 16 October, over six weeks prior to the beginning of December. At no point did ComReg suggest that the Auction would take six weeks to complete and it is unclear how Telefonica has arrived at this conclusion.

In relation to the points raised regarding interim licences, please note that ComReg is aware of the limited time now available for transition before the commencement of Time Slice 1. ComReg is also aware of the expiration of existing GSM 900 MHz interim licences on 31 January 2013. ComReg can, therefore, confirm that it has now commenced consideration of the requirement for and details of a consultation on the need for the short term extension of the duration of existing GSM rights of use in the 900 MHz band. You will appreciate, of course, that the ability to issue such a consultation is severely curtailed in advance of knowing the precise nature of the transition activities required to be undertaken by Existing GSM licensees. All other Qualified Bidders are being informed of this fact.

Finally, ComReg would wholly reject the baseless suggestion that it has not engaged constructively on matters raised or engaged seriously with Interested Parties.

Please note that ComReg will shortly make contact with all Qualified Bidders with regards to the further round of mock auctions and that Telefonica's mock auction, if you require it, will take place in the week beginning Monday 8 October 2012.

ComReg would also remind Telefonica of its obligations in relation to confidentiality under the terms of the Information Memorandum. For the avoidance of doubt, these obligations also cover the above information concerning interim licences.

Yours sincerely

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Dr. Samuel Ritchie

3. ComReg: letter to Telefonica "Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 3 October 2012)



3 October 2012

Mr Tom Hickey Telefonica Ireland Limited 28 – 29 Sir John Rogerson's Quay Docklands Dublin 2

# Ref: Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

Dear Tom,

I am writing to you concerning Transition Activities in connection with ComReg's Multi-Band Spectrum Award (MBSA) process.

We appreciate that the efficient and timely completion of Transition Activities arising from the MBSA process is an important consideration for Existing GSM Licensees and Winning Bidders alike. We also appreciate the importance of ensuring that such Transition Activities are completed as effectively and efficiently as possible in terms of the overall benefits that will arise from the earliest availability of liberalised spectrum rights of use being made available in the MBSA process.

In light of this, firstly, I wish to remind Telefonica of the Transition Rules<sup>1</sup> which all Existing GSM Licensees (as well as all Winning Bidders) are required to comply with. These are detailed in section 3.8 of the Information Memorandum (ComReg Document 12/52). Among other things, the Transition Rules envisage that all Transition Activities would be completed before 31 January 2013.<sup>2</sup>

Please be assured that ComReg appreciates the limited time remaining until 31 January 2013 and continues to monitor the situation in relation to the timeframes for the completion of Transition Activities that will arise from the MBSA process.

See, in particular, paragraph 3.4.18 of Decision 04/12 (in Section 8 of Document 12/25).

<sup>&</sup>lt;sup>2</sup> Specifically, paragraph 3.159 of the Information Memorandum. Although, footnote 83 of paragraph 3.159 also acknowledges that: "*At the time that ComReg announces the results of the assignment round, it may review this deadline date.*"



To better inform ComReg's understanding of the nature and required timeframes for Transition Activities, please be advised that we are now seeking information on the preparations and capacity of Telefonica to carry out Transition Activities (Relocation<sup>3</sup> and, if necessary, Retuning<sup>4</sup>) in compliance with the Transition Rules.

In that regard, ComReg notes that at this stage of the MBSA process your company should be in the planning phase of your Transition project and should therefore be able to provide details on the planning activities already carried out and plans for further steps. As noted in the joint technical reports<sup>5</sup> by Red-M Wireless Limited (Red-M) and Vilicom Limited (Vilicom), operators can commence the planning phase of their Transition projects in advance of the results of the MBSA process being known.

To assist ComReg in the timely completion of this project, ComReg is engaging Red-M Wireless Limited and Vilicom Limited to provide expert technical advice to it.

ComReg proposes that Red-M and Vilicom (and a ComReg representative if required) meet with appropriate, qualified personnel in your Company at your premises in the morning of 10 October. The scope of this meeting would be to discuss, and collect information and documentation on, the Transition activities that your company has already carried out and the Transition plans that your company has already made. To assist you in preparing for this discussion, Red-M and Vilicom suggest the following discussion items:

- · preparation for implementation to date;
- outline project plan; and
- issues foreseen.

Please note that any confidential information discussed with, or provided to, Red-M / Vilicom at this meeting will be treated appropriately in accordance with ComReg's Guidelines on the Treatment of Confidential Information and the nondisclosure agreements between ComReg and Red-M and Vilicom.

<sup>&</sup>lt;sup>3</sup> 'Relocation' refers to the situation where an Existing GSM Licensee obtains an equal amount or a greater amount of spectrum rights in the 900/1800 MHz band and has to relocate its network to this new spectrum location.

<sup>&</sup>lt;sup>4</sup> 'Retuning' refers to the situation where an Existing GSM Licensee obtains less or no spectrum in the 900/1800 MHz band and has to retune its network to a point within this new spectrum bandwidth.

<sup>&</sup>lt;sup>5</sup> See Document 10/71c, Document 10/105b and, in particular, pages 15 and 16 of Document 12/22.



ComReg anticipates and appreciates your full co-operation with this important matter and requests that you contact Stephen Shannon of Vilicom at 086 8145299 in the first instance by 5 October to finalise the arrangements for this meeting.

Should you have any issues in relation to the matters covered in this letter, please contact me on +353 1 804 9650.

Yours sincerely

Herry Kennedy

Kevin Kennedy Spectrum Development Manager

cc (via e-mail): Stephen Shannon, Vilicom

4. Telefonica: letter to ComReg "Transition Planning and Rule Change" (letter dated 8 October 2012)



#### Strictly confidential

8<sup>th</sup> October 2012

By Hand Dr Samuel Ritchie Commission for Communication Regulation Abbey Court, Irish Life Centre Dublin 1

#### **Transition planning and Rule Change**

Dear Dr Ritchie

We refer to a letter received on 3<sup>rd</sup> October from Kevin Kennedy of ComReg concerning transition planning, and also to the letter received from you on 20<sup>th</sup> September covering the auction delay and the change to the auction rules.

#### **Transition Planning**

Telefonica itself has highlighted the significance of the situation we will ourselves in post-auction; where it is now inevitable that there will be insufficient to complete transition activities before the end of January 2013. We will assist ComReg in every way that we can to minimise the transition time.

We have however some significant concerns regarding practicality of meeting with ComReg's advisors to discuss the matter just a few days before the commencement of bidding in the primary rounds of the auction. As you know, the auction rules impose strict confidentiality regarding all aspects of a bidder's intentions, approach, and strategy in relation to the spectrum to be assigned and the auction process. We question whether it is practically possible to hold meaningful discussions regarding the outcome of the auction at this time.

While Telefonica Ireland is of course fully supportive of an efficient transition process, for the avoidance of any doubt, we would note that:

- Discussion of any element of transition planning pre-auction could involve indirectly disclosing Telefonica Ireland's bidding preferences in the auction. In addition to being prohibited by the Auction Rules, this is information of the highest confidentiality and commercial sensitivity, which should not be disclosed to any third party, whether a regulatory, governmental, private or any other entity whatsoever prior to the auction.
- The auction will begin on 15<sup>th</sup> October, namely 3 working days after the date of the proposed meeting. Once this auction is concluded then it will be possible to finalise transition plans based on actual allocations, and without the same commercial sensitivity issues arising. In the circumstances there is no clear benefit is to be gained by requesting information that at this stage is based on a bidder's aspirations rather than actual allocations, when they will be known so soon afterwards.
- With the auction starting on 15<sup>th</sup> October, the relevant personnel, including advisors and shareholder representatives are fully committed to pre-auction preparations. In the circumstances, it would not be possible to make the relevant personnel available for a

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meeting and working to collate the detailed information requested without significantly disrupting Telefonica Ireland's preparations for the auction.

Separately, we note your response dated 20<sup>th</sup> September 2012, in which you indicated that "ComReg can, therefore, confirm that it has now commenced consideration of the requirement for and details of a consultation on the need for the short term extension of the duration of existing GSM rights of use in the 900 MHz band". We look forward to hearing from you in detail as soon as possible about this consultation, which is a matter of the utmost concern and urgency for ourselves and our shareholders. We reiterate the extreme commercial uncertainty created by the fact that our current GSM licence expires in 3½ months on 31<sup>st</sup> January 2012 and as yet ComReg has provided no certainty as to the licensing situation that will be in place after that date. We remain of the view that a licence extension will be required as there is insufficient time postauction to allow for completion of post-auction transition activities, regardless of the auction outcome or of any planning activities undertaken by any operator to date. We note that details of pre-auction transition planning are not required in order to commence the consultation process. We continue to review our position on this very serious issue and will not hesitate to take action in circumstances where we consider that our concerns are not being appropriately addressed by ComReg.

#### Auction Rule Change and EAS Compliance with the Rules

Finally we also note the statement in your letter that "ComReg is not obliged to confirm..that the EAS accurately reflects the Auction Rules". We note that as the entity running this auction, it is absolutely ComReg's responsibility to ensure that its EAS does actually correctly implement its Auction Rules as published, and that they function correctly. We do not understand why ComReg would undermine confidence in its EAS in this manner in the run up to the auction by asserting that it has no obligation to ensure it actually works, and consider that such a position is fundamentally untenable.

Yours sincerely

head

Tom Hickey

5. ComReg: letter to Telefonica "Transition Planning and Rule Change" (letter dated 15 October 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

15 October 2012

**By Hand - Confidential** 

Tom Hickey Telefonica Ireland limited 28/29 Sir John Rogerson's Quay Dublin 2

Dear Mr. Hickey

# **Transition Planning and Rule Change**

I refer to the above matter and to your letter of 8 October 2012 received on 9 October 2012 in respect of same. ComReg has considered the points raised in your letter and responds to each of them in turn below using the same headings as used in your letter.

# **Transition Planning**

ComReg notes Telefonica's refusal to make appropriate qualified personnel in its company available to meet with Red-M and Vilicom (and a ComReg representative if required) at its premises despite ComReg's request of 3 October 2012. ComReg is surprised at Telefonica's refusal and, despite its claims to the contrary, apparent lack of co-operation in ensuring that transition activities are carried out in a timely and efficient manner post-Auction. Please note that ComReg does not consider Telefonica's refusal to be constructive or the reasons given for this refusal to be adequate and is separately writing to Telefonica in relation to this matter.

In relation to Telefonica's comments on an interim GSM licence consultation, ComReg would refer Telefonica to its letter to Telefonica of 20 September 2012 and the relevant points made therein on this subject. For the avoidance of doubt, ComReg does not agree with, and is surprised by, Telefonica's unsupported assertion that details of pre-auction transition planning are irrelevant to such a consultation. Such comments are all the more

surprising in light of Telefonica's purported concerns around the upcoming expiry of current interim GSM licences in the 900 MHz band.

#### Auction Rule Change and EAS Compliance with the Rules

ComReg has considered Telefonica's comments under this heading. Telefonica appears to be again seeking some form of commitment from ComReg that the EAS accurately reflects the Auction Rules.

ComReg can confirm that it has gone to great lengths to ensure that the EAS accurately reflects the Auction Rules and has full confidence in the EAS in this respect.

In light of the above, ComReg does not consider it appropriate and does not propose to reopen this issue through this exchange of correspondence.

ComReg looks forward to Telefonica's participation in the Auction.

Yours sincerely

Sith

Dr. Samuel Ritchie

 ComReg: letter to Telefonica "Information Requirements pursuant to section 13D(1) of the Communications Regulation Act 2002" (letter dated 17 October 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

17 October 2012

Tom Hickey, Telefonica Ireland Limited, 28 – 29 Sir John Rogerson's Quay, Docklands, Dublin 2

# BY REGISTERED POST & E-MAIL

# INFORMATION REQUIREMENT PURSUANT TO SECTION 13D(1) OF THE COMMUNICATIONS REGULATION ACT 2002

# Reference: Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

Dear Tom,

# A. Introduction

The Commission for Communications Regulation ("ComReg"), pursuant to its powers under section 13D of the Communications Regulation Acts, 2002 to 2011 ("2002 Act"), as inserted by section 6 of the Communications Regulation (Amendment) Act 2007, requires Telefonica O2 to provide ComReg with the written information set out below in section B.

As set out in ComReg Document 12/25<sup>1</sup>, all Existing GSM Licensees (as well as all Winning Bidders) are required to comply with the Transition Rules associated with the Multi-Band Spectrum Award (MBSA) process.<sup>2</sup> These Rules are detailed in section 3.8 of the Information Memorandum (ComReg Document 12/52<sup>3</sup>). Among

Commission for Communications Regulation An Coimisiún um Rialáil Cumarsáide Block DEF, Abbey Court, Irish Life Centre, Lower Abbey St, Dublin I Bloc DEF, Cuirt na Mainistreach, Ionad Irish Life, Sraid Na Mainistreach Iocht, Baile Atha Cliath I Telephone +353 | 804 9600 Fax +353 | 804 9665 Email info@comreg.ie Web www.comreg.ie

<sup>&</sup>lt;sup>1</sup> See http://www.comreg.ie/\_fileupload/publications/ComReg1225.pdf

<sup>&</sup>lt;sup>2</sup> See, in particular, paragraph 3.4.18 of Decision 04/12 (in Section 8 of Document 12/25).

<sup>&</sup>lt;sup>3</sup> See http://www.comreg.ie/\_fileupload/publications/ComReg1252.pdf



other things, the Transition Rules envisage that all Transition Activities would be completed before 31 January 2013.<sup>4</sup>

On 3 October 2012, ComReg sent a letter to Telefonica O2 seeking information on the preparations and capacity of Telefonica O2 to carry out the Transition activities (being Relocation and, if necessary, Retuning) in compliance with the Transition Rules.

In this letter, ComReg:

- stated that it is engaging Red-M Wireless Limited and Vilicom Limited to provide expert technical advice to it on the Transition Activities assocated with the MBSA process;
- proposed that Red-M and Vilicom (and a ComReg representative if required) meet with appropriate, qualified personnel in Telefonica O2;
- proposed that the scope of this meeting would be to discuss, and collect information and documentation on the Transition activities that Telefonica O2 has already carried out and the Transition plans that Telefonica O2 has already made; and
- requested that Telefonica O2 contact Stephen Shannon of Vilicom in the first instance by 5 October to finalise the arrangements for this meeting.

In response to this letter, on 8 October 2012 Telefonica O2 submitted a letter to ComReg which stated, amongst other things, that it:

- has some significant concerns regarding the practiciality of meeting with ComReg's advisors to discuss this matter; and
- questioned whether it is practically possible to hold meaningful discussions regarding the outcome of the auction at this time.

ComReg is dissatisfied with Telefonica O2's response which may impede it in the exercise of its functions and, pursuant to section 13D of the 2002 Act, is now requiring the provision of the information set out in section B below.

# B. Information Requirement

Telefonica O2 is required to provide ComReg with the following written information sequentially, and strictly in accordance with the numbered questions below. These questions seek information on the preparations and capacity of your company to carry out the Transition activities (being Relocation and, if necessary, Retuning) in compliance with the above mentioned Transition Rules.

This information requirement should be carefully reviewed and completed by personnel in Telefonica O2 of appropriate seniority and appropriate knowledge.

<sup>&</sup>lt;sup>4</sup> Specifically, paragraph 3.159 of the Information Memorandum. Although, footnote 83 of paragraph 3.159 also acknowledges that: "*At the time that ComReg announces the results of the assignment round, it may review this dead line date.*"



# **B.1** Relocation activities

The questions under this heading refer only to Relocation<sup>5</sup> activities. For the avoidance of doubt these questions refer to Relocation activities in both the 900 MHz and 1800 MHz bands.

1. Please indicate whether your company has carried out any pre-planning or planning activities<sup>6</sup> to prepare for the possibility of Relocation arising from the MBSA process.

If yes to question 1, please answer question 2, 3 and 4 below.

- 2. Please describe each Relocation scenario investigated in this preplanning/planning activity and its results and its conclusions. For each Relocation scenario investigated, this description is to set out:
  - (i) the Relocation scenario investigated indicating the frequency band or bands involved in this scenario and the frequency assignment investigated (i.e. relocating from your current frequency assignments in the 900/1800MHz band to the frequency range X1-X2 in the 900/1800MHz band);
  - (ii) the process steps and resourcing requirements involved in this Relocation scenario and the expected timescales associated with each process step. In this description, please indicate the order in which these process steps will be completed and whether these process steps can be carried out in parallel or not; and
  - (iii)the overall timescales expected with this Relocation scenario.
- 3. For each Relocation scenario investigated please describe any particular challenges that might be encountered and the mitigation activities that might be taken to address these challenges. This description is to outline:

<sup>&</sup>lt;sup>5</sup> Relocation' has the same meaning as assigned to it in the Information Memorandum Document 12/52, namely that 'Relocation' refers to the situation where an Existing GSM Licensee obtains an equal amount or a greater amount of spectrum rights in the 900/1800 MHz band and has to relocate its network to this new spectrum location.

<sup>&</sup>lt;sup>6</sup> As discussed in section 3.2 of Document 12/22 :

<sup>&</sup>quot;planning activities that an existing GSM Licensee could initiate in advance of the auction include;

Identifying parts of the data-fill that relate to the frequency of operation, which will need to be modified,

<sup>•</sup> Identifying parts of the GSM900, GSM1800 and UMTS data-fill, which will need to be modified to ensure handover between the networks,

Identifying all radio equipment that cannot be modified, such as band selective repeaters and source replacement equipment, if required,

Ensuring correct landlord contact details for sites are available in case sites visits are required; and

<sup>•</sup> Producing a staff and resource plan for Implementation and Verification phases."



- (i) any critical stages where your plans might be dependent on third parties and the nature of these dependencies;
- (ii) any dependencies on the Transition activities of the other Existing GSM Licensees; and

(iii)any other sensitivities/risks related to this particular Relocation scenario.

- 4. As a result of the MBSA process, it is possible that your company might have to carry out Relocation activities in both the 900 MHz and 1800 MHz bands. This may be carried out in either a sequential or a simultaneous manner. Please indicate:
  - (i) whether your pre-planning/planning preparations have investigated these two possibilities; and
  - (ii) whether any of the process steps or timescales involved with a Relocation scenario will differ based upon the approach taken (i.e. a simultaneous or a sequential process). If these process steps or timescales differ, please detail these differences.

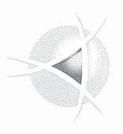
Please verify your response to questions 1, 2, 3 and 4 above with the submission of pre-planning/planning documentation already prepared related to the Relocation scenarios investigated.

#### **B.2** Retuning Activities

The questions under this heading refer only to Retuning<sup>7</sup> activities. For the avoidance of doubt these questions refer to Retuning activities in both the 900 MHz and 1800 MHz bands.

5. Please indicate whether your company has carried out any pre-planning or planning activities<sup>8</sup> to prepare for the possibility of Retuning arising from the MBSA process.

<sup>&</sup>lt;sup>7</sup> 'Retuning' has the same meaning as assigned to it in the Information Memorandum Document 12/52, namely that '*Retuning' refers to the situation where an Existing GSM Licensee obtains less or no spectrum in the 900/1800 MHz band and has to retune its network to a point within this new spectrum bandwidth.* 



If yes to question 5, please answer question 6, and 7 below.

- 6. Please describe each Retuning scenario investigated in this pre-planning/planning activity and its results and its conclusions. For each Retuning scenario investigated, this description is to set out:
  - (i) the Retuning scenario investigated indicating the frequency band or bands involved in this scenario and the frequency assignment investigated (i.e. retuning from your current frequency assignments in the 900/1800MHz band to the frequency range X1-X2 in the 900/1800MHz band);
  - (ii) the process steps and resourcing requirements involved in this Retuning scenario and the expected timescales associated with each process step. In this description, please indicate the order in which these process steps will be completed and whether these process steps can be carried out in parallel or not; and

(iii)the overall timescales expected with this Retuning scenario;

- 7. For each Retuning scenario investigated please describe any particular challenges that might be encountered and the mitigation activities that might be taken to address these challenges. This description is to outline
  - (i) any critical stages where your plans might be dependent on third parties and the nature of these dependencies;
  - (ii) any dependencies on the Transition activities of the other Existing GSM Licensees; and
  - (iii)any other sensitivities/risks related to this particular Retuning scenario.

- Identifying and documenting the strategic network approach it would use to prepare for the scenario of
  reduced spectrum for GSM purpose, noting that such a scenario may be necessary for the deployment of
  UMTS 900. It is assumed the specific activities identified below are consistent with this strategic
  approach.
- Preparing a new GSM network frequency plan based on 5MHz
- Moving traffic to alternative frequencies
- Enabling AMR
- Trialling a cluster area demonstrating the above measures.
- Identifying 900MHz sites to which new 1800 MHz and 2100MHz base stations could be added to

In addition to the technical activities listed above, there may be other planning activities which could occur.

- Identify any partners it may require during the transition (subcontractors, consultants etc.) and agree terms on which such support might be made available.
- Identify any arrangements (broadly described by ComReg as 'non-technical measures) that may be
  made. These may include discussions with other existing GSM licensees regarding spectrum sharing,
  leasing or other arrangements that might ease the transition period, provided such discussions comply
  with competition law and the auction rules (e.g. discussion should take place before such discussions are
  forbidden by any non-collaboration requirements of the auction process)."

<sup>&</sup>lt;sup>8</sup> As discussed in section 3.2 of Document 12/22 :

<sup>&</sup>quot;It is suggested that an existing GSM licensee, in addition to the planning activities listed above [for Scenario 1 - Relocation] carry out the following technical activities:



Please verify your response to questions 5, 6, and 7 above with the submission of preplanning/planning documentation already prepared related to the Retuning scenarios investigated.

# C. Reasons for this information requirement

- 1. ComReg requires the information sought herein in order to carry out its statutory functions, in particular, to manage the radio frequency spectrum, including ensuring that the Transition Activities decribed at section A above are carried out in a timely and efficient manner.
- 2. ComReg requires the information sought herein because ComReg does not already have in its possession the information which is required.
- **3.** ComReg requires the information sought herein because it cannot obtain it from any source other than Telefonica O2.

# D. Legal Basis

Having regard, in particular, to ComReg's functions and objectives as set out at sections 10(1)b and section 12(1)b of the 2002 Act, as well as its functions under the Framework Regulations<sup>9</sup> and the Authorisation Regulations<sup>10</sup>, ComReg now requires you, pursuant to section 13D of the 2002 Act, to provide ComReg with the written information set out above at section B.

# E. Consequences in the event of non-compliance

Please note that under sections 13D and 13E of the 2002 Act, criminal (or in the alternative civil) proceedings may be initiated by ComReg where:

- an undertaking fails to comply with an information requirement within the specified time period; or
- an undertaking, in purporting to comply with such a requirement, provides to ComReg information which it knows to be false or misleading.

In this regard, I would draw your attention to the ComReg Information Notice regarding compliance with Section 13D(1) requests.<sup>11</sup>

<sup>&</sup>lt;sup>9</sup> European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), (the Framework Regulations).

<sup>&</sup>lt;sup>10</sup> European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011), (the "Authorisation Regulations")

<sup>&</sup>lt;sup>11</sup> "Information requirements to undertakings pursuant to section 13D(1) of the Communications Regulation Acts 2002 to 2010 - Obligations for authorised operators in relation to providing data", ComReg Document No 10/63, 6 August 2010.



#### F. Time period for compliance with the information requirement

Telefonica O2 is required to provide ComReg with a full written response to the questions set out in section B above, including the submission of relevant preplanning/planning documentation already prepared related to these questions, by 4pm on 26 October 2012.

Please provide the required information in hardcopy format, signed by a person duly authorised by Telefonica O2 to do so on its behalf. In addition, please also provide the required information in electronic format on CD-ROM.

The required information will be collected from your organisation by ComReg. To make an appointment to collect this information, please contact Kevin Kennedy at ComReg on 01 804 9650 before 1pm on 26 October 2012.

If you have any queries in relation to this information request please contact Kevin Kennedy on 01 804 9650.

Yours sincerely

George Merrigan Director, Market Framework Commission for Communications Regulation

cc. Kevin Kennedy, ComReg

A&L Goodbod y: letter to ComReg "Telefonica Ireland Limited ("Telefonica")
 – Transition Planning and Information Request (letter dated 24 October 2012)

A&L Goodbody Solicitors International Financial Services Centre North Wall Quay Dublin 1 Tel: +353 1 649 2000 Fax: +353 1 649 2649 email: info@algoodbody.com website: www.algoodbody.com dx: 29 Dublin

A&L Goodbody

our ref | JFW/MEH 01366740

your ref

date 24 October 2012

**By Hand** F.A.O. Mr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Lower Abbey Street Dublin 1

#### Telefónica Ireland Limited ("Telefónica") – Transition Planning and Information Request

Dear Sirs

We have been asked by Telefóncia to write to you in connection with the above mentioned matter and your correspondence to Telefóncia dated 15 and 17 October 2012 respectively.

We refer to ComReg's request of 3 October 2012 that Telefóncia should make appropriate qualified personnel in its company available to meet with Red-M and Vilicom on 10 October 2012. Telefóncia wishes to assure ComReg that it is fully committed to its obligations to ensure that transition activities are completed as effectively and efficiently as possible. Telefóncia will fully co-operate with ComReg to minimise transition time however we hope that you can appreciate that Telefóncia had legitimate concerns and unavailability regarding the timing and practicalities of that particular proposed meeting, and its response was in no way intended to be construed as a general refusal to meet on transition planning issues. We are informed that the appropriate qualified personnel that would need to have gone to that meeting have been fully engaged in another ComReg process, namely pre-auction preparations, and they were simply not physically available on the day proposed.

We note that ComReg has now requested to be provided with certain information, which you require to be carefully reviewed and completed by personnel in Telefónica of appropriate seniority and appropriate knowledge, by 26 October 2012. We note that while GSM licensees were encouraged to carry out certain basic planning activities prior to the auction, the transition rules as detailed by ComReg in section 3.8 of the Information Memorandum envisaged that it is upon completion of the assignment round of the auction that existing GSM licensees will be required to collectively formulate and submit a detailed Transition Project Proposal to ComReg in respect of transition activities.<sup>1</sup> This was stated to be due to the fact that it is only at this point of the auction that ComReg will notify the winning bidders and existing GSM licensees of the specific frequency assignments resulting from the

<sup>1</sup> Please refer to paragraph 3.157, page 89 of the Information Memorandum

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R.B. Buckley	B.M. Cotter	S.M. Doggett	M.P. McKenna	E.A. Roberts	A.C. Burke	D.R. Baxter	B. Walsh	R.M. Moore	K. Furlong	D.R. Francis
P.M. Law	J.G. Grennan	B. McDermott	K.A. Feeney	C. Rogers	J. Given	A. McCarthy	A.M. Curran	D. Main	P.T. Fahy	L.A. Murphy
J.H. Hickson	J. Coman	C. Duffy	M. Sherlock	G. O'Toole	D. Widger	J.F. Whelan	A. Roberts	J. Cahir	A.J. Johnston	A. Walsh
M.F. O'Gorman	P.D. White	E.M. Brady	E.P. Conlon	J.N. Kelly	C. Christle	J.B. Somerville	C. Widger	M. Traynor	M. Rasdale	A. Casey
C.E. Gill	V.J. Power	P.V. Maher	E. MacNeill	N. O'Sullivan	S. Ó Cróinin	M.F. Barr	M. Dale	P.M. Murray	D. Inverarity	B. Hosty
E.M. FitzGerald	L.A. Kennedy	S. O'Riordan	K.P. Allen	M.J. Ward	J.W. Yarr	M.L. Stack	C. McCourt	N. Ryan	M. Coghlan	
Consultants		Haughey TV O	Connor Profess	or I.C.W. Wylie	A.F. Browne	M.A. Greene A.	V Fanagan LA	O'Farrell LB. N	Moore	

assignment round.<sup>2</sup> Telefónica's expectation therefore, (arising from the process outlined and consulted upon in the IM), was that the full details regarding the Transition Project Proposal would not be required by ComReg until post the assignment round of the auction. However now that ComReg has requested information during the auction, resources have been put in place within Telefónica to work on collating this information in a form to respond to the specific questions raised by ComReg. This work will however take significant time, particularly given the detailed nature of ComReg's queries. Further, the key personnel within Telefónica with the requisite seniority and knowledge to review and confirm the information, are engaged in the main stage of the spectrum auction at this time and will have great difficulty redirecting their time from the current intensity of the spectrum auction (without putting its participation in the auction at obvious significant risk).

In the circumstances, given these commitments to another ComReg process, our client cannot reasonably collate all the information you have requested by 26 October 2012 within the timeframe given in your letter of 17 October 2012. We have been asked by Telefónica to respectfully request on its behalf a two week extension in order to enable Telefónica to respond to ComReg's request and ensure that the information is accurate, complete and more importantly in a legally compliant form.

We look forward to hearing from you.

Yours faithfully

At L Goodbody

M-14004068-3

<sup>&</sup>lt;sup>2</sup> Please refer to paragraph 3.138, page 86 of Response to Consultation, ComReg Document Number 12/50

8. ComReg: letter to A&L Goodbody "Information Requirement pursuant to section 13D(1) of the Communications Regulation Act 2002" (letter dated 26 October 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

26 October 2012

Mr Tom Hickey Telefónica Ireland Limited 28 – 29 Sir John Rogerson's Quay Docklands Dublin 2

#### BY REGISTERED POST AND E-MAIL

#### INFORMATION REQUIREMENT PURSUANT TO SECTION 13D(1) OF THE COMMUNICATIONS REGULATION ACT 2002

Reference: Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

Dear Tom,

We refer to a letter received from your legal advisers, A&L Goodbody, on 24 October 2012 in respect of the above matter. ComReg notes that A&L Goodbody has requested, on Telefónica's behalf, a two week extension in order to enable Telefónica to respond to ComReg's Information Requirement and ensure that the information is accurate, complete and in a legally compliant form.

ComReg notes the various reasons given for this request. In response, ComReg would point out that its Information Requirement of 17 October 2012 does not seek *"full details regarding the Transition Project Proposal"*, but rather information on the current preparations, planning and capacity of Telefónica to carry out the Transition activities identified in the Information Requirement.

However, given the concerns raised in A&L Goodbody's letter regarding availability of relevant Telefónica personnel, ComReg is willing to extend the deadline for Telefónica to fully comply with the information request until 4pm Friday 2 November 2012.

The required information will be collected from your organisation by ComReg. To make an appointment to collect this information, please contact Kevin Kennedy at ComReg on 01 8049650 before 1pm on 2 November 2012. The requirements set out in section F of ComReg's letter of 17 October 2012 remain otherwise unchanged.

Yours sincerely

George Merrigan Director, Market Framework Commission for Communications Regulation cc: A&L Goodbody (by letter)

Commission for Communications Regulation An Coimisiún um Rialáil Cumarsáide Block DEF, Abbey Court, Irish Life Centre, Lower Abbey St, Dublin I Bloc DEF, Cuirt na Mainistreach, Ionad Irish Life, Sraid Na Mainistreach Iocht, Baile Atha Cliath I Telephone +353 | 804 9600 Fax +353 | 804 9665 Email info@comreg.ie Web www.comreg.ie

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9. Telefonica: letter to ComReg "Transition Planning and Interim GSM Licence Consultation" (letter dated 2 November 2012)



### Strictly Confidential

2<sup>nd</sup> November 2012

Dr Samuel Ritchie Commission for Communication Regulation Abbey Court, Irish Life Centre Dublin 1

### **Transition Planning and Interim GSM Licence Consultation**

Dear Mr Ritchie

I refer to your letter dated 17<sup>th</sup> October 2012 in which certain information was requested by ComReg pursuant to section 13D of the Communications Act 2002, and to your subsequent letter in which you clarified that "ComReg does not seek full details regarding the Transition Project Proposal but rather information on current preparations, planning and capacity of Telefónica to carry out the Transition activities identified in the Information Request". Telefónica has prepared its response below to the two letters on the basis of ComReg's clarification on 26<sup>th</sup> October.

I would make the following preliminary points:

- The information set out below and in the attached document is of the utmost commercial sensitivity and confidentiality, and may not be disclosed to any third party, including any agent of ComReg, without Telefónica's express prior written consent.
- Owing to Telefónica's ongoing participation in the main stage of the auction, it has very limited resources available to respond to ComReg's queries. This constraint was previously flagged to ComReg in letters dated 24<sup>th</sup> and 8<sup>th</sup> October, and was the reason for Telefónica's request for a two-week extension, as it would have resources available after the main stage to prepare its response. The one week extension provided means that Telefónica has had to prepare its response while the main stage is still under way. This has impacted on preparation of the response document, but not on transition planning itself.
- This response is without prejudice to concerns about the manner and time-frame in which ComReg issued the current s13D request, and concerns about the statutory justification for the queries posed.

As requested, Telefónica confirms that it has carried out "pre-planning or planning activities for the possibility of Relocation or Retuning". Set out below and in the attached document is information as requested on "current preparations, planning and capacity of Telefónica to carry out the Transition activities".

Telefonica has been preparing transition planning throughout the consultations. This preparation intensified in 2011 and in particular once ComReg announced an actual date for the auction in

August 2012. Telefonica has created a team consisting of a number of experienced engineers, reporting to our Head of networks which has been engaged on transition planning activities. This team was tasked to identify the work that would need to be carried out in order to transition from the current 900 and 1800 MHz allocations to potential new allocations following the auction. This team identified a range of tasks and dependencies for the completion of these tasks, which are set out in the attached document. Where it was possible to complete these tasks pre-auction, this work was carried out, however many of the activities identified require knowledge of the auction outcome in order to progress.

The transition planning and work carried out by Telefónica pre-auction is planning that was capable of being carried out prior to the outcome of the auction being known. Once the outcome is known, Telefónica will then be in a position to carry out the next stage of transition planning and will of course co-operate fully with ComReg and the other existing GSM licensees at that stage to submit a Transition Project Proposal to ComReg, as provided for in the Information Memorandum. It will also make all appropriate resources available to implement the transition plan once agreed. As previously indicated to ComReg however, Telefónica would note that based on its knowledge of the transition activities that need to be carried out post-auction, it does not believe that it will be possible to complete all of these activities by 31<sup>st</sup> January 2013. We would reiterate our request that ComReg now liaise with the operators with a view to agreeing a feasible date for the completion of transition. We would also request that ComReg provide an update on its proposed consultation on extension of interim licences.

Please do not hesitate to contact me if you have any queries concerning the information supplied.

**Yours Sincerely** 

hall

Tom Hickey

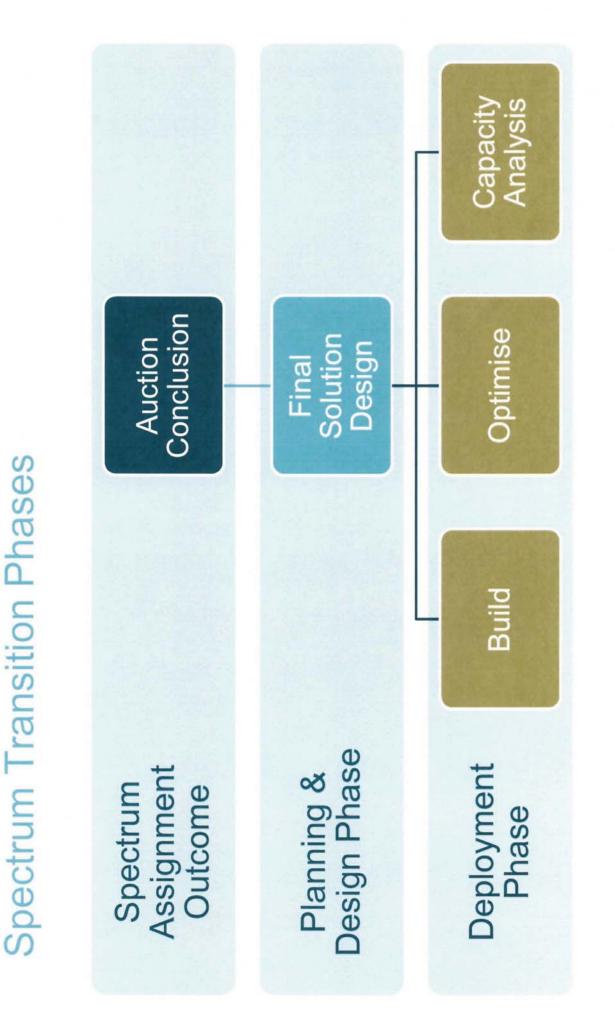
10. Telefonica: presentation sent to ComReg "Spectrum Transition Project" (presentation dated 2 November 2012)



<ul> <li>Spectrum Transition team since Q4 2011</li> <li>Key Focus Areas include:</li> <li>Network Trials of mu and specifically Custo and specifically Custo and specifically Custo and specifically Custo</li> <li>Detailed Capacity As:</li> <li>Assessed Optimisatio experience</li> <li>Automatic Frequency</li> <li>Border assessment o</li> <li>Border assessment o</li> <li>Identified Network im</li> <li>Identified Network im</li> <li>Consulted with Telef projects across Telefo</li> <li>Progressed 800Mhz &amp; wider Telefonica Orga</li> <li>Developed Budget pr</li> <li>Progressed all Transition</li> <li>critical path dependency</li> </ul>	<ul> <li>Spectrum Transition team have been in place and actively working on potential outcome scenarios since Q4 2011</li> <li>Key Focus Areas include:</li> <li>Network Trials of multiple potential spectrum holding outcomes to assess Network KPI impacts and specifically Customer experience impacts</li> </ul>
Key	as include: rials of multiple potential spectrum holding outcomes to assess Network KPI impacts fically Customer experience impacts
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<ul> <li>Automatic Fr</li> <li>Border asses</li> <li>Border asses</li> <li>Identified Ne</li> <li>Identified Ne</li> <li>Consulted w</li> <li>Consulted w</li> <li>Consulted w</li> <li>Brojects acro</li> <li>Assessed 8(</li> <li>Assessed 8(</li> <li>Assessed 8(</li> <li>Assessed 11 Ticologressed all Ticologressed all</li></ul>	Assessed Optimisation features from Equipment Vendor and their viability to improve Customer experience
<ul> <li>Border asses</li> <li>Identified Ne</li> <li>Consulted w projects acro projects acro</li> <li>Assessed 80 wider Telefol</li> <li>Developed B</li> <li>Progressed all Ti critical path dep</li> </ul>	Automatic Frequency Planning Tool and process assessment to assist spectrum transitioning
<ul> <li>Identified Ne</li> <li>Consulted w projects acro projects acro</li> <li>Assessed 8( wider Telefol wider Telefol</li> <li>Developed B</li> <li>Progressed all Ti critical path dep</li> </ul>	Border assessment of potential impact to sites and service in Border area
<ul> <li>Consulted w projects acro projects acro</li> <li>Assessed 8( wider Telefol wider Telefol</li> <li>Developed B</li> <li>Progressed all Ti critical path dep</li> </ul>	Identified Network impact on Shared Network sites and their associated solutions
<ul> <li>Assessed 8( wider Telefol wider Telefol</li> <li>Developed B</li> <li>Progressed all Ticci path dep</li> </ul>	Consulted with Telefonica Group to leverage their wide expertise and insights from transition projects across Telefonica
<ul> <li>Developed B</li> <li>Progressed all Ticci path dep</li> </ul>	Assessed 800Mhz & DTT Channel Interference and engaged with Group on experience in the wider Telefonica Organisation
<ul> <li>Progressed all Ti critical path dep</li> </ul>	Developed Budget provision and sought Governance approval locally and with Telefonica Group
	Progressed all Transition Streams to a point where Spectrum Auction Assignment outcome is a critical path dependency to support Transition progress
<ul> <li>Telefonica flag th Auction outcome</li> </ul>	Telefonica flag that Transition timelines are also dependent on Equipment lead-time post Spectrum Auction outcome

Spectrum Transition – Executive Summary

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Build # 1	Equipment or Process Lead Time Dependency Status	Identified all specific sites locations where capacity configuration is constrained under specific Spectrum Scenarios Agreed Telefonica Approach is to Cell split current sites where Spectrum capacity constraints apply NetShare sites options have been assessed Site Acquisition phase has not commenced pending Spectrum Yes Auction Assignment output	Site planning and Build phase is dependent on Spectrum Auction Yes outcome and site negotiation output leases as described above	Assessed all Repeater sites to collate full design specification and equipment specification Assessed Repeater equipment support for both E-GSM & P-GSM Bands and potential Spectrum Assignment impact Specific Site re-design is now pending Spectrum Assignment Ves outcome to support Equipment Ordering process	Assessed Combiner impacts for Shared Sites and associated options for Telefonica to resolve Spectrum Assignment allocations are now critical inputs in addition to flexibility to discuss and agree final solution with our Netshare partner Solution Agreement/Equipment Ordering & Lead-time are noted As key Critical Path items
1	Equipment Auction or Process Outcome Lead Time Dependency Dependency	Yes	Yes	Yes	Yes
Deployment Phase	Stream	Site Acquisition	Site Planning & Build	Repeater Sites	Share Sites -Combiners
Ω	Category	Build	Build	Build	Build

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Category	Stream	Auction Outcome Dependency	Equipment Auction or Process Outcome Lead Time Dependency Dependency	Status
Build	Antenna Solutions	Yes	Yes	Antenna Options have been assessed for both Shared and Non Shared sites Spectrum Assignment is critical input to support relevant Equipment Ordering and Lead-time
				Assessment complete of Traffic Balancing options across multi Radio Layer sites Radio Node ordering is dependent on Spectrum Assignment output to determine scale of traffic balancing actually required
Build	Traffic Balancing across Technology Layers	Yes	Yes	to support Network Performance KPIs
Build	MORAN Analysis & Deployment	Yes	Yes	MORAN Active Sharing Trial complete for feasibility of sharing in common bands Spectrum Assignment outcome for Telefonica and NetShare Partner required to facilitate Equipment ordering process
Build	Coverage Enhancement	Yes	Yes	Assessed Options to enhance Coverage and thus compensate for KPI and Customer Experience impacts Equipment Ordering pending Spectrum Assignment input
-	DVB-TV Preparation &			Reviewed DTT Channel Plan and impact assessment on near & adjacent 800Mhz channels Reviewed options and Process deployed in other Telefonica Business to resolve service issues in Life

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		Auction	Equipment or Process	
		Outcome	Lead Time	
Category	Stream	Dependency Dependency	Dependency	Status
				Completed a Comprehensive review of Network Software
				Enhancements and new algorithms to improve capacity, capability and performance. Trial concluded in both Urban and Regional
				Population Areas to assess specific customer geo location.
				Feature implementation plan reviewed with Equipment Vendor and
				associated licensing process is refined.
				Feature implementation is dependent on final Spectrum Output
				scenarios
Optimise	Optimise Network Software Feature Trials	No	Some	
				Comparison complete of various frequency planning methodologies
				and tools with multiple vendors
				Feasibility of Network Change Freeze requirements to lock Full
				Network site parameters as input to AFP process
				Final coordination will be dependent on Spectrum Assignment
Optimise	Automatic Frequency Plan (AFP)	Yes	Yes	outcome
				Assessment complete of pre & post AFP luning requirement and
				associated resourcing requirements to test and assess Network KPIs
				and Customer experience
				Resourcing requirements identified to complete both activity sets -
Optimise	Optimise Parameter Optimisation	No	No	timelines dependent on Spectrum Auction Assignment.

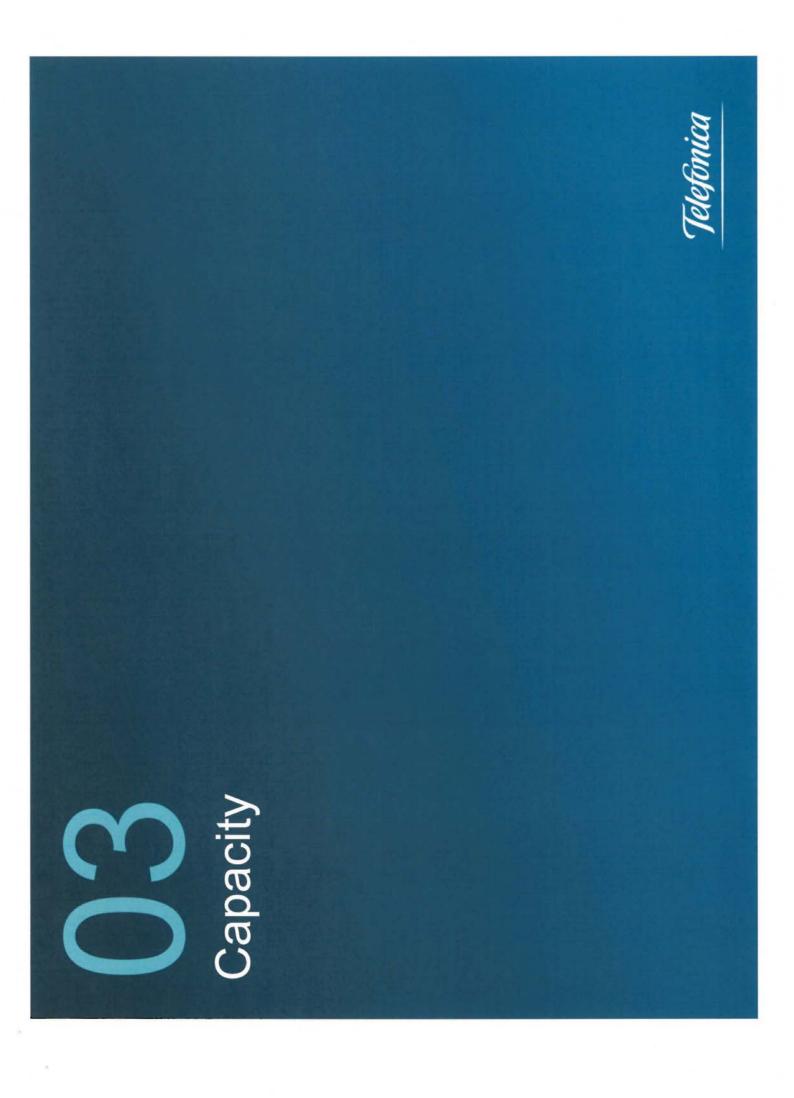
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Depinylitelit Filds	D D D D D D	Optil	
A CONTRACTOR OF A CONTRACTOR O		Equipment	
	Auction	or Process	
	Outcome	Lead Time	
Category Stream	Dependency Dependency	Dependency	Status
			Assessed potential impact on Near Border sites where re-
			engineering activities may be required – Detailed design
Optimise Cross Border Optimisation	Yes	No	subject to Spectrum assignment
			Traffic balancing across Technology Layers and associated
			Capacity upgrades assessed – Implementation project
			dependent on Spectrum assignment with follow on
<b>Optimise</b> Traffic Balancing	Yes	No	dependency on Equipment Ordering & lead-time
			Identified Network Performance tuning activities as follow up
			to Frequency Replan – Resourcing identified to complete
			parameter consistency checks and performance analysis &
Optimise Network Clean-up	No	No	changes
			Repeater Network retune assessed – Manual site intervention
			required in all cases to effect the retune plan dependency on
			equipment ordering process and associated Spectrum
<b>Optimise</b> Repeater Re-tune	No	No	Assignment to progress this stream activity

Denlovment Phase - Ontimise # 2

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Dep	<b>Deployment Phase – Capacity #1</b>	ase –	Cap	acity # 1
Category	Stream	Auction Outcome Dependency	Auction Equipment Outcome Lead Time Dependency Dependency	Status
Capacity	Capacity AMR-HR License deployment	Yes		Adaptive Multi Rate is utilised to compress Voice Codecs and enhance voice capacity on network hardware Licensing Ordering process dependent on final Spectrum assignment to validate its full requirement – Licensing timelines will not create any challenges to Transition plan
Capacity	Low Level Capacity Modelling	No	No	Low level analysis of the subscriber traffic behaviour and location was carried out and a capacity model was built to allow us to predict the implications of spectrum refarm Determined estimated impacts to various bands/technologies scenarios from Auction Assignment outcome
Capacity	Transceiver Deployment	Yes	Some	Redistribution of capacity assessed to support Traffic balancing with potential impact on Transceiver Hardware Upgrades. Deployment plan for Transceiver Upgrades has assessed Lead- time impacts and Equipment constraints on particular sites
				Transmission Capacity assessed based on potential Transceiver

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Upgrades – Solution & Plan drafted to support Transmission Capacity upgrades as relevant

Yes

Capacity Transport Upgrade

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Category	Stream	Auction Outcome Dependency	Equipment Lead Time Dependency	Status
Capacity	Transcoder ugrades	Yes	No	Assessed Transcoder pools based on potential Traffic Redistribution for GSM frequency bands, Pool capability dependent on AMR –HR Utilisation
Capacity	VAMOS	Yes	Some	Assessment complete of VAMOS features for Voice Codec Compression – Deployment dependent on Spectrum Assignment outcome
Capacity	3G Site Upgrades	Yes	Yes	Assessment complete of 3G Site requirements to support traffic offloading from constrained GSM Scenarios Deployment dependent on auction assignment outcome with follow on equipment lead-time and site upgrade agreements with landowners

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## Spectrum Transition – Conclusion

- Spectrum Transition Plan is widely acknowledged in Telefonica as a critical delivery activity
- Feasibility assessments to test many spectrum scenarios are now complete
- Broad team of resources actively engaged on Scope and Feasibility since Q4 2011
- Funding & Governance Approval has been secured to support Transition plan Activities
- Critical Path dependency is the Spectrum Auction Assignment outcome
- Transition timelines are tentative based on Assignment Unknown status and associated equipment lead-time post auction outcome. Christmas Network Freeze will be included in transition timeline



11. ComReg: letter to Telefonica "Transition Planning and Interim GSM Licence Consultation – following ComReg's information request of 17 October 2012 to Telefonica Ireland Limited pursuant to 13D(1) of the Communications Regulation Act 2012" (letter dated 8 November 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

08 November 2012

Mr Tom Hickey Telefónica Ireland Limited 28 – 29 Sir John Rogerson's Quay Docklands Dublin 2

Reference: Transition Planning and Interim GSM Licence Consultation – following ComReg's Information Request of 17 October 2012 to Telefonica Ireland Limited pursuant to section 13D(1) of the Communications Regulation Act 2012

Dear Mr Hickey,

I refer to your letter dated 2 November 2012 in relation to the above.

In particular, I note your view that "...the information set out below and in the attached document is of the utmost commercial sensitivity and confidentiality, and may not be disclosed to any third party, including any agent of ComReg, without Telefonica's express prior written consent."

Having had regard to your letter ComReg considers that it is not required to seek Telefónica's express consent to third party disclosure for reasons including the following:

- section 13D(1) enables ComReg to require an undertaking to provide it with such written information as it considers necessary to enable it to, amongst other things, carry out its functions;
- in the present case, disclosure of the information provided by Telefónica in your letter of 2 November to its agents (including, in particular, independent consultants and legal advisors engaged by ComReg to provide advice on Transition issues arising from the MBSA process) is reasonably required for it to carry out its functions; and
- appropriate arrangements are in place to protect the confidentiality and security of the information provided by Telefónica.

Telefónica might note that ComReg, at this point in time, considers that it will be disclosing information received from Telefónica pursuant to its Section 13D Notice to Red-M Wireless Limited, Vilicom Engineering Limited and its legal advisors, Mason Hayes & Curran.

Yours sincerely

State

Dr Samuel Ritchie

12. Telefonica: letter to ComReg "MBSA Assignment Transition" (letter dated 12 December 2012)



12<sup>th</sup> December 2012

Dr Samuel Ritchie Commission for Communication Regulation Abbey Court, Irish Life Centre Lower Abbey Street Dublin 1

### **MBSA Assignment Transition**

Dear Samuel

The assignment stage of ComReg's spectrum auction (MBSA) has now concluded and ComReg has clarified the assignments that will apply following the auction. It will now be necessary for Telefonica (O2) and other existing licensees to implement a transition to new assignments in the 900MHz and 1800MHz bands. ComReg's auction process envisaged that operators would develop and agree a common transition plan. The purpose of this letter is to inform ComReg of progress in that regard; of O2's proposed transition plan; O2's reaction to other operator proposals; and other related matters.

### **Operator Agreement on Transition**

There have been two meetings attended by all four licensees, on 10<sup>th</sup> December and 11<sup>th</sup> December (by conference call). At these meetings, operators presented their proposed transition plans separately. As agreement was not reached among all operators present, it is not possible to present ComReg with an industry transition plan, however our proposal is, we believe agreeable to all existing GSM licensees and three of the four operators. For information, O2's presentation is attached to this letter. O2 is in a position to agree to the Meteor proposal and indicated so at the meetings. Meteor also indicated that it can agree to the O2 proposal. Vodafone stated that the proposals of both Meteor and O2 were reasonable, and indicated willingness to agree to them.

### **O2** Approach to Transition

O2's general approach to the transition has been to carry-out the planning and implementation as early as is possible. Priority has been given to the 900MHz band as both Vodafone and H3GI require O2 to move to its new assignment before they can commence operating on their new assignments in lots F and G respectively. In the 1800MHz band, O2 believes it can vacate the spectrum that has been assigned to other operators relatively quickly, so that no material delay is caused to any other operator taking up their spectrum as assigned.

In the 900MHz band, O2 is dependent on Meteor successfully vacating lots C and D before it can transit from F and G. In practice, O2 has found that it should be possible for the majority of its planning and preparation to be carried out in parallel with similar activity being carried out by

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Meteor, leaving only the actual implementation to be carried out sequentially. In the 1800MHz band, lots I, J and K are unassigned in time-slice 1. O2 currently uses three channels in lot L which is assigned to Meteor in time-slice 1. O2 can transition these three lot L channels early so that no delay is caused to Meteor taking up its assignment, as explained below.

It is O2's intention to carry out its transition as early as is practically possible. On this basis, we have developed a transition plan as described below which represents the earliest practicable transition. We understand that other operators will want the benefit of the earliest possible transition, but at the same time will want a latest date when they can be reasonably certain their assigned spectrum will be vacated. This raises a dilemma in that the earliest date does not allow any room for contingencies, so if a final date is to be provided, then it will of necessity be a later date that allows for contingency. For this reason, O2 proposes two dates; the Project Date; and the Deadline Date. O2 will implement on the basis of the Project Date unless this date is not possible for reasons that O2 cannot reasonably control. At this time O2 has no reason to believe that it cannot complete its transition by the Project Date indicated below, however does need to retain reasonable additional time for the Deadline Date to allow for contingencies. By way of example, one circumstance that might require additional time would be a failure of the Automatic Frequency Plan (AFP). This plan will be prepared for the new assignment, however it is possible that this AFP might fail on implementation and this something that will only become apparent upon implementation. In this case, O2 would require sufficient time to roll-back, re-design, and re-implement.

### **O2 900MHz Transition**

The following table shows O2's timetable to prepare and complete transition in the 900MHz band. Final implementation is contingent on the release of Lots C and D by Meteor.

Activity	Project Date	Deadline Date
AFP preparation complete	14th February 2013	14th February 2013
Repeater equipment ready	19th March 2013	19th March 2013
Cavity Combiner solution ready	15th March 2013	15th March 2013
Transition Implementation Complete	Confirmed Spectrum Availability + 3 weeks	Confirmed Spectrum Availability + 6 weeks

It is O2's understanding that Meteor expect to have vacated Lots C and D by 16<sup>th</sup> April 2013. In this case O2 would expect to have vacated lots F and G by May 7<sup>th</sup> 2013, but would have May 28<sup>th</sup> as a Deadline Date.

### **O2 1800MHz Transition**

As described above, O2 currently uses three 2x200MHz carriers within lot L, which has been assigned to Meteor in time-slice 1. As the use of these three channels is somewhat limited, we have found that with relatively small effort we can relocate these three carriers to a position

within lots A, B, or C ahead of the main transition of O2's 1800MHz network. Among other locations, these channels are used by cells in the co-ordination zone near the border with Northern Ireland so will need to be replaced by similarly coordinated alternative channels, and O2's GSM licence will need to be modified accordingly. O2 propose to transition these three 1800MHz channels with a Deadline Date of 2<sup>nd</sup> April 2013.

O2 propose to implement its main 1800MHz transition immediately after the successful completion of its 900MHz transition. Similar to the approach taken in the 900MHz band, O2 will have a Project Date, but also a Deadline Date for implementation of 3 weeks and 6 weeks respectively as shown below.

Activity	Project Date	Deadline Date
AFP preparation complete	14 <sup>th</sup> March 2013	14 <sup>th</sup> March 2013
Relocation of 3 channels from Lot L to Lot A/B/C	26 <sup>th</sup> March	2 <sup>nd</sup> April
Transition Implementation Complete	O2 900MHz Transition Complete + 3 weeks	O2 900MHz Transition Complete + 6 weeks

By way of example, if O2's 900MHz transition is completed by 7<sup>th</sup> May 2013, then the expected date for completion of 1800MHx transition would be 28<sup>th</sup> May, with a Deadline Date of 18<sup>th</sup> June.

### Transparency of Progress

O2 propose to update other operators and ComReg of progress of activities two weeks prior to each Project Date, and also on each Project Date.

### **Deadline Date**

O2 understands that other operators will want reassurance in relation to O2 meeting the Deadline Date. In order to give this reassurance, O2 would propose that ComReg initially extend its Interim Licence in the 900MHz band by no more than the date when Lots C and D are vacated by Meteor plus six weeks (currently 28<sup>th</sup> May). This date would need to be capable of being extended to account for any delay in the availability of Lots C and D and also for any other delay to transition arising from circumstances beyond O2's control.

### Repeaters

ComReg has had some correspondence with O2 in relation to the use of repeaters, chiefly within the 900MHz band, and O2 has proposed to ComReg that this matter should be resolved within the transition activities following the MBSA. This matter has been raised with the other three licensees in discussions relating to the transition, and all three have indicated willingness to consider a common registration of broadband repeaters on each other's register of licensed sites. Final details on how this might work have yet to be agreed, and O2 proposes to follow-up with this detail separately. This activity will not impact on the transition plan.

### **Liquidated Damages**

In your letter of 27<sup>th</sup> November, you call on all existing licensees to address within their transition plan the "attribution and acceptance of liability for liquidated damages in accordance with the provisions set out in Section 3.8 of the IM". You will be aware that O2 reserved its position in relation to this part of ComReg's proposal in response to various consultation documents, and by direct correspondence, most recently from our legal representative A&L Goodbody. O2 does not propose to accept liability for liquidated damages as part of its transition plan. To do so would be to commit to what at present is an un-quantified liability.

O2 understands that other licensees and ComReg will want to have some reassurance that O2 has no incentive to delay the transition of assignments. We believe this requirement is adequately addressed by our proposal above that ComReg initially extend O2's interim licence to a date that is six-weeks later than the date of availability of Lots C and D. Similarly, in the 1800MHz band, O2 will agree to a modification to its licence to provide for a transition of the three GSM channels initially, followed by the full assignment. O2 would then be required to explain and justify any delay beyond the agreed Deadline Dates to ComReg in order to obtain appropriate further interim licence extension/modification.

Please note that this proposal is solely for discussion purposes and is not intended as a legal offer capable of acceptance, nor to create a contractual relationship whether with ComReg or any other entity. We are anxious to finalise the Transition Plan as soon as possible, and propose that once ComReg has had an opportunity consider the attached, that we schedule a meeting to discuss and finalise the Transition Plan. In the mean-time, O2 will continue with its preparatory work in accordance with this proposal. If ComReg forms the opinion that this proposal is not agreeable then O2 should be notified immediately so as to avoid incurring unnecessary expense.

Yours Sincerely

Thean Oll

Tom Hickey

13. Telefonica: presentation sent to ComReg "MBSA Transition – Discussions between Existing and New Licensees" (presentation dated 12 December 2012)



This is a Draft Plan and is circulated for information only. No commitment is entered into by circulation of this Draft Plan

### General

- Priority has been given to transition in the 900MHz band as O2 must vacate lots F and G before Vodafone and H3GI can take up new assignments
- O2 aim to carry out transition activities in the 1800MHz band simultaneously with 900MHz, however as lots I,J and K are unassigned in TS1, the commitment is to vacate lot L so that no delay is caused to Meteor taking up its assignment
- O2 has examined the transition activities and developed a plan to transfer from lots F and G in 900MHz at the earliest possible date. This is our Project Date and O2 will use its best endeavours to deliver by this date. O2 will also commit to a Deadline Date by which we will guarantee to have completed transition activities
- and D. O2's final implementation date is relative to Meteor's O2's 900MHz transition is dependant on Meteor having vacated lots C implementation date
- σ O2 has reserved its position regarding Liquidated Damages – this is matter to be resolved between ComReg and O2

# **MBSA Transition Activities and Milestones**

900MHz Transition

Activity	<b>Project Date</b>	<b>Deadline Date</b>
AFP preparation complete	14th February	14th February
Repeater equipment ready	19th March	19th March*
Cavity Combiner solution ready	15th March	15th March*
Transition Implementation Complete	Confirmed Spectrum Availability + 3 weeks	Confirmed Spectrum Availability + 6 weeks*

O2 propose to update other operators and ComReg of progress of activities two weeks prior to each Project Date, and also on each Project Date

\*Subject to external parties, including vendors and suppliers



14. ComReg: letter to Telefonica "All MBSA Winning Bidders – The Transition Project Proposal" (letter dated 21 December 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### By hand and email

21 December 2012

Tom Hickey Regulatory Manager Telefonica Ireland Limited 28/29 Sir John Rogerson's Quay Dublin 2

### All MBSA Winning Bidders – The Transition Project Proposal

Dear Mr. Hickey

Further to the submissions that ComReg received from all the MBSA Winning Bidders on 12 December 2012, and the individual Transition Project Proposals for ComReg's consideration contained therein, I am writing to you in relation to the Transition Project Plan for the MBSA process and the immediate next steps to finalise this plan.

ComReg notes that two of the Existing GSM Licensees (namely Meteor and Telefónica) submitted its own individual Transition proposal but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. In that regard, ComReg has requested its consultants, namely Red-M Wireless Limited and Vilicom Limited ('Red-M/Vilicom'), to review all relevant material including the individual Transition proposals submitted on 12 December and to recommend a Transition plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

Red-M/Vilicom has carried out this analysis and the Schedule to this letter sets out Red-M/Vilicom's analysis and recommendations on the MBSA Transition Plan. Amongst other things, Comreg notes that Red-M/Vilicom:



- have considered and analysed all the Transition information supplied by the Mobile Network Operators ('MNOs') and in particular their submissions of 12 December 2012;
- have recommended a Transition Plan that ComReg could adopt as its finalised Transition Project Plan for both the 900 MHz and 1800 MHz bands (the "Recommended Transition Plan"). The Recommended Transition Plan proposes that:
  - the Transition activities in the 900 MHz band be completed by the end of week 17 (26 April 2013);
  - the Transition activities in the 1800 MHz band be completed by end of week 14 (5 April 2013); and
  - o a fortnightly reporting period be incorporated into the plan.

Having had regard to all the relevant materials before it, including the individual transition proposals submitted on 12 December, and after carefully considering the Red-M/Vilicom analysis and recommendations, ComReg has formed the view that the Recommended Transition Plan is achievable by all of the relevant parties without imposing overly onerous obligations on Winning Bidders and would therefore be a proportionate measure. Accordingly, ComReg proposes to adopt the Recommended Transition Plan (as set out in Annex 2 of the Report in the Schedule to this letter) as the finalised Transition Project Plan. In arriving at this proposal, ComReg notes that, having analysed all the relevant Transition-related information provided to ComReg to date, Red-M/Vilicom's professional opinion is that *"the Recommended Transition Plan is both viable and achievable within the proposed timescales."* 

Should the Recommended Transition Plan be adopted as is, this would set the following Transition-completion dates for the 900 MHz and 1800 MHz bands.<sup>1</sup>

GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Vodafone	No Transition necessary	31 January 2013
Meteor	5 April 2013	No Transition necessary
Telefónica	Meteor's 900 MHz Transition-	5 April 2013

Table 1: The prop	osed Transition-completion dates	
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<sup>&</sup>lt;sup>1</sup> Note the Transition Project Plan would also set out milestone dates against the specific Transition activities as outlined in the Recommended Transition Plan.



GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
	completion date + 3 Weeks (i.e. 26 April 2013)	

Both generally, and against the background of the Liquidated Damages provisions set out in section 3.8.2 of the Information Memorandum, ComReg notes the Winning Bidders' submissions of 12 December 2012 regarding deadlines, and further notes that two GSM Licensees (namely Meteor and Telefónica) suggested that a later deadline date be set in order to provide for contingencies and/or matters not within their control.

While ComReg understands that unforeseen events could lead to delays in the implementation of a Transition plan and thus require provision to be made for additional contingencies, ComReg also notes the views of Red-M/Vilicom on the Recommended Transition completion dates, namely that:

- a) these dates are both viable and achievable; and
- b) these dates could be further accelerated by Meteor and Telefónica in respect of a number of items (equipment lead time, hybrid combiners and alternative solutions to cavity combiners).

This suggests to ComReg that some contingency-provision may, in effect, already be built into the Transition-completion dates for Meteor and Telefónica. To the extent that this is so, the provision for additional contingencies sought by Meteor and Telefónica would not appear to be strictly necessary.

Notwithstanding this, ComReg proposes to add a **two-week grace period** to the Transitioncompletion dates proposed above during which Liquidated Damages shall not trigger even if the above-mentioned 900 MHz and 1800 MHz Transition-completion dates are not achieved. This would set the below-mentioned dates as the dates following which the requirement to pay Liquidated Damages in accordance with the Information Memorandum would be triggered.



Table 2: The proposed dates following which the requirement to pay Liquidated Damages would apply

GSM Licensee	900 MHz Liquidated Damages date	1800 MHz Liquidated Damages date
Vodafone	No Transition necessary	14 February 2013
Meteor	19 April 2013	No Transition necessary
Telefónica	Meteor's 900 MHz Transition completion date + 5 Weeks (i.e. 10 May 2013)	19 April 2013

Finally, ComReg notes Telefónica's statement in its letter of 12 December that it "does not propose to accept liability for liquidated damages as part of its transition plan" as to "do so would be to commit to what at present is an un-quantified liability". In that regard, ComReg would point out that the application and methodology for calculation of Liquidated Damages is clearly explained in Document 12/25 (Decision D04/12) and set out in Section 3.8.2 of the Information Memorandum. In addition, ComReg would remind Telefónica that all Winning Bidders, as a contractual pre-condition to participating in the MBSA, agreed to be bound by and to comply with the Transition Rules and are consequently required to abide by the finalised Transition Project Plan.

ComReg is now seeking each Winning Bidder's views on the above proposals. In order to facilitate the finalisation of Transition Project Plan in early January 2013, ComReg requests that all views be submitted to <u>kevin.kennedy@comreg.ie</u> no later than **4pm on Tuesday 8** January 2013.

In submitting these views, the respondents must clearly identify any confidential information as ComReg intends to publish all information received on this proposal, subject to the treatment of confidential information as set out in ComReg Document 05/24.

In addition, and in accordance with paragraph 3.163 of the IM, it is ComReg's intention to publish the finalised Transition Project Plan on ComReg's website, having regard to the treatment of confidential information as set out in ComReg 05/24.

**Yours Sincerely** 

Dr. Samuel Ritchie

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SCHEDULE

Page 5 of 5

Recommendations to ComReg on the MBSA Transition Plan

VRN829\_300

### Recommendations to ComReg on the MBSA Transition Plan

Joint Report for ComReg

By



### 1 Recommendations to ComReg on the MBSA Transition Plan

This document sets out Red-M/Vilicom recommendations to ComReg on the Transition Plan for the Multi-Band Spectrum Award ('MBSA') Process. This document has been prepared using the information supplied to ComReg by the Mobile Network Operators ('MNOs') and, in particular, their submissions to ComReg dated 12 December 2012. As submissions received from all MNOs, including Hutchison 3G Ireland Limited ('H3GI'), have been considered by Red-M/Vilicom in preparing this document, the recommended Transition plan will assist all Winning Bidders.

As discussed further below, two Transition plans are considered in this document:

- (1) 'MNO Supplied Composite Transition Plan': This is a composite Gantt chart representation of the Transition timelines for Time Slice 1 proposed individually by the MNOs to ComReg in their submissions of the 12th December 2012 (see Annex 1).
- (2) 'Recommended Transition Plan': This is the Transition plan recommended by Red-M / Vilicom for the MBSA process (see Annex 2 which includes a Gantt chart representation of this plan).

### 1.1 The MNO Supplied Composite Transition Plan

The Assignment Round of the MBSA process was completed on 14<sup>th</sup> November 2012. A two week "Negotiation Phase" subsequently followed and this was concluded on the 28<sup>th</sup> November 2012. There were no changes in the spectrum assignments determined by the Assignment Round of the MBSA. ComReg held meetings with the MNOs during the week commencing the 3<sup>rd</sup> December 2012 to discuss the MBSA results and Transition preparations.

Following the Assignment Round of the MBSA process, there was a four week period during which the Existing GSM Licensees were required to collectively formulate and submit a Transition Project Proposal to ComReg. The deadline for submitting a Transition Project Proposal was 12<sup>th</sup> December 2012.

ComReg received an individual 'Transition Proposal' from two of the Existing GSM Licensees, Meteor and Telefónica. Vodafone did not provide a Transition Proposal, thereby suggesting that it would not be carrying out Transition activities beyond 31 January 2013. These proposals are presented on a composite basis in a Gantt chart in Annex 1.

## 1.2 The Recommended Transition Plan

Two of the Existing GSM Licensees, Meteor and Telefónica, submitted their own individual 'Transition Project Proposal' but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). Telefónica's submission on the 12<sup>th</sup> December 2012 states:

'As agreement was not reached among all operators present, it is not possible to present ComReg with an industry transition plan, however our proposal is, we believe agreeable to all existing GSM licensees and three of the four operators.'

In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. ComReg has requested Vilicom and Red-M to review all relevant material including the individual Transition Proposals submitted and to recommend a Transition Plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

### 1.2.1 The Recommended Transition Plan: 900MHz

The Recommended Transition Plan reduces the critical path timescale so that the Telefónica spectrum relocation at 900MHz concludes at the end of week 17 ( $26^{th}$  April 2013), rather than week 19 ( $10^{th}$  May 2013) as envisaged by the MNO Supplied Composite Transition Plan.

The two week reduction in the timescale for Transition activities has resulted from the following minor modifications to the individual proposals supplied by the MNOs:

### Meteor and Telefónica shared sites:

For the site share activity (identified as "Site Works Complete" for Meteor, and "Cavity Combiner Solution Ready" for Telefónica), one week has been removed from Meteor's supplied proposal. The Recommended Transition Plan shows a completion date for this activity in week 11 (15<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Meteor's supplied proposal showed "site works complete" in week 12 (22<sup>nd</sup> March 2013); whereas
- Telefónica's supplied proposal showed "cavity combiner solution ready" in week 11 (15<sup>th</sup> March 2013).

However, as the sites are shared sites, the Meteor and Telefónica activities should be capable of completion at the same time.

### Meteor Repeaters:

Two weeks have been removed from Meteor's supplied proposal for the repeater replace/retune activity.

- Meteor's supplied proposal showed "Repeater Replace/Retune Complete" in week 13 (29<sup>th</sup> March 2013).
- Telefónica's supplied proposal showed "Repeater Equipment Ready" in week 12 (19<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Telefónica has confirmed an eleven week timescale for the retuning/replacing of its repeaters. [Confidential Text Removed].
- Meteor would appear to have significantly fewer repeaters than Telefónica and given a similar level of effort, it should therefore be able to complete this activity more rapidly than Telefónica. The Recommended Transition Plan shows Meteor taking marginally less time (10 weeks) to complete this activity compared to 11 weeks for Telefónica.
- [Confidential Text Removed]
- Retuning/replacing repeaters is an activity which can be completed quicker if more manpower and resources are used.

We are of the view that the reduced critical path timescale (of two weeks) is both viable and achievable. Indeed, we note that the Transition timescales could possibly be further accelerated considering the following:

### Equipment Lead Times:

Meteor and Telefónica should be able to reduce the timescales associated with the 77 shared sites currently using cavity combiners, if the manufacturers can deliver the relevant replacement equipment at an earlier date.

### Hybrid Combiners:

Meteor described a 3-stage 'lift and shift' process for replacing the shared sites with new cavity combiners i.e.

- 1. Replacing the existing cavity combiners with hybrids,
- 2. Retuning the cavities offsite (or purchasing new ones)
- 3. Replacing the hybrid combiner with the new retuned cavity combiner

Meteor and Telefónica could implement steps 2 and 3 after the Transition Project Plan is complete.

### • Alternative Solutions to Cavity Combiners:

Meteor and Telefónica could also investigate alternative solutions to the cavity combiners at some of the 77 shared sites. These alternative solutions may reduce the ten week period currently assigned to the cavity combiner solution. For example, logical site sharing which would involve one operator adding equipment to their shared partners' NodeB cabinet. This might be accomplished more quickly.

In this light, we are of the view that a reduced critical path timescale of two weeks is reasonable.

### 1.2.2 The Recommended Transition Plan: 1800MHz

Telefónica did not supply a date for 1800MHz relocation, but stated in its submission of the 12<sup>th</sup> December 2012 that the transition implementation is complete at

### "O2 900MHz Transition Complete + 3 weeks",

which implies a completion date at the end of week 22 ( 28<sup>th</sup> May 2013).

The Recommended Transition Plan is drawn up on the basis of this statement i.e. the implementation of its relocation in the 1800MHz band will take 3 weeks. However, it suggests that Telefónica relocate in the 1800MHz band immediately after the 1800 MHz AFP (*Automatic Frequency Plan*) process is prepared. We see no reason why Telefónica could not complete its 1800MHz relocation during weeks 12 to 14 while waiting for Meteor to complete its 900MHz relocation. Therefore we recommend that the finalised Transition plan should require Telefónica's completion of 1800MHz relocation by week 14, the week ending 5<sup>th</sup> April 2013.

Telefónica's supplied proposal: AFP preparation complete in week 11 (14<sup>th</sup> March 2013) Telefónica's supplied proposal: 1800MHz Relocation complete in week 22 (28<sup>th</sup> May 2013) Recommended Transition Plan: 1800MHz Relocation complete in week 14 (5<sup>th</sup> April 2013)

### 1.2.3 The Recommended Transition Plan: Reporting Method

In its submission, Meteor suggested that it would publish a fortnightly report to ComReg and the other winning bidders, containing the following items:

- Progress against milestone dates; and
- Identification of any risks and mitigating actions.

This proposal seems reasonable and to ensure that ComReg has a view of the implementation of the finalised Transition Plan, the same proposal should be adopted by all GSM Licensees.

Further, when a transition activity (as set out in the Recommended Transition Plan in Annex 2) is completed by a GSM Licensee, it should notify ComReg and all other Winning Bidders immediately of this development and not wait for the fortnightly report to do so. This would seem reasonable in order to ensure full transparency for both ComReg and all MNOs during implementation of the Transition Project Plan.

Similarly, once a GSM Licensee has completed its relocation activities in a band (either the 900 MHz or the 1800 MHz band), it should immediately notify ComReg and the other Winning Bidders of this development and not wait for the fortnightly report to do so. Again, this would seem reasonable in order to ensure full transparency for all parties.

# **1.3 Recommendation**

In light of the above and taking account of all of the circumstances and proposals submitted by MNOs, we consider that the Recommended Transition Plan is both viable and achievable within the proposed timescales while avoiding any undue delay in the availability of liberalised spectrum. We therefore recommend that ComReg adopt this Recommended Transition Plan as its finalised Transition Project Plan for both the 900MHz and 1800MHz bands.

Andy Barnard Red-M Wireless Ltd Louise Hopkins Vilicom Engineering Ltd

# 2 Annex 1- MNO Supplied Composite Transition Plan - Gantt chart

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   | 10         11         12         13         14         15           08-Mar         15-Mar         22-Mar         29-Mar         05-Apr         12-Apr           08-Mar         15-Mar         29-Mar         05-Apr         12-Apr           11         11         11         11         11           12         11         11         11         11           13         11         11         11         11           14         11         11         11         11           14         11         11         11         11           14         11         11         11         11           14         11         11         11         11           14         11         11         11         11         11           15         11         11         11         11         11         11           14         11         11         11         11         11         11         11   | 10         11         12         13         14         15         16           08-Mar         15-Mar         22-Mar         29-Mar         05-Apr         12-Apr         19-Apr           08         15         12         13         29-Mar         05-Apr         12-Apr         19-Apr           11         12         12         12         12         12         12         12           12         13         13         13         13         13         13         14           13         14         14         14         14         14         14         14           14         14         14         14         14         14         14         14           14         14         14         14         14         14         14         14           14         14         14         14         14         14         14         14           14   
  | 10         11         12         13         14         15         16         17           08-Mar         15-Mar         23-Mar         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr           08         15         15         12         19         17         16         17           08-Mar         15-Mar         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr           15         12         12         12         12         12         12         12           15         12         12         12         12         12         12         12         12         12         12           16         12 | 10         11         12         13         14         15         16         17         18           08-Mar         15-Mar         29-Mar         05-Apr         19-Apr         26-Apr         03-Mav           08-Mar         15-Mar         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-Mav           08-Mar         15-Mar         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-Mav           11         11         11         11         11         11         11         11           11 | 10     11     12     13     14     15     16     17     18     19       08-Mar     15-Mar     22-Mar     29-Mar     05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May       08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     12-Apr     26-Apr     03-May     10-May       10     11     11     12     11     11     11     11       11     11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11       11     11     11     11     11     11   | 10     11     12     13     14     15     16     17     18     19     20       08-Mar     15-Mar     23-Mar     05-Apr     12-Apr     13-Apr     26-Apr     03-May     10-May     17-May       08-Mar     19     12     12     12     12     13     14     15       15     15     12     12     12     12     13     13     17-May       15     15     12     12     12     12     14     15     16       15     12     12     12     12     12     16     16     17       16     12     12     12     12     12     12     13     14       16     12     12     12     12     14     14     16       16     12     12     12     12     12     16     16       16     12     12     12     12     12     12     12     12       16     12     12     12     12     12     12     12     12       16     12     12     12     12     12     12     12     12       16     12     12     12  |
|                 | 08-Mar   |          |                |              |               |                       |                        |                        |                    |   |   |   |   |  |   |   |      |         |       |     |       |        | -1         0         1         2         3         4         5         6         7         8           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           21-Dec         28-Dec         04-Jan         17-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           21-Dec         28-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           21-Dec         28-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           21-Dec         19-Jan         19-Jan         19-Jan         10-Feb         10-Feb         15-Feb         15-Feb | 0         1         2         3         4         5         6         7         8           28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           28-Dec         04-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           28-Dec         18-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           28-Dec         18-Jan         18-Jan         18-Jan         16-Feb         16-Feb         16-Feb         16-Feb         16-Feb         16-Feb         17-Feb         16-Feb         16-Fe   | 1         2         3         4         5         6         7         8           04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb           04         1         1-9         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1         1         1           1         1         1         1         1  
      1         1<  | 4     5     6     7     8       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb       25     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1       1     1     1     1  
  | 4     5     6     7     8       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1   | 4     5     6     7     8       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1       1     1     1     1     1  | an 01-Feb 08-Feb 15-Feb 22-Feb  
   | 6 7 8<br>08-feb 15-feb 22-feb  | 7 8<br>15-Feb 22-Feb   | 8<br>22-Feb   
   |   |  |   |  |   |  | 12 13<br>22-Mar 29-Mar  | 12 13 14<br>22-Mar 29-Mar 05-Apr   
  | 12 13 14 15<br>22-Mar 29-Mar 05-Apr 12-Apr<br>22-Mar 05-Apr 12-Apr   | 12 13 14 15 16<br>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr  
   | 12 13 14 15 16 17<br>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr 26-Apr<br>2-10-10-10-10-10-10-10-10-10-10-10-10-10-  | 12 13 14 15 16 17 18<br>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr 26-Apr 03-May<br>22-Mar 29-Mar 05-Apr 03-May   | 12     13     14     15     16     17     18     19       22-Mar     29-Mar     05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May       22-Mar     05-Mar     05-Apr     12-Apr     12-Apr     19-Apr     10-May     10-May       21-Mar     05-Mar     05-Apr     12-Apr     12-Apr     10-May     10-May       22-Mar     05-Mar     05-Apr     12-Apr     12-Apr     10-May       21-Mar     05-Mar     05-Apr     12-Apr     10-May       21-Mar     05-Apr     12-Apr     10-May     10-May       11-Mar     11-1     10-May     10-May     10-May       12-Mar     11-1     11-1     11-1     11-1       12-Mar     11-1     11-1     11-1       12-Mar     11-1     11-1     11-1       12-Mar     11-1     11-1     11-1       12-Mar     11-1     11-1     11-1       13-Mar     11-1     11-1     11-1       14-Mar     11-1     11-1     11-1       14-Mar     11-1     11-1     11-1       15-Mar     11-1     11-1     11-1       14-Mar     11-1     11-1     11-1  | 12     13     14     15     15     17     18     19     20       22-Mar     05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May     17-May       22-Mar     05-Apr     12-Apr     12-Apr     26-Apr     03-May     10-May     17-May       12-Mar     05-Apr     12-Apr     12-Apr     26-Apr     03-May     10-May     17-May       12-Mar     12-Apr     12-Apr     12-Apr     12-Apr     26-Apr     03-May     10-May     17-May       12-Mar     12-Apr     12-Apr     12-Apr     12-Apr     12-Apr     14     17-May       12-Mar     12-Apr     12-Apr     12-Apr     12-Apr     12-Apr     14     17-May       12-Mar     12-Apr     12-Apr     12-Apr     12-Apr     12-Apr     14     14       12-Mar     12-Apr     12-Apr  |
| _               | 22-Mar   |          |                |              |               |                       |                        |                        |                    |   |   |   |   |  |   |   |      |         |       |     |       |        | -1         0         1         2         3         4         5         6         7         8         9         10           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-feb         08-feb         15-feb         01-Mar         08-Mar           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-feb         08-feb         15-feb         01-Mar         08-Mar           21-Dec         28-Dec         04-Jan         18-Jan         25-Jan         01-feb         08-feb         15-feb         01-Mar         08-Mar           21-Dec         19         19         19         19         19         19         19         19         19           21-Dec         19         10         10         10         10         10   | 0         1         2         3         4         5         6         7         8         9         10           28-Dec         0+Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           28-Dec         0+Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           28-Dec         0+Jan         11-Jan         25-Jan         01-Feb         08-Feb         15-Feb         15-Feb         01-Mar         08-Mar           28-Dec         11-Jan         11-Jan         11-Jan         15-Feb         15-Feb         15-Feb         15-Feb         15-Feb         15-Feb         15-Feb         15-Feb         16-Feb         15-Feb   | 1         2         3         4         5         6         7         8         9         10           04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         01-Mar         08-Mar           04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         01-Mar         08-Mar          
04-Jan         18-Jan         21-Feb         02-Mar         08-Mar         08-Mar         08-Mar           04-Jan         18-Jan         18-Jan         01-Feb         08-Feb         15-Feb         01-Mar         08-Mar           11-Jan         18-Jan         18-Jan <td>4         5         6         7         8         9         10           25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           26-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           27         1         1         1         1         1         1         1           28         1</td> <td>4     5     6     7     8     9     10       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       10     1     1     1     1     1       11     1     1     1     1       12     1     1     1     1       13     1     1     1     1       14     1     1     1     1</td> <td>4     5     6     7     8     9     10       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       10     1     1     1     1     1       11     1     1     1     1       12     1     1     1     1       13     1     1     1     1       14     1     1     1     1</td> <td>5     6     7     8     9     10       an     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       D     1     1     1     1     1     1       D     1     1     1     1     1</td> <td>6         7         8         9         10           08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1         1           1         1         1         1         1         1         1           1&lt;</td> <td>7 8 9 10<br/>15-Feb 22-Feb 01-Mar 08-Mar</td> <td>8 9 10<br/>22-Feb 01-Mar 08-Mar<br/>22-Feb 10-Mar 08-Mar</td> <td>9 10<br/>01-Mar 08-Mar</td> <td>10<br/>08-Mar</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>14<br/>05-Apr</td> <td>14 15<br/>05-Apr 12-Apr</td> <td>14 15 16<br/>05-Apr 12-Apr 19-Apr</td> <td>14 15 16 17<br/>05-Apr 12-Apr 19-Apr 26-Apr</td> <td>14 15 16 17 18<br/>05-Apr 12-Apr 19-Apr 26-Apr 03-May</td> <td>14     15     16     17     18     19       05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May       15     12     19     19     10     10       16     12     19     10     10       17     12     19     10     10       18     12     19     10     10       19     10     10     10       10     10     10     10       10     10     10     10       10     10     10     10       10     10     10     10</td> <td>14     15     16     17     18     19     20       05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May     17-May       12     12     12     12     12     12     12     12       13     12     13     19     10-May     11-May       14     12     13     15     14       15     12     14     14     14       14     14     14     14       15     14     14     14       14     14     14     14       15     14     14     14       14     14     14     14       15     14     14     14       15     14     14     14       16     14     14     14       16     14     14     14       16     14     14     14</td>  | 4         5         6         7         8         9         10           25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           25-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           26-Jan         01-Feb         08-Feb         15-Feb         22-Feb         01-Mar         08-Mar           27         1         1         1         1         1         1         1           28         1   
   | 4     5     6     7     8     9     10       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       10     1     1     1     1     1       11     1     1     1     1       12     1     1     1     1       13     1     1     1     1       14     1     1     1     1   | 4     5     6     7     8     9     10       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       10     1     1     1     1     1       11     1     1     1     1       12     1     1     1     1       13     1     1     1     1       14     1     1     1     1  | 5     6     7     8     9     10       an     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar       D     1     1     1     1     1     1       D     1     1     1     1     1   | 6         7         8         9         10           08-Feb        
15-Feb         22-Feb         01-Mar         08-Mar           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1         1           1         1         1         1         1         1         1           1<   | 7 8 9 10<br>15-Feb 22-Feb 01-Mar 08-Mar  | 8 9 10<br>22-Feb 01-Mar 08-Mar<br>22-Feb 10-Mar 08-Mar   
  | 9 10<br>01-Mar 08-Mar   | 10<br>08-Mar   |   |  |   |  |   | 14<br>05-Apr  
   | 14 15<br>05-Apr 12-Apr   | 14 15 16<br>05-Apr 12-Apr 19-Apr   
  | 14 15 16 17<br>05-Apr 12-Apr 19-Apr 26-Apr   | 14 15 16 17 18<br>05-Apr 12-Apr 19-Apr 26-Apr 03-May  | 14     15     16     17     18     19       05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May       15     12     19     19     10     10       16     12     19     10     10       17     12     19     10     10       18     12     19     10     10       19     10     10     10       10     10     10     10       10     10     10     10       10     10     10     10       10     10     10     10  | 14     15     16     17     18     19     20       05-Apr     12-Apr     19-Apr     26-Apr     03-May     10-May     17-May       12     12     12     12     12     12     12     12       13     12     13     19     10-May     11-May       14     12     13     15     14       15     12     14     14     14       14     14     14     14       15     14     14     14       14     14     14     14       15     14     14     14       14     14     14     14       15     14     14     14       15     14     14     14       16     14     14     14       16     14     14     14       16     14     14     14   |
|                 | 05-Apr   |          |                |              |               |                       |                        |                        |                    |   |   |   |   |  |   |   |      |         |       |     |       |        | -1         0         1         2         3         4         5         6         7         8         9         10         11         12           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         25-Jan         01-Feb         08-Feb         15-Feb         01-Mar         06-Mar         15-Mar         23-Mar           21-Dec         28-Dec         04-Jan         11-Jan         18-Jan         01-Feb         08-Feb         15-Feb         01-Mar         15-Mar         15-Mar           21-Dec         28-Dec         04-Jan         18-Jan         10-Feb         16         16         16         17         17           11-Jan         18-Jan         10-Feb         16  | 0         1         2         3         4       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18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       10       12       12         04-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       15-Mar       15-Mar       15       16<td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     22-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     13-Feb     14       1     1     1     1     1     1     1     1     14       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1<td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td><td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td><td>5     6     7     8     9     10     11     12       an     01-feb     08-feb     15-feb     22-feb     01-Mar     15-Mar     22-Mar       0     1     15     08-feb     15-feb     22-feb     01-Mar     08-Mar     15-Mar       0     1     1     1     1     1     1     1</td><td>6         7         8         9         10         11         12           08-Feb         15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           1         1         22         15         15         15         15         15           1         1         1         1         1         1         1         1         1           1<!--</td--><td>7         8         9         10         11         12           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           15         1         1         1         1         1         1           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         1           15         1         1         1         1         1         1           15         1         1         1         1         1         1         1           15         1<td>8 9 10 11 12<br/>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br/>22-Feb 01-Mar 08-Mar 22-Mar</td><td>9 10 11 12<br/>01-Mar 08-Mar 15-Mar 22-Mar</td><td>10 11 12<br/>08-Mar 15-Mar 22-Mar</td><td>11 12<br/>15-Mar 22-Mar</td><td>12<br/>22-Mar</td><td></td><td></td><td>14<br/>05-Apr</td><td></td><td></td><td>16<br/>19-Apr</td><td>16 17<br/>19-Apr 26-Apr</td><td>16 17 18<br/>19-Apr 26-Apr 03-May</td><td>16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May</td><td>16 17 18 19 20<br/>19-Apr 26-Apr 03-May 10-May 17-May<br/>16-May
17-May</td></td></td></td></td></td<> | 1       2       3       4       5       6       7       8       9       10       11       12         04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       15-Mar       15-Mar         04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       10       12       12         04-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       15-Mar       15-Mar       15       16 <td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     22-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     13-Feb     14       1     1     1     1     1     1     1     1     14       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     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15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td><td>5     6     7     8     9     10     11     12       an     01-feb     08-feb     15-feb     22-feb     01-Mar     15-Mar     22-Mar       0     1     15     08-feb     15-feb     22-feb     01-Mar     08-Mar     15-Mar       0     1     1     1     1     1     1     1</td><td>6         7         8         9         10         11         12           08-Feb         15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           1         1         22         15         15         15         15         15           1         1         1         1         1         1         1         1         1           1<!--</td--><td>7         8         9         10         11         12           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           15         1         1         1         1         1         1           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         1           15         1         1         1         1         1         1           15         1         1         1         1         1         1         1           15         1<td>8 9 10 11 12<br/>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br/>22-Feb 01-Mar 08-Mar 22-Mar</td><td>9 10 11 12<br/>01-Mar 08-Mar 15-Mar 22-Mar</td><td>10 11 12<br/>08-Mar 15-Mar 22-Mar</td><td>11 12<br/>15-Mar 22-Mar</td><td>12<br/>22-Mar</td><td></td><td></td><td>14<br/>05-Apr</td><td></td><td></td><td>16<br/>19-Apr</td><td>16 17<br/>19-Apr 26-Apr</td><td>16 17 18<br/>19-Apr 26-Apr 03-May</td><td>16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May</td><td>16 17 18 19 20<br/>19-Apr 26-Apr 03-May 10-May 17-May<br/>16-May 17-May</td></td></td></td>  | 4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     22-Mar       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     13-Feb     14       1     1     1     1     1     1     1     1     14       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1 <td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td> <td>4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td> <td>5     6     7     8     9     10     11     12       an     01-feb     08-feb     15-feb     22-feb     01-Mar     15-Mar     22-Mar       0     1     15     08-feb    
15-feb     22-feb     01-Mar     08-Mar     15-Mar       0     1     1     1     1     1     1     1</td> <td>6         7         8         9         10         11         12           08-Feb         15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           1         1         22         15         15         15         15         15           1         1         1         1         1         1         1         1         1           1<!--</td--><td>7         8         9         10         11         12           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           15         1         1         1         1         1         1           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         1           15         1         1         1         1         1         1           15         1         1         1         1         1         1         1           15         1<td>8 9 10 11 12<br/>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br/>22-Feb 01-Mar 08-Mar 22-Mar</td><td>9 10 11 12<br/>01-Mar 08-Mar 15-Mar 22-Mar</td><td>10 11 12<br/>08-Mar 15-Mar 22-Mar</td><td>11 12<br/>15-Mar 22-Mar</td><td>12<br/>22-Mar</td><td></td><td></td><td>14<br/>05-Apr</td><td></td><td></td><td>16<br/>19-Apr</td><td>16 17<br/>19-Apr 26-Apr</td><td>16 17 18<br/>19-Apr 26-Apr 03-May</td><td>16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May</td><td>16 17 18 19 20<br/>19-Apr 26-Apr 03-May 10-May 17-May<br/>16-May 17-May</td></td></td> | 4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1   | 4     5     6     7     8     9     10     11     12       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     15-Mar     22-Mar       25     01     15     02     15     15     15     16       1     1     1     12     15     15     16     16       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1  | 5     6     7     8     9     10     11     12       an     01-feb     08-feb     15-feb     22-feb     01-Mar     15-Mar     22-Mar       0     1     15     08-feb     15-feb     22-feb     01-Mar     08-Mar     15-Mar       0     1     1     1     1     1     1     1  
  | 6         7         8         9         10         11         12           08-Feb         15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           1         1         22         15         15         15         15         15           1         1         1         1         1         1         1         1         1           1 </td <td>7         8         9         10         11         12           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           15         1         1         1         1         1         1           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         1           15         1         1         1         1         1         1           15         1         1         1         1         1         1         1           15         1<td>8 9 10 11 12<br/>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br/>22-Feb 01-Mar 08-Mar 22-Mar</td><td>9 10 11 12<br/>01-Mar 08-Mar 15-Mar 22-Mar</td><td>10 11 12<br/>08-Mar 15-Mar 22-Mar</td><td>11 12<br/>15-Mar 22-Mar</td><td>12<br/>22-Mar</td><td></td><td></td><td>14<br/>05-Apr</td><td></td><td></td><td>16<br/>19-Apr</td><td>16 17<br/>19-Apr 26-Apr</td><td>16 17 18<br/>19-Apr 26-Apr 03-May</td><td>16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May</td><td>16 17 18 19 20<br/>19-Apr 26-Apr 03-May 10-May 17-May<br/>16-May 17-May</td></td> | 7         8         9         10         11         12           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar           15         1         1         1         1         1         1           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         1           15         1         1         1         1         1         1           15         1         1         1         1         1         1         1           15         1 <td>8 9 10 11 12<br/>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br/>22-Feb 01-Mar 08-Mar 22-Mar</td> <td>9 10 11 12<br/>01-Mar 08-Mar 15-Mar 22-Mar</td> <td>10 11 12<br/>08-Mar 15-Mar 22-Mar</td> <td>11 12<br/>15-Mar 22-Mar</td> <td>12<br/>22-Mar</td> <td></td> <td></td> <td>14<br/>05-Apr</td> <td></td> <td></td> <td>16<br/>19-Apr</td> <td>16 17<br/>19-Apr 26-Apr</td> <td>16 17 18<br/>19-Apr 26-Apr 03-May</td> <td>16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May</td> <td>16 17 18 19 20<br/>19-Apr 26-Apr 03-May 10-May 17-May<br/>16-May 17-May</td>  | 8 9 10 11 12<br>22-Feb 01-Mar 08-Mar 15-Mar 22-Mar<br>22-Feb 01-Mar 08-Mar 22-Mar  
  | 9 10 11 12<br>01-Mar 08-Mar 15-Mar 22-Mar   | 10 11 12<br>08-Mar 15-Mar 22-Mar   | 11 12<br>15-Mar 22-Mar  | 12<br>22-Mar   |   |  | 14<br>05-Apr  |   
   |  | 16<br>19-Apr   
  | 16 17<br>19-Apr 26-Apr   | 16 17 18<br>19-Apr 26-Apr 03-May  | 16         17         18         19           19-Apr         26-Apr         03-May         10-May           19-Apr         26-Apr         03-May         10-May   | 16 17 18 19 20<br>19-Apr 26-Apr 03-May 10-May 17-May<br>16-May 17-May   |
| _               |  |          |                |              |               |                       | _                      |                        |                    |   |   |   |   |  | E   | EX  | E    | <u></u> |       |     |       |        | -1       0       1       2       3       4       5       6       7       8       9       10       11       12       13       14         21-Dec       28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       08-Mar       15-Mar       25-Mar       05-Apr         21-Dec       28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       08-Mar       15-Mar       25-Mar       05-Apr         1  | 0       1       2       3       4       5       6       7       8       9       10       11       12       13       14         28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       08-Mar       15-Mar       28-Mar       05-Apr         28-Dec       04-Jan       11       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       08-Mar       15-Mar       05-Apr       05-Apr         11       12       18       16   
                        |  | 4     5     6     7     8     9     10     11     12     13     14       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1  
   | 4     5     6     7     8     9     10     11     12     13     14       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1  | 4     5     6     7     8     9     10     11     12     13     14       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       25-Jan     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1   | 5     6     7     8     9     10     11     12     13     14       an     01-Feb     08-Feb     15-Feb     01-Mar     08-Mar     15-Mar     25-Mar     05-Apr       an     01-Feb     08-Feb     15-Feb     01-Mar     08-Mar     12-Mar     25-Mar     05-Apr       an     01-Feb     08-Feb     15-Feb     01-Mar     08-Mar     12-Mar     25-Mar     05-Apr       an     01-Feb     15     1     1     1     1     1       an     01-Feb     15     1     1     1     1       an     1     1     1     1     1     1       an     1     1     1     1     1     1  
  | 6         7         8         9         10         11         12         13         14           08-Feb         15-Feb         01-Mar         08-Mar         15-Mar         29-Mar         05-Apr           08-Feb         15-Feb         21-Mar         08-Mar         15-Mar         29-Mar         05-Apr           15         1         1         1         1         1         1           15         1         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1   | 7         8         9         10         11         12         13         14           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr           15-Feb         22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr           16         1         1         1         1         1         1         1           15-Feb         21-Mar         08-Mar         15-Mar         15-Mar         05-Apr         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1 <t< td=""><td>8         9         10         11         12         13         14           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr           23         14         12         13         14         14           13         15-Mar         15-Mar         29-Mar         05-Apr           14         14         12         14         14           15         14         15         14         14           15         15         14         14         14           14         15         14         14         14           15         15         14         14         14           14         14         14         14         14           14         14         14         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    15-Mar         1         1</td><td>12 13 14<br/>22-Mar 29-Mar 05-Apr</td><td>13 14<br/>29-Mar 05-Apr</td><td>14<br/>05-Apr</td><td></td><td></td><td></td><td>99 4br 50</td><td>17<br/>26-Apr</td><td>17 18<br/>26-Apr 03-May</td><td>17 18 19<br/>26-Apr 03-May 10-May</td><td>17 18 19 20<br/>26-Apr 03-May 10-May 17-May</td></t<> | 8         9         10         11         12         13         14           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr           23         14         12         13         14         14           13         15-Mar         15-Mar         29-Mar         05-Apr           14         14         12         14         14           15         14         15         14         14           15         15         14         14         14           14         15         14         14         14           15         15         14         14         14           14         14         14         14         14           14         14    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  | 9         10         11         12         13         14           01-Mar         08-Mar         15-Mar         22-Mar         05-Apr           01         1         15         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1         1 | 10         11         12         13         14           08-Mar         15-Mar         22-Mar         05-Apr           08         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1  | 11         12         13         14           15-Mar         22-Mar         05-Apr           15-Mar         22-Mar         05-Apr           15         1         1           16         1         1           17         1         1           15-Mar         22-Mar         05-Apr           15-Mar         22-Mar         05-Apr           15-Mar         21-Mar         1           15-Mar         1         1   | 12 13 14<br>22-Mar 29-Mar 05-Apr   | 13 14<br>29-Mar 05-Apr  | 14<br>05-Apr   |   |   
   |  | 99 4br 50  
  | 17<br>26-Apr   | 17 18<br>26-Apr 03-May  | 17 18 19<br>26-Apr 03-May 10-May  | 17 18 19 20<br>26-Apr 03-May 10-May 17-May  |
| -               | Apr 26-Ap  |          | _              |              |               |                       | _                      |                        | _                  |   |   |   |   |  | END   | 9   | 9    |         |       |     | 9     |        | $\begin{array}{c ccccccccccccccccccccccccccccccccccc$  | $ \begin{array}{ c c c c c c c c c c c c c c c c c c c$   
                        |  | 4       5       6       7       8       9       10       11       12       13       14       15         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       25-Mar       05-Apr       12-Apr         25-Jan       01-Feb       08-Feb       12-Feb       01-Mar       08-Mar       15-Mar       05-Apr       12-Apr         1       1       1       1       1       1       1       1       1         1       1       1       1       1       1       1       1       1       1         1   
   | 4       5       6       7       8       9       10       11       12       13       14       15         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       25-Mar       05-Apr       12-Apr         25-Jan       01-Feb       08-Feb       12-Feb       01-Mar       08-Mar       15-Mar       05-Apr       12-Apr         1       1       1       1       1       1       1       1       1         1       1       1       1       1       1       1       1       1       1         1                                 | 4       5       6       7       8       9       10       11       12       13       14       15         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       25-Mar       05-Apr       12-Apr         25-Jan       01-Feb       08-Feb       12-Feb       01-Mar       08-Mar       15-Mar       05-Apr       12-Apr         1       1       1       1       1       1       1       1       1         1       1       1       1       1       1       1       1       1       1         1  | 5     6     7     8     9     10     11     12     13     14     15       an     01-Feb     08-Feb     15-Feb     22-Feb     01-Mar     08-Mar     25-Mar     29-Mar     05-Apr     12-Apr       1     1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1     1   
  | 6         7         8         9         10         11         12         13         14         15           08-feb         15-feb         01-Mar         08-Mar         15-Mar         29-Mar         05-Apr         12-Apr           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1         1           1  | 7         8         9         10         11         12         13         14         15           15-feb         22-feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr           15-feb         22-feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr           16         17         12         12         12         12         12         12           17         12         12         12         12         12         12         12           18         12         12         12         12         12         12         12         12         12           18         12  | 8         9         10         11         12         13         14         15           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr           1         1         1         1         1         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1  
  | 9         10         11         12         13         14         15           01-Mar         08-Mar         15-Mar         29-Mar         05-Apr         12-Apr           1         1         29-Mar         05-Apr         12-Apr           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1           1         1         1         1         1         1           1         1         1         1         1         1         1           1         1         1         1         1         1         1         1  | 10         11         12         13         14         15           08-Mar         15-Mar         22-Mar         29-Mar         05-Apr         12-Apr           11         12         22-Mar         29-Mar         05-Apr         12-Apr           12         12         12         12         12         12           12         12         12         12         12         12           13         12         12         12         12         12           13         12         12         12         12         12           14         12         12         12         12         12           15         12         12         12         12         12           15         12         12         12         12         12           15         12         12         12         12         12           16         12         12         12         12         12           16         12         12         12         12         12  | 11         12         13         14         15           15-Mar         22-Mar         29-Mar         05-Apr         12-Apr           15-Mar         22-Mar         29-Mar         05-Apr         12-Apr           15-Mar         12-Mar         12-Mar         12-Mar           15-Mar         13-Mar         13-Mar         13-Mar           15-Mar         13-Mar         14-Mar         14-Mar           15-Mar         14-Mar         14-Mar         14-Mar           15-Mar | 12 13 14 15<br>22-Mar 29-Mar 05-Apr 12-Apr   | 13 14 15<br>29-Mar 05-Apr 12-Apr  | 15<br>12-Apr   |   |   
   | 6 Apr 26   | 4 V  
  |  | 18<br>03-May  | 18 19<br>03-May 10-May  | 18 19 20<br>03-May 10-May 17-May  |
| 18              | 03-May   |          |                |              |               |                       |                        |                        |                    |   |   |   |   |  |   |   |      |         |       |     |       |        | -1       0       1       2       3       4       5       6       7       8       9       10       11       12       13       14       15       16       15         21-Dec       28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       05-Apr       12-Apr       19-Apr         1   | 0       1       2       3       4       5       6       7       8       9       10       11       13       14       15       16       12       13       14       15       16  
                        |  | 4       5       6       7       8       9       10       11       12       13       14       15       16         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       29-Mar       05-Apr       12-Apr       19-Apr         25-Jan       01-Feb       08-Mar       06-Mar       15-Mar       22-Mar       05-Apr       12-Apr       19-Apr         1       1       1       1       1       1       1       1       1       1         1   
   | 4       5       6       7       8       9       10       11       12       13       14       15       16         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       29-Mar       05-Apr       12-Apr       19-Apr         25-Jan       01-Feb       08-Mar       06-Mar       15-Mar       22-Mar       05-Apr       12-Apr       19-Apr         1       1       1       1       1       1       1       1       1       1         1                     | 4       5       6       7       8       9       10       11       12       13       14       15       16         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       29-Mar       05-Apr       12-Apr       19-Apr         25-Jan       01-Feb       08-Mar       06-Mar       15-Mar       22-Mar       05-Apr       12-Apr       19-Apr         1       1       1       1       1       1       1       1       1       1         1                            | 5     6     7     8     9     10     11     12     13     14     15     16       an     01-feb     08-feb     15-feb     22-feb     01-Mar     08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     19-Apr       an     01-feb     08-feb     15-feb     21-Mar     08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     19-Apr       an     01-feb     08-feb     15-feb     01-feb     16     16     17     19-Apr       an     01-feb     19     19     16     16     16     16     17     19-Apr       an     10     1     1     1     1     1     1     1       an     10     1     1     1     1     1     1     1       an     10     1     1     1     1     1     1     1       an     1     1     1     1     1     1     1     1       an     1     1     1     1     1     1     1     1       an     1     1     1     1     1     1     1     1       an     1     1     1     1 <t< td=""><td>6         7         8         9         10         11         12         13         14         15         16           08-Feb         15-Feb         01-Mar         08-Mar         15-Mar         23-Mar         05-Apr         12-Apr         19-Apr           1         1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1</td><td>7         8         9         10         11         12         13         14         15         16           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           16         1         1         1         1         1         1         1           16         1         1         1         1         1         1         1         1           16         1         1         1         1         1         1         1         1         1           16         1</td><td>8         9         10         11         12         13         14         15         16           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1         1           1         <t< td=""><td>9     10     11     12     13     14     15     16       01-Mar     08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     19-Apr       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td><td>10         11         12         13         14         15         16           08-Mar         15-Mar         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           11         12         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           12         13         24         12-Apr         19-Apr         19-Apr           13         14         12         12         14         15           14         15         14         14         14           15         14         14         14         14           14         14         14         14         14           15
        14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         <t< td=""><td>11     12     13     14     15     16       15-Mar     22-Mar     05-Apr     12-Apr     19-Apr       15     12     12     12     12</td><td>12 13 14 15 16<br/>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr</td><td>13 14 15 16<br/>29-Mar 05-Apr 12-Apr 19-Apr</td><td>15 16<br/>12-Apr 19-Apr</td><td>16<br/>19-Apr</td><td>16 17<br/>3-Apr 26-Ap</td><td>11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1</td><td></td><td></td><td></td><td></td><td>20<br/>17-May</td></t<></td></t<></td></t<> | 6         7         8         9         10         11         12         13         14         15         16           08-Feb         15-Feb         01-Mar         08-Mar         15-Mar         23-Mar         05-Apr         12-Apr         19-Apr           1         1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1           1  | 7         8         9         10         11         12         13         14         15         16           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           16         1         1         1         1         1         1         1           16         1         1         1         1         1         1         1         1           16         1         1         1         1         1         1         1         1         1           16         1   | 8         9         10         11         12         13         14         15         16           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1           1         1         1         1         1         1         1         1         1         1           1 <t< td=""><td>9     10     11     12     13     14     15     16       01-Mar     08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     19-Apr       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1</td><td>10         11         12         13         14         15         16           08-Mar         15-Mar         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           11         12         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           12         13         24   
     12-Apr         19-Apr         19-Apr           13         14         12         12         14         15           14         15         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         <t< td=""><td>11     12     13     14     15     16       15-Mar     22-Mar     05-Apr     12-Apr     19-Apr       15     12     12     12     12</td><td>12 13 14 15 16<br/>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr</td><td>13 14 15 16<br/>29-Mar 05-Apr 12-Apr 19-Apr</td><td>15 16<br/>12-Apr 19-Apr</td><td>16<br/>19-Apr</td><td>16 17<br/>3-Apr 26-Ap</td><td>11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1</td><td></td><td></td><td></td><td></td><td>20<br/>17-May</td></t<></td></t<> | 9     10     11     12     13     14     15     16       01-Mar     08-Mar     15-Mar     29-Mar     05-Apr     12-Apr     19-Apr       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1   | 10         11         12         13         14         15         16           08-Mar         15-Mar         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           11         12         22-Mar         23-Mar         05-Apr         12-Apr         19-Apr           12         13         24         12-Apr         19-Apr         19-Apr           13         14         12         12         14         15           14         15         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14         14         14         14         14           15         14         14         14         14           14 <t< td=""><td>11     12     13     14     15     16       15-Mar     22-Mar     05-Apr     12-Apr     19-Apr       15     12     12     12     12</td><td>12 13 14 15 16<br/>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr</td><td>13 14 15 16<br/>29-Mar 05-Apr 12-Apr 19-Apr</td><td>15 16<br/>12-Apr 19-Apr</td><td>16<br/>19-Apr</td><td>16 17<br/>3-Apr 26-Ap</td><td>11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1</td><td></td><td></td><td></td><td></td><td>20<br/>17-May</td></t<> | 11     12     13     14     15     16       15-Mar     22-Mar     05-Apr     12-Apr     19-Apr       15     12     12     12     12   | 12 13 14 15 16<br>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr   | 13 14 15 16<br>29-Mar 05-Apr 12-Apr 19-Apr  | 15 16<br>12-Apr 19-Apr   | 16<br>19-Apr  | 16 17<br>3-Apr 26-Ap  
   | 11-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1   |  
  |  |   |   | 20<br>17-May  |
| -               |  |          |                |              | _             |                       | _                      |                        |                    |   |   |   |   |  |   |   |      |         |       |     |       |        | $ \begin{array}{c ccccccccccccccccccccccccccccccccccc$   | 0       1       2       3       4       5       6       7       8       9       10       11       13       14       15       16       17       18         28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Feb       01-Mar       08-Mar       15-Mar       28-Mar       05-Apr       16       17       18         28-Dec       04-Jan       11-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Mar       28-Mar       15-Mar       16       17       18         28-Dec       04-Jan       18-Jan       25-Jan       01-Feb       08-Feb       15-Mar       28-Mar       15-Mar       16-Par       16       17       18         18-Jan  |   
  | 4       5       6       7       8       9       10       11       12       13       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       26-Mar       13       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Mar       08-Mar       15-Mar       26-Mar       16       16       16       17       18         16       17       18       16       16       16       16       16       16       16       16       17       18         17       18       16       16       16       16       16       16       16       16       17       18         18       16       16       16       16       16       16       16       16       16       17       16       17       16       17       16       17       16       17       16       17       16       16       16       16       16       16       16       16       16       16       16       16       16       16       16       16  
  | 4       5       6       7       8       9       10       11       12       13       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       26-Mar       13       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Mar       08-Mar       15-Mar       26-Mar       16       16       16       17       18         16       17       18       16       16       16       16       16       16       16       16       17       18         17       18       16       16       16       16       16       16       16       16       17       18         18       16       16       16       16       16       16       16       16       16       17       16       17       16       17       16       17       16       17       16       17       16       16       16       16       16       16       16       16       16       16       16       16       16       16       16       16 | 4       5       6       7       8       9       10       11       12       13       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       26-Mar       13-Mar       14       15       16       17       18         25-Jan       01-Feb       08-Feb       15-Feb       22-Feb       01-Mar       08-Mar       15-Mar       26-Apr       19-Apr       26-Apr       03-May         16       17       18       12       16       16       16       16       17       18         17       18       16       16       16       16       16       16       16       17       18         18       16       16       16       16       16       16       16       16       16       16       16       16       17       18         18       16       1 | 5       6       7       8       9       10       11       12       13       14       15       16       17       18         an       01-feb       08-feb       15-feb       01-Mar       08-Mar       15-Mar       25-Mar       29-Mar       12-Apr       13-Apr       26-Apr       03-Mav         an       01-feb       08-feb       15-feb       01-Mar       08-Mar       12-Apr       13-Apr       26-Apr       03-Mav         an       01-feb       08-feb       15-feb       10  
   | 6         7         8         9         10         11         12         13         14         15         17         18           08-Feb         15-Feb         01-Mar         08-Mar         15-Mar         29-Mar         05-Apr         16-Apr         26-Apr         03-May           08-Feb         15-Feb         01-Mar         08-Mar         15-Mar         26-Mar         03-May           15         1         1         1         1         1         1         1           16         1         1         1         1         1         1         1         1           17         18         15-Mar         15-Mar         12-Mar         12-Mar         13-Mar         13-Mar           18         1  | 7         8         9         10         11         12         13         14         15         16         17         18           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         26-Apr         03-May           15-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         26-Apr         03-May           16         17         18         12         12         19-Apr         26-Apr         03-May           17         18         12         12         12         14         12         14 <td>8         9         10         11         12         13         14         15         16         17         18           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-May           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         26-Apr         03-May           1</td> <td>9     10     11     12     13     14     15     16     17     18       01-Mar&lt;</td> 08-Mar     15-Mar     29-Mar     05-Apr     19-Apr     26-Apr     03-May       1     1     1     1     1     1     1     1       1     1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1       1     1     1     1     1     1  | 8         9         10         11         12         13         14         15         16         17         18           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-May           22-Feb         01-Mar         08-Mar         15-Mar         22-Mar         05-Apr         12-Apr         26-Apr         03-May           1   
   | 9     10     11     12     13     14     15     16     17     18       01-Mar<  | 10         11         12         13         14         15         16         17         18           08-Mar         15-Mar         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-May           11         12         29-Mar         05-Apr         12-Apr         19-Apr         26-Apr         03-May           11         12         12         12         12         12         12         12           11         12         12         12         12         12         12         12           11         12         12         12         12         12         12         12           12         12         12         12         12         13         12         12           12         12         12         12         12         12         12         12           12         12         12         12         12         12         12         12         12           12         12         12         12         12         12         12         12         12         12           12         12         12         12         12         <   | 11     12     13     14     15     16     17     18       15-Mar     29-Mar     05-Apr     12-Apr     19-Apr     26-Apr     03-May       15     12     12     12     12     12     12       15     12     12     12     12     12       15     12     12     12     12       16     17     12     12       17     12     12     12       18     12     12     12       19     12     12     12       10     12     12     12       11     12     12     12       12     13     12     12       14     12     12     12       15     12     12     12       15     12     12     12       14     12     12     12       15     12     12     12       16     12     12     12       16     12     12     12       16     12     12     12       16     12     12     12       17     12     12     12       18     12     12     12  | 12 13 14 15 16 17 18<br>22-Mar 29-Mar 05-Apr 12-Apr 19-Apr 26-Apr 03-May   | 13     14     15     16     17     18       29-Mar     05-Apr     12-Apr     19-Apr     26-Apr     03-May       13     11     11     11     11  | 15 16 17 18<br>12-Apr 19-Apr 26-Apr 03-May   | 16 17 18<br>19-Apr 26-Apr 03-May  | 17 18<br>26-Apr 03-May   
  | 18<br>03-May   |   
   | 1 40   |   |   |   |
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Figure 1: MNO Supplied Composite Transition Plan

20<sup>th</sup> December 2012

# 3 Annex 2- Recommended Transition Plan – Gantt chart

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2013 week number	week ending Friday	Activity	Finalise and Issue Plan	Christmas Lockdown	Start Implementation	Complete 900MHz Relocation	Complete 1800MHz Relocation	Finalise and Issue Plan	Christmas Lockdown	Site Analysis Completed	Complete 1800MHz Relocation	Hardware Delivery	Site Works Complete	Repeater Replace/Retune (900MHz)	900 MHz Spectrum Relocation	Finalise and Issue Plan	Christmas Lockdown	AFP Preparation (900MHz)	AFP Preparation (1800MHz)	Cavity Combiner Solution Ready	Retune Repeaters (900MHz)	Relocate (1800MHz)	1-11-00001-1-1-0
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10	22-Feb 01-Mar 08-Mar 15-Mar		Notes on modifications from the MNO Supplied Composite Transition Plan to the Recommended Transition Plan.	arod with		Meteor would appear to have significantly tewer repeaters than Telefonica and given a similar level of effort, it	should therefore be able to complete this activity more rapidly than Telefónica. The Recommended Transition Plan	shows Meteor taking marginally less time (10 weeks) to complete this activity compared to 11 weeks for Telefónica	Telefónica relocate in the 1800MHz band immediately after AFP preparations in that band are complete.														
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Figure 2: Recommended Transition Plan

15. Telefonica: letter to ComReg "MBSA Transition Project Proposal" (letter dated 10 January 2013)



10<sup>th</sup> January 2012

Dr Samuel Ritchie Commission for Communication Regulation Abbey Court, Irish Life Centre Lower Abbey Street Dublin 1

### **MBSA Transition Project Proposal**

Dear Samuel

I refer to ComReg's proposal for a complete industry transition plan following the MBSA. Telefonica had previously proposed what we believe to be the earliest possible dates for its transition, and it is noted that ComReg has proposed some modifications to those dates in light of full industry information. The following is Telefonica's response ComReg's proposal.

### 900MHz

Telefonica notes that ComReg propose a targeted completion date of 26<sup>th</sup> April, contingent on Meteor's transition having completed by 5<sup>th</sup> April. Telefonica can agree to this proposal. We had also originally proposed a three-week period after the target date to allow for contingency. We note that ComReg propose only two weeks. We believe this to be insufficient, however are willing to work on this basis with a caution – if the attempted transition fails for whatever reason, then a roll-back will be necessary. In this event, two weeks will likely be insufficient to re-design and re-implement the change.

### 1800MHz

Telefonica had originally proposed that the 900MHz transitions should be implemented before the 1800MHz one. This is sensible for all concerned, as Vodafone and H3GI need Telefonica to complete its transition before they can take up their assignments at 900MHz. There is no such dependency in the 1800MHz band, and Telefonica had proposed a solution to avoid delay to Meteor in Lot L.

ComReg has proposed that the full 1800MHz transition implementation should be brought forward to be completed by 5<sup>th</sup> April. No explanation or justification for this change has been given by ComReg or its advisors; however there is sound reasoning behind Telefonica's original proposal. ComReg's project plan now shows Meteor carrying out its 900MHz implementation at exactly the same time that Telefonica carries out its 1800MHz implementation. From a National Strategic Perspective, this is unwise if not foolish. The transitions that must be implemented are not trivial modifications – they involve changes to the entire radio access network in a single overnight re-tune. There is scope for malfunction causing loss of service which would impact not only the individual network involved, but also the relevant operator's other networks and all other national networks, e.g. the loss of service by O2's 1800MHz network would not just cause loss of service to O2 customers, there would be a knock-on impact of congestion that would

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impact all networks terminating traffic with O2. For this reason alone, it would be unwise to undertake two of these rare and risky implementations at the same time.

In addition, ComReg will be aware that Telefonica and Meteor have a network sharing agreement serviced by Mosaic. There are common resources that will be required to plan and implement both the Meteor and O2 network transitions. To attempt to implement Meteor's 900MHz transition and O2's 1800MHz transition simultaneously introduces additional risk to the 900MHz transition, and will likely increase the overall cost to O2. Given that lots I, J, and K are unassigned in time-slice 1, Telefonica sees no advantage to this proposal, but only increased risk. If ComReg wishes Telefonica to proceed with the 1800MHz transition as it currently proposes, then this must be explained and justified.

Telefonica has confirmed that Meteor is in agreement with Telefonica's original proposal – that the two operators work together to ensure Lot L is released early, and otherwise to implement the main 1800MHz transition after the two 900MHz ones. We see no reason for ComReg to intervene in this agreement.

### **General Comments**

In its document dated 12<sup>th</sup> December last, Telefonica set-out what it believes is the earliest possible transition plan. This does not include any contingency, other than the three weeks explicitly stated. ComReg seems to believe that contingencies are built-in throughout the plan, and that on that basis, that there may be scope to either accelerate the transition, or reduce the planned contingency time. For the record, this is not correct and seems to have been based on false assumptions, e.g:

- It is not possible to simply accelerate the retune/replacement of repeaters by using more manpower and resources. There is a limit to the number of suitably qualified, available, and approved persons who can carry out this work
- Manufacturers and suppliers cannot simply supply the equipment earlier the earliest times have already been used in forming our original proposal
- We are not aware of any feasible "Alternative Solutions to Cavity Combiners", as is suggested on page 5 of the consultant's report.

### **Liquidated Damages**

We note ComReg's comments in relation to liquidated damages, however Telefonica continues to reserve its position on this matter.

Yours Sincerely

Thean Oll

Tom Hickey

16. McCann Fitzgerald: letter to ComReg "Vodafone: Custodian of Data/ Spectrum Auction/ Interim Licenses" (letter dated 8 May 2012)<sup>14</sup>

<sup>&</sup>lt;sup>14</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

17. McCann Fitzgerald: letter to ComReg "Vodafone/Spectrum Auction/ Interim Licenses" (letter dated 17 May 2012)<sup>15</sup>

<sup>&</sup>lt;sup>15</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

 Voda fone: letter to ComReg "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 18 September 2012)



18 September 2012

SamueLritchie@comreg.ie Dr. Samuel Ritchie Commission for Communications Regulation Abbey Court, Irish Life Centre Lower Abbey Street Dublin 1 BY HAND

### CONFIDENTIAL

### Multi-Band Spectrum Release: Postponement of Auction

Dear Dr Ritchie

I refer to your letter of 14 September in which you announced the postponement of the Main Stage of the auction by approximately three weeks. The purpose of this letter is to communicate to ComReg Vodafone Ireland Limited's ("**Vodafone**") grave concern about the implications of this delay on Vodafone's ability and obligation to guarantee continuity of service for its retail and wholesale customers as a consequence of the uncertainty of the auction and licensing timetable and the impending expiry of Vodafone's interim licence, on the basis of which Vodafone currently provides service in the 900MHz spectrum band to those customers.

I expressly reserve Vodafone's position on all other elements of your letter of 14 September pending receipt from ComReg of further information in relation to the proposed modifications of the Information Memorandum and Auction Rules and the completion of a full assessment by Vodafone of the likely risks and implications of these modifications for Vodafone's existing bid and its ongoing participation in the auction.

The interim licence was granted on 13 May 2011 by ComReg pursuant to the Wireless Telegraphy (Interim GSM Mobile Telephony Licence) Regulations, 2011 (S.I. No. 189 of 2011) (the "**Regulations**"). Those Regulations, at Regulation 5(4), provide that a licence granted or renewed under the Regulations shall, in any event, terminate on 31 January 2013.

I am also obliged to remind you that in its Decision D03/11 of 13 April, at paragraph 3.4, ComReg said "*For the avoidance of doubt, ComReg makes no commitment to extend or renew the licences granted pursuant to this Decision beyond the Interim Licence Term, whether at all, or for any particular period or on any particular terms*".

Prior to the publication of the Information Memorandum on 25 May 2012, Vodafone explained in detail (in letters from our solicitors, McCann FitzGerald, to Commissioner Chisholm dated 8 May 2012 and 17 May 2012, copies attached) why it was concerned that the auction and post-auction processes (including any legal challenges) would (and now appears will) extend beyond the date of expiry of Vodafone's current licence. In sharing these concerns with ComReg, Vodafone relied on the Joint Technical Report prepared for ComReg by Red-M and Vilicom (published as ComReg Document Number 12/12) which confirmed that the overall timeframe required for an existing operator to complete its band reassignment activity would be approximately five months.

ComReg's current proposal is that the auction should begin three and half months prior to the expiry of Vodafone's current licence. Even by the estimates of ComReg's own experts, time has clearly run out.

### Vodafone Ireland Limited

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Registered Office: MountainView, Leopardstown, Dublin 18. Registered in Ireland No. 326967 Directors: Jeroen Hoencamp (CEO) (NL) (Chairman), Thomas Reisten (DE), Paul Ryan. In McCann FitzGerald's letters of 8 and 17 May, they requested, on our behalf, that ComReg should immediately commence a process leading to the reasonable extension of the existing interim licences in order to ensure continuity of service pending conclusion of the spectrum auction process.

In response, ComReg in Document Number 12/50 (at paragraph 6.65) said that it "*will address any potential extension of interim GSM 900 MHz licences at a time when ComReg considers it necessary to do so, and in any event sufficiently in advance of expiration of existing interim 900 MHz licences*".

It is now clearly necessary and we explicitly call upon ComReg to address the issue of the extension of those interim licences beyond 31 January 2013 as a matter of the utmost urgency. To the extent that ComReg believes that a consultation process is required, that process must begin immediately.

In this regard, I have to remind ComReg that the consultation that led to the adoption of the Regulations and the granting of the interim licences began with ComReg Document Number 10/71 published by ComReg in September 2010, that is to say eight months before the expiry of the licences. I must also remind you that the consultation process took almost seven months to complete (not counting the application period for the interim licences). In the case of the process initiated by ComReg Document Number 10/71, almost eight months passed before Vodafone received its interim licence. ComReg has now only allowed for a period of four and half months to provide for the continuity of service in the 900Mhz band.

I hope you will understand why I feel I must require an urgent response from you to this letter, and, in particular, explicit confirmation that ComReg will immediately commence the process of extending the interim licences, together with full details of the proposed amendments to the auction rules as soon as possible, and in any event before **1300hrs on Thursday, 20 September 2012**.

For the avoidance of doubt, Vodafone reserves all rights in this matter and in particular, its right to draw this situation and its concerns directly to the attention of the Minister for Communications, Energy and Natural Resources.

Yours sincerely

Paul Ryan Director Vodafone Ireland Limited

19. ComReg: reply to letter from Vodafone of 18 September 2012 (letter dated 20 September)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### Strictly Confidential - By Hand

20 September 2012

Mr. Paul Ryan Director Vodafone Ireland Limited Mountain View Leopardstown Dublin 18

### Multi-Band Spectrum Release: Postponement of Auction

Dear Mr. Ryan

I refer to the above matter and to your letter of 18 September 2012 in respect of same.

In relation to the points raised regarding interim licences, please note that ComReg is aware of the limited time now available for transition before the commencement of Time Slice 1. ComReg is also aware of the expiration of existing GSM 900 MHz interim licences on 31 January 2013. ComReg can, therefore, confirm that it has now commenced consideration of the requirement for and details of a consultation on the need for the short term extension of the duration of existing interim GSM rights of use in the 900 MHz band. You will appreciate, of course, that the ability to issue such a consultation is severely curtailed in advance of knowing the precise nature of the transition activities required to be undertaken by Existing GSM licensees. All other Qualified Bidders are being informed of this fact.

We also note your suggestion that Vodafone reserves "its right to draw this situation and its concerns directly to the attention of the Minister for Communications, Energy and Natural Resources". We are surprised that Vodafone would even contemplate such communication, given the extensive concerns it has raised with regards to confidentiality and information security in the recent past. In any case, we would remind Vodafone that such communication would constitute a serious breach of the Auction Rules on confidentiality (see, for example, paragraph 3.77 of the Information Memorandum). For the avoidance of doubt, the confidentiality obligations articulated in the Information Memorandum cover 900 MHz interim licensing issues. We trust that it is unnecessary to remind Vodafone of the potential implications of such a breach.

Please note that ComReg will shortly make contact with all Qualified Bidders with regards to the further round of mock auctions and that Vodafone's requested mock auction will take place in the week beginning Monday 8 October 2012.

Yours sincerely

Stutet

Dr. Samuel Ritchie

20. Vodafone: letter to ComReg "Letter to Paul Ryan of 20 September 2012: Multi-Band Spectrum Release: Postponement of Auction ("Postponement Letter"), Letter to Paul Ryan of 20 September 2012: Amendment to ComReg document 12/52 Information Memorandum (IM) ("Amendment Letter"), Letter to Eileen Maher of 20 September 2012: Multi-Band Spectrum Release: Ongoing Technical Issues ("Technical Issues Letter")" (Redacted) (letter dated 27 September 2012) 27 September 2012



Dr. Samuel Ritchie Commission for Communications Regulation Abbey Court, Irish Life Centre Lower Abbey Street Dublin 1 **BY HAND** 

### CONFIDENTIAL

Letter to Paul Ryan of 20 September 2012: Multi-Band Spectrum Release: Postponement of Auction ("Postponement Letter")

Letter to Paul Ryan of 20 September 2012: Amendment to ComReg document 12/52 Information Memorandum (IM)("Amendment Letter")

Letter to Eileen Maher of 20 September 2012: Multi-Band Spectrum Release: Ongoing Technical Issues ("Technical Issues Letter")

Dear Dr Ritchie

I refer to your three letters of 20 September 2012 referenced above.

### Extension of duration of existing interim GSM rights of use in the 900 MHz band

We note your confirmation in the Postponement Letter that ComReg has commenced consideration of the requirement for and details of a consultation on the need for the *"short-term extension of the duration of the existing interim GSM rights of use in the 900 MHz band"*.

Vodafone Ireland Limited ("**Vodafone**") agrees that, given current expectations concerning the timeframe for the multi-band spectrum release auction process (the **"auction process"**) and the fact that the current interim licences concerning use in the 900 MHz band, including those held by Vodafone (the **"current interim licences"**) expire on 31 January 2013, such consideration by ComReg, at the very least, is not only entirely reasonable and appropriate but is now an absolute necessity.

Vodafone has a number of important and legitimate concerns which underpin this view. They include the following:

(a) There is not sufficient time for Vodafone to adequately implement transition arrangements in the period post completion of the spectrum auction process and prior to the expiry of the current interim licences on 31 January 2013. This is the case whether one applies ComReg's own assessment of the timeframe required for successful auction participants to implement any necessary retuning and / or realignment of their networks in the transition period post spectrum auction or Vodafone's own estimates in this regard. Our own estimated timeframes have previously been communicated to ComReg in our submissions in the process which led to the issuing of the current interim licences and in the auction process itself.

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- (b) As a consequence of the impossibility for Vodafone to adequately implement transition arrangements in the period post completion of the spectrum auction process and prior to the expiry of the current interim licences on 31 January 2013, Vodafone has no certainty regarding its ability and obligation to guarantee continuity of service for our retail and wholesale customers from 1 February 2012. As matters stand, it is Vodafone's strong concern that without ComReg taking such steps as are required to extend the current interim licences or grant fresh interim licences beyond 31 January 2013, the current interim licences will expire and Vodafone will have no legal and / or regulatory basis on which to provide its telecommunications services.
- (c) Should the current interim licences expire and not either be extended or be replaced with fresh interim licences, Vodafone and ComReg potentially face legal challenge from opportunistic third parties and / or successful / unsuccessful auction participants who may allege that Vodafone has no legal / regulatory basis on which to operate its business.
- (d) Similarly, as ComReg will be aware, the IM details (at paragraphs 3.66 and 3.67) that there is potential for ComReg to levy liquidated damages against any Winning Bidder who fails to meet the timelines for transitional activities to be completed. On this basis, Vodafone potentially may be exposed to significant penalties in this regard. Therefore, it is reasonable that Vodafone would also now seek a commitment from ComReg that failure to extend the current interim licences or issue fresh interim licences will not result in the levying of such liquidated damages against Vodafone.

Put simply, it is critical for Vodafone in order to avoid profound disruption of our ability and obligation to guarantee continuity of service for Vodafone's retail and wholesale customers to know sufficiently in advance of 31 January 2013, and in our view, to ensure some degree of certainty either:

- that the spectrum rights allocated to Vodafone arising from the auction process will be available and can be properly supported and tested no later than 31 January 2013 (which, as per the above, seems to us impossible using either ComReg's or Vodafone's assessment of the minimum timeframe required), or
- (ii) that no later than close of business on 12 October 2012, the effect of Vodafone's current interim licences will be extended for such a period as to allow an orderly transition consequent on the outcome of the spectrum auction process.

In any event, such certainty is necessary as soon as practicable and prior to the recommencement of the auction process to take account of the considerable risk of opportunistic third party legal challenge disrupting a process on fresh interim licences.

While the content and timing of any consultation ComReg believes necessary on a proposal to consider issuing fresh interim licences is of course ultimately a matter for ComReg, we would observe that most of the issues likely to be raised in any such consultation will overlap significantly with those raised in the consultation prior to the issue of the current interim licences. That consideration might legitimately be a factor in setting the timeframe for any consultation on a proposal to consider issuing fresh interim licences in respect of the period immediately following 31 January 2013.

Vodafone very strongly believes, having regard to what we have said about the transition timescales (and indeed by comparison with the transition timescales considered appropriate in the previous interim licence consultation), that consultation on a proposal to consider issuing fresh interim licences should commence immediately.

Neither consideration of issuing fresh interim licences nor consultation on such consideration can safely or reasonably be deferred until the auction process has been completed, or indeed recommenced. We request that such consideration and any consultation considered necessary commence immediately and, if necessary, continue

in tander with the auction process (which we do not believe would present any unusual difficulty or concern). We call upon ComReg to ensure that interested parties should be told as a matter of urgency of the timeframes proposed for such consideration and any consultation, when a decision is likely to be taken about fresh interim licences, and the proposed duration of such fresh interim licences.

### Auction process

Vodafone notes the reasons given for the deferral of the recommencement of the auction process from 24 September 2012 to 16 October 2012. Having invested significantly in its participation in the auction process, Vodafone remains fully committed to its continued participation in that process and is extremely anxious that the auction process would now proceed promptly, subject to Vodafone having sufficient comfort that all and any technical and other issues have been or are fully resolved before the operative part of the auction process is engaged and provided that the outputs of the further mock auction scheduled confirm this. Vodafone believes that it is in the interests of all participants that the operative part of the auction process would proceed uninterrupted on and from 16 October 2012.

As regards the amendments to the Auction Rules and IM set out in the Amendment Letter and attached DotEcon report, Vodafone remains dissatisfied that amendments to the Auction Rules and IM are being introduced at this late stage and after preliminary bids have been submitted and Vodafone reserves its position generally as to the potential impacts of these amendments on the auction process and its outcome. We note that it is ordinarily ComReg's practice to undertake a full consultation on amendments of this nature. We presume that you do not propose to do so in this instance having regard specifically to timing considerations affecting the auction process (and that you may regard this approach as mandated by the terms of the IM). While judgments about the nature and scale of any consultation considered appropriate ultimately fall to be made by ComReg, we would alert you to the potential for challenge to, or dispute concerning, the absence of a consultation, prior to or following the outcome of the auction process.

We also understand that the DotEcon report detailing the amendments to the Auction Rules and IM is expressed to be intended only to be shared with Eligible Bidders; while we do not have a particularly strong view on this particular intention, it seems to us that it would be consistent with past practice and more transparent if the detail of the amendment and its application in the context of the Auction Rules as given in the DotEcon report would be made public.

### **Technical** Issues

We are concerned by your reiteration in the Technical Issues Letter that the third mock auction cannot take place any earlier than the week beginning 8 October 2012. While this timing might not be problematic if no technical issue in fact arises in the third mock auction, such an outcome cannot of course be predicted with confidence. We believe that scheduling the third mock auction so close to the commencement of the operative part of the auction process itself does not afford participants sufficient time following the third mock auction to review, analyse and resolve any issues which they consider may arise from the third mock auction before the commencement of the operative part of the auction process itself. In short, we are concerned that if any significant problem is identified (by ComReg or by any participant) arising from a mock auction run on or after 8 October 2012, there will be a serious prospect that the operative part of the auction process itself would again have to be deferred to allow a sufficient window for resolution. We would therefore urge you again to consider advancing the date of the third mock auction to the end of this week or early next week (commencing 1 October 2012) so as to build in a window for such review, analysis and resolution as may be necessary arising from experience in the third mock auction. We believe a window of two (2) working weeks is the minimum time to be allowed to ensure that outstanding technical issues can be assessed, remedied, tested and closed.

In relation to your query raised in the Technical Issues letter regarding the status of **status** we would ask you to note that was designated by Vodafone as an Authorised Agent for the purpose of the auction process,

which fact was noted on Vodafone's application form and Board Resolution submitted, to ComReg in connection with Vodafone's participation in the auction process. However, for the avoidance of any doubt, I confirm that **second second second** 

### Approach to the Minister

Finally, as regards what you say in the Postponement Letter concerning the prospect of Vodafone's bringing its concerns to the attention of the Minister for Communications, Energy and Natural Resources, Vodafone is of course fully aware of its obligations regarding confidentiality and information security in the context of the auction process. We do not agree, as you seem to suggest, that any communication by us with the Minister at the present time would *ipso facto* involve a breach of the Auction Rules concerning confidentiality, or that confidentiality obligations in the IM necessarily extend to what we would regard as issues potentially concerning the expiry of the Vodafone's current interim licences or our ability to maintain continuity of service for retail and wholesale customers, and we therefore reserve our position in that regard, though we hope that the necessity for any such communication will not arise and that therefore any difference of view between us on the subject of such a communication would remain academic.

I look forward to your response on the points raised. In particular, given the urgency of the requirement for Vodafone's current interim licences to be extended beyond 31 January 2012, we require confirmation of ComReg's position on this specific issue no later than **5pm on Thursday, 4 October 2012**.

Yours sincerely

Paul Ryan Director Vodafone Ireland Limited

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21. ComReg: letter to Voda fone "Transition Activities associated with the Multi-Band Spectrum Award (MBSA) Process" (letter dated 3 October 2012)<sup>16</sup>

<sup>&</sup>lt;sup>16</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

22. ComReg: reply to Vodafone letter of 27 September 2012 "Letter of the 27 September 2012" (letter dated 5 October 2012)<sup>17</sup>

<sup>&</sup>lt;sup>17</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

23. Voda fone: letter to ComReg "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 10 October 2012)<sup>18</sup>

<sup>&</sup>lt;sup>18</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

24. ComReg: reply to Vodafone letter of 5 October 2012 "Multi-Band Spectrum Release: Postponement of Auction" (letter dated 12 October 2012)<sup>19</sup>

<sup>&</sup>lt;sup>19</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

25. ComReg: letter to Voda fone "Information Requirement Pursuant to Section 13D(1) of the Communications Regulation Act 2002" (letter dated 17 October 2012)<sup>20</sup>

<sup>&</sup>lt;sup>20</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

26. Voda fone: letter to ComReg "Response to Information Requirement pursuant to section 13D(1) of the Communication Regulation Act 2002"(letter dated 26 October 2012)<sup>21</sup>

<sup>&</sup>lt;sup>21</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

27. Vodafone: Further material submitted by Vodafone in response to the Information Requirement pursuant to section 13D(1) of the Communications Regulation Act 2002<sup>22</sup>

 $<sup>^{22}</sup>$  Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

28. ComReg: letter to Vodafone "MBSA Process" (letter dated 20 November 2012)<sup>23</sup>

<sup>&</sup>lt;sup>23</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

29. Voda fone: letter to ComReg "Multi-Band Spectrum Auction ("MBSA") Process" (letter dated 21 November 2012)<sup>24</sup>

<sup>&</sup>lt;sup>24</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

30. ComReg: letter Voda fone "MBSA Process" (letter dated 23 November 2012)<sup>25</sup>

<sup>&</sup>lt;sup>25</sup> Note, ComReg are awaiting clarification of confidentiality of this letter, and will publish this letter at a later date.

 Vodafone: letter to ComReg "Transitional Project Proposal" (letter dated 12 December 2012)



12 December 2012

Dr. Samuel Ritchie Multi-Band Spectrum Award Commission for Communications Regulation Abbey Court, Irish Life Centre Lower Abbey Street Dublin 1

**Re Transition Project Proposal** 

Dear Dr Ritchie,

In line with the provisions of the your letter of the 27 November last, Vodafone Ireland Limited ("**Vodafone**") has met with all of the other Winning Bidders in the Multi-Band Spectrum Auction with a view to agreeing a Transition Project Plan.

In the course of discussions, Meteor and O2 produced documents setting out proposed dates for the required spectrum moves which dates are set out in the attached documents . (Draft TPP10 Dec12.pptx and Spectrum Transition Plan.pptx).

Vodafone hereby confirms that we have no objection to the dates proposed by Meteor and O2 for their required spectrum moves.

Regards

Paul Ryan Director Vodafone Ireland Limited





Vodafone Ireland Limited MountainView, Leopardstown, Dublin 18, Ireland T - +353 (0)1 203 7777 F - +353 (0)1 203 7778 W - <u>www.vodafone.ie</u> 32. ComReg: letter to Vodafone "All MBSA Winning Bidders – The Transition Project Proposal" (letter dated 21 December 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### By hand and email

21 December 2012

Paul Ryan Strategy Director Vodafone Ireland Limited Mountain View Leopardstown Dublin 18

### All MBSA Winning Bidders – The Transition Project Proposal

Dear Mr. Ryan

Further to the submissions that ComReg received from all the MBSA Winning Bidders on 12 December 2012, and the individual Transition Project Proposals for ComReg's consideration contained therein, I am writing to you in relation to the Transition Project Plan for the MBSA process and the immediate next steps to finalise this plan.

ComReg notes that two of the Existing GSM Licensees (namely Meteor and Telefónica) submitted its own individual Transition proposal but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. In that regard, ComReg has requested its consultants, namely Red-M Wireless Limited and Vilicom Limited ('Red-M/Vilicom'), to review all relevant material including the individual Transition proposals submitted on 12 December and to recommend a Transition plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

Red-M/Vilicom has carried out this analysis and the Schedule to this letter sets out Red-M/Vilicom's analysis and recommendations on the MBSA Transition Plan. Amongst other things, Comreg notes that Red-M/Vilicom:



- have considered and analysed all the Transition information supplied by the Mobile Network Operators ('MNOs') and in particular their submissions of 12 December 2012;
- have recommended a Transition Plan that ComReg could adopt as its finalised Transition Project Plan for both the 900 MHz and 1800 MHz bands (the "Recommended Transition Plan"). The Recommended Transition Plan proposes that:
  - the Transition activities in the 900 MHz band be completed by the end of week 17 (26 April 2013);
  - the Transition activities in the 1800 MHz band be completed by end of week 14 (5 April 2013); and
  - o a fortnightly reporting period be incorporated into the plan.

Having had regard to all the relevant materials before it, including the individual transition proposals submitted on 12 December, and after carefully considering the Red-M/Vilicom analysis and recommendations, ComReg has formed the view that the Recommended Transition Plan is achievable by all of the relevant parties without imposing overly onerous obligations on Winning Bidders and would therefore be a proportionate measure. Accordingly, ComReg proposes to adopt the Recommended Transition Plan (as set out in Annex 2 of the Report in the Schedule to this letter) as the finalised Transition Project Plan. In arriving at this proposal, ComReg notes that, having analysed all the relevant Transition-related information provided to ComReg to date, Red-M/Vilicom's professional opinion is that *"the Recommended Transition Plan is both viable and achievable within the proposed timescales."* 

Should the Recommended Transition Plan be adopted as is, this would set the following Transition-completion dates for the 900 MHz and 1800 MHz bands.<sup>1</sup>

GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Vodafone	No Transition necessary	31 January 2013
Meteor	5 April 2013	No Transition necessary

Table 1: The proposed Transition-completion dates

<sup>&</sup>lt;sup>1</sup> Note the Transition Project Plan would also set out milestone dates against the specific Transition activities as outlined in the Recommended Transition Plan.



GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Telefónica	Meteor's 900 MHz Transition- completion date + 3 Weeks (i.e. 26 April 2013)	5 April 2013

Both generally, and against the background of the Liquidated Damages provisions set out in section 3.8.2 of the Information Memorandum, ComReg notes the Winning Bidders' submissions of 12 December 2012 regarding deadlines, and further notes that two GSM Licensees (namely Meteor and Telefónica) suggested that a later deadline date be set in order to provide for contingencies and/or matters not within their control.

While ComReg understands that unforeseen events could lead to delays in the implementation of a Transition plan and thus require provision to be made for additional contingencies, ComReg also notes the views of Red-M/Vilicom on the Recommended Transition completion dates, namely that:

- a) these dates are both viable and achievable; and
- b) these dates could be further accelerated by Meteor and Telefónica in respect of a number of items (equipment lead time, hybrid combiners and alternative solutions to cavity combiners).

This suggests to ComReg that some contingency-provision may, in effect, already be built into the Transition-completion dates for Meteor and Telefónica. To the extent that this is so, the provision for additional contingencies sought by Meteor and Telefónica would not appear to be strictly necessary.

Notwithstanding this, ComReg proposes to add a **two-week grace period** to the Transitioncompletion dates proposed above during which Liquidated Damages shall not trigger even if the above-mentioned 900 MHz and 1800 MHz Transition-completion dates are not achieved. This would set the below-mentioned dates as the dates following which the requirement to pay Liquidated Damages in accordance with the Information Memorandum would be triggered.



GSM Licensee	900 MHz Liquidated Damages date	1800 MHz Liquidated Damages date
Vodafone	No Transition necessary	14 February 2013
Meteor	19 April 2013	No Transition necessary
Telefónica	Meteor's 900 MHz Transition completion date + 5 Weeks (i.e. 10 May 2013)	19 April 2013

Table 2: The proposed dates following which the requirement to pay Liquidated Damages would apply

In relation to Liquidated Damages, ComReg would remind Vodafone that all Winning Bidders, as a contractual pre-condition to participating in the MBSA, agreed to be bound by and to comply with the Transition Rules and are consequently required to abide by the finalised Transition Project Plan. In addition, ComReg would point out that the application and methodology for calculation of Liquidated Damages is clearly explained in Document 12/25 (Decision D04/12) and set out in Section 3.8.2 of the Information Memorandum.

ComReg is now seeking each Winning Bidder's views on the above proposals. In order to facilitate the finalisation of Transition Project Plan in early January 2013, ComReg requests that all views be submitted to <u>kevin.kennedy@comreg.ie</u> no later than **4pm on Tuesday 8** January 2013.

In submitting these views, the respondents must clearly identify any confidential information as ComReg intends to publish all information received on this proposal, subject to the treatment of confidential information as set out in ComReg Document 05/24.

In addition, and in accordance with paragraph 3.163 of the IM, it is ComReg's intention to publish the finalised Transition Project Plan on ComReg's website, having regard to the treatment of confidential information as set out in ComReg 05/24.

**Yours Sincerely** 

Dr. Samuel Ritchie

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SCHEDULE

Page 5 of 5

# Recommendations to ComReg on the MBSA Transition Plan

Joint Report for ComReg

By



## 1 Recommendations to ComReg on the MBSA Transition Plan

This document sets out Red-M/Vilicom recommendations to ComReg on the Transition Plan for the Multi-Band Spectrum Award ('MBSA') Process. This document has been prepared using the information supplied to ComReg by the Mobile Network Operators ('MNOs') and, in particular, their submissions to ComReg dated 12 December 2012. As submissions received from all MNOs, including Hutchison 3G Ireland Limited ('H3GI'), have been considered by Red-M/Vilicom in preparing this document, the recommended Transition plan will assist all Winning Bidders.

As discussed further below, two Transition plans are considered in this document:

- (1) 'MNO Supplied Composite Transition Plan': This is a composite Gantt chart representation of the Transition timelines for Time Slice 1 proposed individually by the MNOs to ComReg in their submissions of the 12th December 2012 (see Annex 1).
- (2) 'Recommended Transition Plan': This is the Transition plan recommended by Red-M / Vilicom for the MBSA process (see Annex 2 which includes a Gantt chart representation of this plan).

### 1.1 The MNO Supplied Composite Transition Plan

The Assignment Round of the MBSA process was completed on 14<sup>th</sup> November 2012. A two week "Negotiation Phase" subsequently followed and this was concluded on the 28<sup>th</sup> November 2012. There were no changes in the spectrum assignments determined by the Assignment Round of the MBSA. ComReg held meetings with the MNOs during the week commencing the 3<sup>rd</sup> December 2012 to discuss the MBSA results and Transition preparations.

Following the Assignment Round of the MBSA process, there was a four week period during which the Existing GSM Licensees were required to collectively formulate and submit a Transition Project Proposal to ComReg. The deadline for submitting a Transition Project Proposal was 12<sup>th</sup> December 2012.

ComReg received an individual 'Transition Proposal' from two of the Existing GSM Licensees, Meteor and Telefónica. Vodafone did not provide a Transition Proposal, thereby suggesting that it would not be carrying out Transition activities beyond 31 January 2013. These proposals are presented on a composite basis in a Gantt chart in Annex 1.

### 1.2 The Recommended Transition Plan

Two of the Existing GSM Licensees, Meteor and Telefónica, submitted their own individual 'Transition Project Proposal' but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). Telefónica's submission on the 12<sup>th</sup> December 2012 states:

'As agreement was not reached among all operators present, it is not possible to present ComReg with an industry transition plan, however our proposal is, we believe agreeable to all existing GSM licensees and three of the four operators.'

In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. ComReg has requested Vilicom and Red-M to review all relevant material including the individual Transition Proposals submitted and to recommend a Transition Plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

### 1.2.1 The Recommended Transition Plan: 900MHz

The Recommended Transition Plan reduces the critical path timescale so that the Telefónica spectrum relocation at 900MHz concludes at the end of week 17 ( $26^{th}$  April 2013), rather than week 19 ( $10^{th}$  May 2013) as envisaged by the MNO Supplied Composite Transition Plan.

The two week reduction in the timescale for Transition activities has resulted from the following minor modifications to the individual proposals supplied by the MNOs:

### Meteor and Telefónica shared sites:

For the site share activity (identified as "Site Works Complete" for Meteor, and "Cavity Combiner Solution Ready" for Telefónica), one week has been removed from Meteor's supplied proposal. The Recommended Transition Plan shows a completion date for this activity in week 11 (15<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Meteor's supplied proposal showed "site works complete" in week 12 (22<sup>nd</sup> March 2013); whereas
- Telefónica's supplied proposal showed "cavity combiner solution ready" in week 11 (15<sup>th</sup> March 2013).

However, as the sites are shared sites, the Meteor and Telefónica activities should be capable of completion at the same time.

### Meteor Repeaters:

Two weeks have been removed from Meteor's supplied proposal for the repeater replace/retune activity.

- Meteor's supplied proposal showed "Repeater Replace/Retune Complete" in week 13 (29<sup>th</sup> March 2013).
- Telefónica's supplied proposal showed "Repeater Equipment Ready" in week 12 (19<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Telefónica has confirmed an eleven week timescale for the retuning/replacing of its repeaters. [Confidential Text Removed].
- Meteor would appear to have significantly fewer repeaters than Telefónica and given a similar level of effort, it should therefore be able to complete this activity more rapidly than Telefónica. The Recommended Transition Plan shows Meteor taking marginally less time (10 weeks) to complete this activity compared to 11 weeks for Telefónica.
- [Confidential Text Removed]
- Retuning/replacing repeaters is an activity which can be completed quicker if more manpower and resources are used.

We are of the view that the reduced critical path timescale (of two weeks) is both viable and achievable. Indeed, we note that the Transition timescales could possibly be further accelerated considering the following:

### Equipment Lead Times:

Meteor and Telefónica should be able to reduce the timescales associated with the 77 shared sites currently using cavity combiners, if the manufacturers can deliver the relevant replacement equipment at an earlier date.

### Hybrid Combiners:

Meteor described a 3-stage 'lift and shift' process for replacing the shared sites with new cavity combiners i.e.

- 1. Replacing the existing cavity combiners with hybrids,
- 2. Retuning the cavities offsite (or purchasing new ones)
- 3. Replacing the hybrid combiner with the new retuned cavity combiner

Meteor and Telefónica could implement steps 2 and 3 after the Transition Project Plan is complete.

### Alternative Solutions to Cavity Combiners:

Meteor and Telefónica could also investigate alternative solutions to the cavity combiners at some of the 77 shared sites. These alternative solutions may reduce the ten week period currently assigned to the cavity combiner solution. For example, logical site sharing which would involve one operator adding equipment to their shared partners' NodeB cabinet. This might be accomplished more quickly.

In this light, we are of the view that a reduced critical path timescale of two weeks is reasonable.

### 1.2.2 The Recommended Transition Plan: 1800MHz

Telefónica did not supply a date for 1800MHz relocation, but stated in its submission of the 12<sup>th</sup> December 2012 that the transition implementation is complete at

### "O2 900MHz Transition Complete + 3 weeks",

which implies a completion date at the end of week 22 ( 28<sup>th</sup> May 2013).

The Recommended Transition Plan is drawn up on the basis of this statement i.e. the implementation of its relocation in the 1800MHz band will take 3 weeks. However, it suggests that Telefónica relocate in the 1800MHz band immediately after the 1800 MHz AFP (*Automatic Frequency Plan*) process is prepared. We see no reason why Telefónica could not complete its 1800MHz relocation during weeks 12 to 14 while waiting for Meteor to complete its 900MHz relocation. Therefore we recommend that the finalised Transition plan should require Telefónica's completion of 1800MHz relocation by week 14, the week ending 5<sup>th</sup> April 2013.

Telefónica's supplied proposal: AFP preparation complete in week 11 (14<sup>th</sup> March 2013) Telefónica's supplied proposal: 1800MHz Relocation complete in week 22 (28<sup>th</sup> May 2013) Recommended Transition Plan: 1800MHz Relocation complete in week 14 (5<sup>th</sup> April 2013)

### 1.2.3 The Recommended Transition Plan: Reporting Method

In its submission, Meteor suggested that it would publish a fortnightly report to ComReg and the other winning bidders, containing the following items:

- Progress against milestone dates; and
- Identification of any risks and mitigating actions.

This proposal seems reasonable and to ensure that ComReg has a view of the implementation of the finalised Transition Plan, the same proposal should be adopted by all GSM Licensees.

Further, when a transition activity (as set out in the Recommended Transition Plan in Annex 2) is completed by a GSM Licensee, it should notify ComReg and all other Winning Bidders immediately of this development and not wait for the fortnightly report to do so. This would seem reasonable in order to ensure full transparency for both ComReg and all MNOs during implementation of the Transition Project Plan.

Similarly, once a GSM Licensee has completed its relocation activities in a band (either the 900 MHz or the 1800 MHz band), it should immediately notify ComReg and the other Winning Bidders of this development and not wait for the fortnightly report to do so. Again, this would seem reasonable in order to ensure full transparency for all parties.

### **1.3 Recommendation**

In light of the above and taking account of all of the circumstances and proposals submitted by MNOs, we consider that the Recommended Transition Plan is both viable and achievable within the proposed timescales while avoiding any undue delay in the availability of liberalised spectrum. We therefore recommend that ComReg adopt this Recommended Transition Plan as its finalised Transition Project Plan for both the 900MHz and 1800MHz bands.

Andy Barnard Red-M Wireless Ltd Louise Hopkins Vilicom Engineering Ltd

# 2 Annex 1- MNO Supplied Composite Transition Plan - Gantt chart

Figure 1: MNO Supplied Composite Transition Plan

# 3 Annex 2- Recommended Transition Plan - Gantt chart

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or	Activity						_	_	_												-			
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ónio	Cavity Combiner Solution Ready																					_		
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Figure 2: Recommended Transition Plan

33. Matheson Ormsby Prentice: letter to ComReg "Multi-Band Spectrum Award – Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 3 October 2012)

### MATHESON ORMSBY PRENTICE

Solicitors 70 Sir John Rogerson's Quay Dublin 2 Ireland DX: 2 Dublin T: +353 1 232 2000 F: +353 1 232 3333 W: www.mop.ie

Dr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1 Strictly private and confidential By courier

Our Ref HK/CM/640002/195

Your Ref

3 October 2012

Dear Dr Ritchie

### Multi-Band Spectrum Award – Transition Activities and GSM 900 MHz Interim Licences

We act for Hutchison 3G (Ireland) Limited ("H3GI"). We refer to your letter to Mr David Hennessy, Chief Technical Officer of H3GI, dated 20 September 2012 concerning an amendment to the Information Memorandum (ComReg Document 12/52) (the "IM"). The purpose of this letter is to set out H3GI's concerns arising from the comments contained in the penultimate paragraph of your letter regarding the possible treatment of 900 MHz spectrum post 31 January 2013 and to seek further information from ComReg concerning this critically important matter.

### 1 Adjustment of the Auction Rules and Timetable

As a result of a number of issues and in particular, an error in the 800, 900 and 1800 MHz auction (the "Auction") rules identified and notified by H3GI to ComReg, ComReg gave notice to H3GI on 14 September 2012 of an adjustment of the Auction rules and a delay of three weeks in the Auction timetable with the Main Stage commencing on Tuesday 16 October 2012 rather than Monday 24 September 2012.<sup>1</sup> In relation to the delay, ComReg stated that it was aware of the limited time for transition but indicated that ComReg had consequently adjusted the timetable by the minimum amount of time. H3GI understood this comment to mean that notwithstanding the adjustment of the timetable by three weeks, ComReg continued to believe that the time available for transition remained sufficient so that Time Slice 1 would commence on 1 February 2013 as set out on page 11 of the IM.

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Chairman: Sir Anthony O'Reilly - Managing Partner: Liam Quirke - Partners: Pauline O'Donovan, Stanley Watson, Robert Heron, Patrick Sweetman, Brian Buggy, Paul Glenfield, Michael Jackson, Chris Quinn, Tim Scanlon, Helen Kelly, Sharon Daly, Ruth Hunter, Tony O'Grady, Paraic Madigan, Michael O'Connor, Tara Doyle, Anne-Marie Bohan, Patrick Spicer, Turlough Galvin, Patrick Molloy, George Brady, Brid Munnelly, Robert O'Shea, Joseph Beashel, Deirdre-Ann Barr, John Dunne, Damien Keogh, Cara O'Hagan, Dualta Counihan, Barry Lynch, Ronan McLoughlin, Niall Horgan, Deirdre Dunne, Alistair Payne, Fergus Bolster, Christian Donagh, Bryan Dunne, Libby Garvey, Shane Hogan, Peter O'Brien, John O'Connor, Thomas Hayes, Nicola Dunleavy, Mark O'Sullivan, Julie Murphy-O'Connor, Helen Noble, Alan Connell, Bonnie Costelloe, Brian Doran, John Gill, Alan Chiswick, Joe Duffy, Pat English, Carina Lawlor, Shay Lydon, Aldan Fahy, Niamh Counihan, Marie O'Brien, Gerry Thornton, Liam Collins, Darren Maher. Tax Principals: Anthony Walsh, John Ryan, Greg Lockhart, John Kelly, Catherine Galvin. - Consultants: Arthur Moran, Emer Hunt, Frank Nowlan, Elizabeth Grace, Michael Tyrrell, Graham Richards, James Hickey, Don McAleese, Stuart Margetson. Of Counsel - William Prentice, Roderic Ensor.

<sup>&</sup>lt;sup>1</sup> Letter from ComReg to Mr David Hennessy dated 24 August 2012.

### 2 Opportunistic submissions by Vodafone/O2

H3GI was therefore very surprised by the apparent change in ComReg's position in the six days between your letter dated 14 September 2012 and your letter dated 20 September 2012. In the penultimate paragraph of your letter dated 20 September 2012, ComReg states:

"Additionally, and consequent to our letter of 14 September, some concern has been expressed with regard to the time now available to conclude transitional activities in advance of the expiry of existing Interim GSM 900 MHz rights of use. Please note that ComReg is aware of the limited time now available for transition before the commencement of Time Slice 1. ComReg is also aware of the expiration of existing GSM 900 MHz interim licences on 31 January 2013. ComReg can, therefore, confirm that it has now commenced consideration of the requirement for and details of a consultation on the need for the short term extension of the duration of existing Interim GSM rights of use in the 900 MHz band. You will appreciate, of course, that the ability to issue such a consultation is severely curtailed in advance of knowing the precise nature of the transition activities required to be undertaken by Existing GSM licensees. ComReg can assure all Qualified Bidders that it will act swiftly to resolve any such issues arising as soon as the auction outcome is clear."

It would appear from this comment that ComReg is now minded to initiate a consultation in respect of extending the existing interim GSM rights of use in the 900 MHz band.

H3GI can only surmise that ComReg has once again been the subject of opportunistic submissions from Vodafone and/or O2 seeking to use a modest delay of just three weeks to the Auction timetable to renew calls for an extended interim licence. As far back as 2010, Vodafone and O2 were raising unsubstantiated arguments to try and secure interim licences of a very considerable duration and thus delay commencement of new 900 MHz spectrum licences: Vodafone proposing an interim licence for an indefinite period with the termination date being contingent on the fulfilment of a number of conditions and O2 proposing that its interim licence be extended to 2015. Given the incentives of Vodafone and O2 to reduce the cost of transition activities by extending the time available to complete them and extend the period during which they can provide GSM services at low regulatory cost, it is not surprising that those operators would seek to use any and every opportunity to make renewed calls for an extended interim licence. However, what is surprising and indeed alarming, is the apparent readiness of ComReg to entertain these submissions from Vodafone and O2 at this point.

### 3 Lack of clarity

In your letter dated 20 September 2012, ComReg refers to "the need for the short term extension of the duration of existing Interim GSM rights of use in the 900 MHz band". It is not clear: (i) what this "need" might be; (ii) why "the short term" is required; or (iii) indeed what "the short term" means. It is not clear whether Vodafone and O2 are relying on the three week extension of the Auction timetable in their submissions to ComReg or claiming that a three week extension might be necessary.

We would be grateful if ComReg would clarify what it means by these terms, as employed by it in its letter of 20 September 2012, and the periods which Vodafone and O2 are now claiming would be necessary.

# 4 Why does ComReg now believe that there might not be sufficient time available for transition activities by 31 January 2013?

As a member of a major global telecommunications group, H3GI believes that there is sufficient time for Vodafone and O2 to complete all necessary transitional activities by 31 January 2013. The Multi-Band Spectrum Award process has been ongoing since 2008. During this time, it has been clear that the existing GSM licensees might have to participate in transitional activities. Furthermore, H3GI believes that Vodafone and O2 must have already prepared internal transition plans dealing with potential auction outcomes.

Please explain why ComReg now believes that there might not be sufficient time available for transition activities by 31 January 2013.

# What is ComReg doing now to ensure completion of transitional activities by 31 January 2013?

H3GI believes that ComReg should: (i) use its powers under section 13 D of the Communications Regulation Act, 2002 (as amended)(the "Act") to obtain a copy of the contingency transition plans of the existing GSM licensees; (ii) ensure that it is fully familiar with the current 900 MHz deployment of Vodafone, O2 and Meteor; (iii) prepare its own plan for comparison with the existing GSM licensees' transition project proposal under the IM; (iv) shorten the four week period referred to in paragraph 3.16 of the IM to two weeks; and (v) as previously requested by H3GI, appoint a senior and experienced ComReg manager to project manage transitional activities once the results of the Auction are known to ensure completion of the transition plan by 31 January 2013, and commit to weekly project meetings with all relevant stakeholders once the project plan has been finalised.<sup>2</sup>

Please explain what ComReg is doing now to ensure completion of transitional activities by 31 January 2013, including whether it has or intends to ask Vodafone, O2 and Meteor whether they have prepared contingency transition plans.

### 6 Non availability of an extension

Your letter confusingly refers to "expiration of existing GSM 900 MHz Interim Licences on 31 January 2013" and consideration of "extension of the duration of existing GSM rights of use". It seems clear from SI No 189/2011 Wireless Telegraphy (Interim GSM Mobile Telephony Licence) Regulations 2011 on 20 April 2011 ("Licence Regulations") that the licence in question expires on 31 January 2013 and that such instrument is not capable of extending a right of use. Accordingly, it would seem that what ComReg is referring to is the possibility of it creating yet another new licence for the sole benefit of Vodafone and O2. This approach, if that is what is really being considered by ComReg as a possibility at this stage, is startling. It is unclear what basis ComReg would have for the introduction of new interim licences for the sole benefit of Vodafone and O2 given the clear requirement in regulation 9 of the European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations (SI No 335/2011) (the "Authorisation Regulations") that the Regulator "establish open, objective, transparent, non-discriminatory and proportionate procedures for the granting of rights of use for radio frequencies...".

5

<sup>&</sup>lt;sup>2</sup> Letter from Mark Hughes to Mr George Merrigan, of ComReg dated 5 April 2012.

Please explain the basis on which ComReg feels that it could possibly introduce new interim licences especially for Vodafone and O2 following the expiry of the current interim licences.

### 7 Harmful effects of delay on H3GI and competition generally

ComReg's delays in commencing the Auction process has caused harm both to H3GI and to competition in the Irish mobile market. In this regard, H3GI refers to the report prepared by Value Partners and RRA and provided by H3GI to ComReg on 18 March 2011.

H3GI strenuously objects to the renewed attempts of Vodafone and O2 to cause further delay to the commencement of the new spectrum licences and the apparent willingness of ComReg to accede to their demands.

H3GI considers it essential that ComReg acts decisively at this stage and takes all steps within its power to ensure that the current Auction timetable is adhered to and that 900 MHz spectrum is available to Winning Bidders on 1 February 2013 as planned. Any ComReg delay after that date would be wholly unacceptable to H3GI and H3GI will be forced to consider all legal remedies available to it where any acts/omissions by ComReg make such delay likely.

Given the seriousness of the issues raised in this letter, we request that ComReg respond to this letter by close of business on Monday 8 October 2012.

Yours faithfully

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MATHESON ORMSBY PRENTICE

34. ComReg: reply to Matheson Ormsby Prentice letter of 3 October 2012 (letter dated 10 October 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### Strictly Confidential – By Hand

10 October 2012

Matheson Ormsby Prentice 70 Sir John Rogerson's Quay Dublin 2

Your Ref: HK/CM/640002/195

**Dear Sirs** 

I refer to the above matter and to your letter of 3 October 2012 in respect of same.

ComReg notes the issues that you have raised in your letter and addresses each of them in turn below using the same headings and numbering as used in your letter for ease of reference.

### 1. Adjustment of the Auction Rules and Timetable

ComReg can confirm that your client's understanding of the comment referred to was incorrect. At no point did ComReg state or indicate in its letter of 14 September that it was confident that the time table for transition remained sufficient so that Time Slice 1 would commence on 1 February 2013. Indeed, such a view would have been inconsistent with the estimated transition periods discussed in Chapter 6 of Document 12/25. ComReg is not responsible for any unsupported misinterpretation of its letter of 14 September.

### 2. Opportunistic submissions by Vodafone/O2

Following on from the above and contrary to the assertion in your letter, ComReg clearly did not change any stated position in the six days between its letters of 14 September and 20 September. The paragraphs cited in your letter under this heading merely confirmed ComReg's existing position for the benefit of all Bidders and following request for same. For the avoidance of doubt, ComReg has, prior to the issue of its letter of 14 September, been closely monitoring the timeframes for transition activities and associated issues, including engaging independent expert consultants to assist it in this regard and consideration of any requirement for and details of a consultation on short term extensions to existing GSM rights of use.

ComReg wholly rejects any suggestion that ComReg somehow favours or is unduly influenced by particular interested parties.

### 3. Lack of Clarity

ComReg already made it clear in its letter of 20 September that its ability to issue a consultation on interim licences is curtailed in advance of knowing the precise nature of the transition activities required to be undertaken by Existing GSM licensees. Indeed, the relevant sentence from that letter was quoted in your letter under the previous heading above. As such, it is not possible for ComReg to furnish the information requested.

In any case, such information is clearly more appropriately presented and considered via public consultation. It is not ComReg's policy, or in accordance with its statutory obligations, to divulge such information, were it in its possession, to an individual interested party prior to the issuing of a public consultation.

In light of the above, ComReg rejects the assertion that there has been any lack of clarity in its letter of 20 September.

# 4. Why does ComReg now believe that there might not be sufficient time available for transition activities by 31 January 2013?

For the avoidance of doubt, ComReg can confirm that it has made no decision as to whether transition activities can be completed by 31 January 2013.

However, ComReg is conscious that there will now be less than five months available for transition activities to take place in the 900 MHz band between the end of the Auction and expiration of existing interim GSM licences. In light of the estimated transition periods discussed in Chapter 6 of Document 12/25, it is appropriate for ComReg to consider the possibility that transition activities in the 900 MHz band might not be complete by 31 January 2013.

ComReg also notes that transition activities include both relocation and retuning. Where retuning is necessary, a longer period for transition activities will likely be required.<sup>1</sup> Your letter appears to assume that only relocation activities will be required. However, ComReg has a statutory duty to plan for both eventualities.

Notwithstanding the above, ComReg can confirm that it has already, and prior to the receipt of your letter, commenced the process of engaging with existing GSM licensees to plan for the transition phase of the Award Process. This process includes requesting information regarding any transition activities that existing GSM licensees have already carried out and the transition plans that they have already made. The aim of this process is to ensure an efficient and timely completion of transition activities arising from the Award Process.

# 5. What is ComReg doing now to ensure completion of transitional activities by 31 January 2013?

ComReg acknowledges your client's suggestions regarding management of the transition process. In relation to activities ComReg is currently undertaking regarding transition

<sup>&</sup>lt;sup>1</sup> This too was considered and set out in Document 12/25.

activities, please see ComReg's response under the previous heading above. ComReg's aim is to ensure an efficient and timely completion of transition activities arising from the Award Process. For the avoidance of doubt, ComReg does not intend to shorten the four week period referred to in paragraph 3.13 of the Information Memorandum to two weeks.

### 6. Non availability of an extension

It is not ComReg's responsibility nor within its statutory remit to provide legal advice. In response to the legal query raised, ComReg would simply refer you to ComReg's statutory powers generally and, in particular, under the Authorisation Regulations and the Wireless Telegraphy Act, 1926. ComReg would also refer you to the statutory powers relied on and referred to in the Wireless Telegraphy (Interim GSM Mobile Telephony Licence) Regulations, 2011.

Any further consideration of the basis upon which it would be considered appropriate to extend existing or issue new interim GSM licences would be more appropriately set out in a public consultation.

### 7. Harmful effects of delay on H3GI and competition generally

Under this heading, you assert that a three week adjustment to the time table has caused harm to H3GI and to competition in the Irish mobile market. However, you note elsewhere in your letter the minor nature of this timetable adjustment.

ComReg would remind you that one of the main factors requiring an adjustment to the Auction timetable was the amendment required to the Auction Rules following the identification of an omission by your client. In any case, and as noted in its letter of 14 September, ComReg has adjusted the timetable by the minimum amount necessary to ensure that all Qualified Bidders are appropriately prepared to participate in the Auction.

ComReg can assure H3GI that it has and is doing everything within its power to ensure that the Auction commences as soon as possible and to ensure an efficient and timely completion of transition activities arising from the Award Process.

Yours sincerely

Dr. Samuel Ritchie

35. Matheson Ormsby Prentice: letter to ComReg "Multi-Band Spectrum Award – Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 16 October 2012)

### MATHESON ORMSBY PRENTICE

Solicitors 70 Sir John Rogerson's Quay Dublin 2 Ireland DX: 2 Dublin T: +353 1 232 2000 F: +353 1 232 3333 W: www.mop.ie

Dr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1 Strictly private and confidential By courier

Our Ref 640002/195 Your Ref

16 October 2012

Dear Dr Ritchie

### Multi-Band Spectrum Award - Transition Activities and GSM 900 MHz Interim Licences

We refer to our letters dated 3 October and 9 October 2012 and your letters dated 10 and 11 October 2012. As regards your letter dated 11 October 2011, we suggest that ComReg checks its records. Our record (attached) indicates that our letter to you dated 9 October 2012 was accepted by and signed for by M. Murphy at ComReg at 16:52 on 9 October 2012 and not on 10 October 2012 as indicated in your letter dated 11 October 2012.

We are astounded by the comments in your letter dated 10 October 2012 which appear to seek to blame H3GI for the Auction delay arising out of the three week "adjustment" to the Auction timetable and the apparent suggestion that a delay to commencement of Time Slice 1 could in any way be attributable to H3GI. The fault for the "omission" in the Information Memorandum ("IM") and subsequent delay to the Auction timetable lies squarely with ComReg. H3GI acted entirely properly in bringing the matter in question to ComReg's attention and it completely rejects the suggestion that in bringing this matter to the attention of ComReg, it could be construed as responsible for the resulting delay to the Auction timetable.

Your letter failed to alleviate our concerns about a possible delay to the commencement of Time Slice 1 and did not fully address many of the questions set out in our letter of 3 October 2011 as well as giving rise to new questions and concerns. In particular, we would ask you to respond to the questions set out below as soon as possible.

### 1

### Closely monitoring the time frames for transition activities and lack of clarity

We note ComReg's statement that it had been "closely monitoring the timeframes for transition activities and associated issues" prior to the issue of its letter of 14 September.

### DUBLIN

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### PALO ALTO

Chairman: Sir Anthony O'Reilly - Managing Partner: Liam Quirke - Partners: Pauline O'Donovan, Stanley Watson, Robert Heron, Patrick Sweetman, Brian Buggy, Paul Glenfield, Michael Jackson, Chris Quinn, Tim Scanlon, Helen Kelly, Sharon Daly, Ruth Hunter, Tony O'Grady, Paraic Madigan, Michael O'Connor, Tara Doyle, Anne-Marie Bohan, Patrick Spicer, Turlough Galvin, Patrick Molloy, George Brady, Brid Munnelly, Robert O'Shea, Joseph Beashel, Deirdre-Ann Barr, John Dunne, Damien Keogh, Cara O'Hagan, Dualta Counihan, Barry Lynch, Ronan McLoughlin, Niall Horgan, Deirdre Dunne, Alistair Payne, Fergus Bolster, Christian Donagh, Bryan Dunne, Libby Garvey, Shane Hogan, Peter O'Brien, John O'Connor, Thomas Hayes, Nicola Dunleavy, Mark O'Sullivan, Julie Murphy-O'Connor, Helen Noble, Alan Connell, Bonnie Costelloe, Brian Doran, John Gill, Alan Chiswick, Joe Duffy, Pat English, Carina Lawlor, Shay Lydon, Aidan Fahy, Niamh Counihan, Gerry Thornton, Liam Collins, Darren Maher. Tax Principals: Anthony Walsh, John Ryan, Greg Lockhart, John Kelly, Catherine Galvin. - Consultants: Arthur Moran, Emer Hunt, Frank Nowlan, Elizabeth Grace, Michael Tyrrell, Graham Richards, James Hickey, Don McAleese, Stuart Margetson. Of Counsel - William Prentice, Roderic Ensor. H3GI would like to understand the form that such close monitoring of transition activities and associated issues took and what prompted such close monitoring exercises. In this regard, H3GI would like ComReg to expand on the very general statement that it engaged independent expert consultants to assist it in this regard and considered any requirement for and details of a consultation on short term extensions to existing GSM rights of use.

We note that your letter "*rejects the assertion that there has been any lack of clarity*" and fails to provide the clarity legitimately sought by H3GI in its letter dated 3 October 2012.

In particular, we note that ComReg has failed to clarify what it means by the term "the need for the short term extension of existing Interim GSM rights of use in the 900 MHz band", and did not make clear: (i) what this "need" might be; (ii) why "the short term" is required; or (iii) indeed what "the short term" means.

We note that you used a similar formulation in your letter dated 10 October 2012 where you refer to ComReg giving consideration to "*short term extensions to existing GSM rights of use*" prior to 14 September 2012 but again fail to explain what you mean by "*short term extensions*". Please confirm what you mean by this phrase.

Your letter also failed to provide clarity as regards the legal basis for any extension of GSM rights of use despite the request in our letter of 3 October 2012. H3GI remains surprised that ComReg does not see fit to identify the legal basis of its consideration of extending / reviewing licences at this stage. H3GI is not seeking legal advice from ComReg. It is merely seeking a clear explanation from ComReg about the legal basis for an extension; it is ComReg that raised the possibility of an extension, not H3GI.

### 2 Decision to have a public consultation and refusal to provide information

Your letter dated 20 September 2012 refers to the commencement of "consideration of the requirement for and details of a consultation on the need for...." Your letter dated 10 October 2012 appears to indicate that ComReg has in fact now made a decision to carry out a consultation as it is suggesting that its failure to clarify the periods which Vodafone / O2 are claiming would be necessary in terms of an extension cannot be provided as such information "*is more appropriately presented and considered via public consultation*" and that the legal bases for an extension would be "more appropriately set out in a public consultation".

Can you please indicate whether a decision to hold a public consultation has actually been made and, if so, when such a decision was made and on what basis as well as when such a public consultation might commence?

We do not understand your rationale for the refusal to clarify the periods which Vodafone / O2 are claiming would be necessary in terms of an extension. H3GI entirely disagrees with the assertion that a response to this wholly legitimate question is more appropriately presented and considered at a public consultation stage. H3GI considers that given the importance and time critical nature of this issue for H3GI, the information should be provided as requested.

### 3 Engagement with existing GSM licensees to plan for transition phase

We note that your letter provides that ComReg has "commenced the process of engaging with existing GSM licensees to plan for the transition phase of the Award Process" prior to

the receipt of our letter dated 3 October 2012 and this process includes requesting "information regarding any transition activities that existing GSM licensees have already carried out and the transition plans that they have already made".

Please confirm: (i) when that process of engagement with existing GSM licensees commenced; (ii) whether ComReg has requested "*information regarding any transition activities that existing GSM licensees have already carried out and the transition plans that they have already made*"; (iii) when ComReg requested such information; and (iv) whether ComReg used its powers under section 13D of the Communications Regulation Act, 2002 as amended in making such requests. In addition, please confirm whether ComReg has actually received information regarding transition plans and activities deemed acceptable to ComReg and if not, what steps ComReg has taken or intends to take to address this deficiency Furthermore, please confirm whether the possibility of failing to meet the 31 January 2012 deadline was raised by Vodafone / O2 prior to ComReg's letter of 14 September 2012.

# 4 Steps taken by ComReg and refusal to reduce the four week period referred to in the IM

We note ComReg's statement that it "is doing everything within its power" to "ensure an efficient and timely completion of transition activities arising from the award process".

However, what is not clear to us is what exactly ComReg or its advisers are actually doing to "ensure an efficient and timely competition of transition activities arising from the award process". Your letter did not deal with our request that ComReg confirm whether it will appoint a senior and experienced ComReg manager to project manage transitional activities once the results of the Auction are known to ensure completion of the transition plan by 31 January 2013, and commit to weekly project meetings with all relevant stakeholders once the project plan has been finalised. Please provide such confirmation. We note your refusal to shorten the four week period referred to in paragraph 3.16 of the IM to two weeks as suggested by H3GI. Please explain why ComReg is not intending to shorten this period and explain what other steps it is taking to ensure that Time Slice 1 begins on 1 February 2013.

Given the seriousness of the issues raised in this letter, we request that ComReg respond to this letter by close of business on Thursday 18 October 2012.

Yours faithfully

Cartes- Drinsly Prentie

MATHESON ORMSBY PRENTICE



Customer:MATHESON ORMSBY PRENTICEService:SPECIAL BIKEYour Reference:640002/195Return Job:NoPickup Date:09/10/12Caller:Padraig



PICKUP FROM ACCOUNT ACCOUNT Contact: Padraig DELIVER TO

**DUBLIN 1** 

### TRACKING DETAILS

Date	Time	Status
09/10/12	16:53	DROP COMPLETE

Area DUBLIN 1

POD: m murphy

Job: 11533800	09/10/2012 16:52
Fail Reason:	Scanned - 0
	1
Details:	
Print Name: m	murphy
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	- J

36. ComReg: reply to Matheson Ormsby Prentice letter of 16 October 2012 (letter dated 22 October 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### Strictly Confidential – By Hand

22 October 2012

Matheson Ormsby Prentice 70 Sir John Rogerson's Quay Dublin 2

Your Ref: 640002/195

Dear Sirs

I refer to the above matter and to your letter of 16 October 2012 sent on behalf of your client H3GI.

ComReg notes and has considered the matters raised in your letter and addresses each of them in turn below.

In relation to the second paragraph of your letter, ComReg notes that you are '*astounded*' by the contents of its letter of 10 October 2012. ComReg would point out that, contrary to your suggestion, it did not '*seek to blame*' H3GI for the adjustment to the Auction timetable. ComReg merely sought to, understandably, express its surprise that H3GI would expect that any amendment to the Auction Rules so close to the intended Auction commencement date could have no effect whatsoever on the Auction timetable.

Furthermore, ComReg did not suggest that H3GI acted improperly in bringing the matter to ComReg's attention. On the contrary, H3GI was required to do so immediately under the Auction Rules.

In relation to the third paragraph of your letter, ComReg notes that H3GI purports to raise many of the same concerns it has already raised in its letter of 3 October 2012. In that regard, ComReg would point out that it is satisfied that it has already appropriately addressed those concerns in its letter of 10 October 2012. Notwithstanding this, ComReg responds below to each of the points raised in your letter using the same numbering and headings as used in your letter for ease of reference.

### 1. Closely monitoring the time frames for transition activities and lack of clarity

In relation to the first paragraph under this heading, ComReg would note that it has been fully cognisant of the expiration dates of interim GSM licences ever since they took effect in May 2011. ComReg has also been fully cognisant of the estimated time periods required for transition activities discussed in Chapter 6 of Document 12/25 ever since publication of that

document in March 2012. Since the publication of the Information Memorandum in May 2012, ComReg has sought to ensure that all stages of the Award Process are carried out in accordance with the timetable set out in that document. To a large degree ComReg has achieved that goal. In light of the time periods discussed in Chapter 6 of Document 12/25 and the impending expiration of interim GSM licences, it is clearly appropriate for ComReg to consider whether transition activities can be carried out prior to the expiration of interim licences. Such considerations are entirely consistent with the information memorandum as amended, and ComReg's statutory functions, objectives and duties.

ComReg can confirm that it has engaged Red-M Wireless Limited and Vilicom Engineering Limited to assist it in planning for transition activities that may be required so that ComReg can ensure that those activities are carried out in an efficient and timely manner. This will also clearly assist ComReg in determining whether transition activities can be carried out prior to 1 February 2013.

In relation to the second, third, fourth and fifth paragraphs under this heading, ComReg notes that these are issues already raised by your client in its letter of 3 October. Having carefully reviewed the points made in your latest letter, ComReg is satisfied that it has already appropriately addressed those queries in its letter of 10 October 2012. ComReg would therefore refer your client to the relevant parts of that letter.

### 2. Decision to have a public consultation and refusal to provide information

In relation to the first and third paragraphs under this heading, ComReg would note that at no point did it suggest that Vodafone or O2 had claimed "*certain periods would be necessary in terms of an extension*". These are your client's words.

In relation to the second paragraph under this heading, ComReg would note that, given the limited time period remaining between now and expiry of existing interim GSM licences, it is appropriate to consider whether there is a need for new or extension to existing interim licences. In accordance with Regulation 12 of the Authorisation Regulations, it is also appropriate to consult with interested parties on the need for, and nature of, such measures. ComReg can confirm that it intends to issue a consultation on this matter shortly after the Auction. A failure by ComReg to consider and plan for such a consultation would, given the circumstances, likely be contrary to ComReg's statutory obligations.

In relation to the third paragraph under this heading, ComReg would again refer you to its letter of 10 October 2012. Information regarding the duration of an interim licence, should it be required, is clearly more appropriately addressed in a public consultation.

### 3. Engagement with existing GSM licensees to plan for transition phase

ComReg notes that your client seeks detailed information regarding communications between ComReg and other authorised operators. This is an unusual request in that your client is not a party to any of these communications. You have provided no explanation as to why your client is seeking each category of information specified or why it would be entitled to receive that information. In addition, it is not ComReg's practice to divulge such information to third parties, save through public consultation or other public documentation and in accordance with its guidelines on confidential information. In that light, ComReg is of

the view that your client is not entitled to the information sought through this exchange of correspondence and does not therefore propose to accede to your client's request.

# 4. Steps taken by ComReg and refusal to reduce the four week period referred to in the IM

ComReg notes that these are issues already raised by your client in your letter of 3 October 2012. ComReg is satisfied that it has already appropriately addressed these issues in its letter of 10 October 2012. Notwithstanding this, ComReg would confirm that, as is the case with all important projects of this nature, senior ComReg staff will be involved at all stages of the transition process.

In relation to your comment on the four week period referred to in paragraph 3.13 of the Information Memorandum, ComReg would point out that this is a matter which has already been publicly consulted and decided upon. ComReg does not therefore intend to shorten the four week period as suggested by your client.

Yours sincerely

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Dr. Samuel Ritchie

 Matheson: letter to ComReg "Multi-Band Spectrum Award – Transitional Activities and GSM 900 MHz Interim Licenses" (letter dated 13 November 2012) Solicitors 70 Sir John Rogerson's Quay Dublin 2 Ireland

> T +353 1 232 2000 F +353 1 232 3333 W www.matheson.com DX 2 Dublin

Dr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1 Strictly private and confidential By courier

Our Ref HK/CM/640002/195 Your Ref

13 November 2012

Matheson

Dear Dr Ritchie

### Multi-band Spectrum Award - Transition Activities and GSM 900 MHz Interim Licences

We refer to the above matter, your letter of 22 October 2012 and ComReg's announcement of yesterday, 12 November 2012 which provides that it will consult on whether it is necessary to extend the Interim GSM rights of use after the Assignment Round (the "Announcement"). Hutchison 3G Ireland Limited ("H3GI") is very disappointed that ComReg is signalling "the possibility of delayed commencement in some or all lots in the 900MHz and 1800 MHz bands in Time Slice 1". We reiterate our client's view that a delay in commencement is unacceptable and unnecessary and that ComReg should be taking steps to ensure that this does not occur.

### 1 Timing of the consultation

We note from the Announcement that ComReg intends to publish the consultation "*after the Assignment Round*" which is due to take place between 09:30am and 11:30am on Wednesday 14 November 2012. Please confirm how soon after the Assignment Round the consultation will be published.

### 2 Outstanding information regarding the decision to issue a consultation/entertain a possible delay

In our letters to you dated 3 October, 9 October and 16 October 2012, we sought information from you on the background to and rationale for the possible delay to the 900MHz and 1800MHz bands including the following:

the legal basis upon which ComReg believes it can extend / issue new interim licences;

Dublin	London	New York	Palo Alto
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Chairman: Sir Anthony O'Reilly – Managing Partner: Liam Quirke – Partners: Pauline O'Donovan, Robert Heron, Patrick Sweetman, Brian Buggy, Paul Glenfield, Michael Jackson, Chris Quinn, Tim Scanlon, Helen Kelly, Sharon Daly, Ruth Hunter, Tony O'Grady, Paraic Madigan, Michael O'Connor, Tara Doyle, Anne-Marie Bohan, Patrick Spicer, Turlough Galvin, Patrick Molloy, George Brady, Brid Munnelly, Robert O'Shea, Joseph Beashel, Deirdre-Ann Barr, John Dunne, Damien Keogh, Cara O'Hagan, Dualta Counihan, Barry Lynch, Ronan McLoughlin, Niall Horgan, Deirdre Dunne, Alistair Payne, Fergus Bolster, Christian Donagh, Bryan Dunne, Libby Garvey, Shane Hogan, Peter O'Brien, John O'Connor, Thomas Hayes, Nicola Dunleavy, Julie Murphy-O'Connor, Helen Noble, Alan Connell, Bonnie Costelloe, Brian Doran, John Gill, Alan Chiswick, Joe Duffy, Pat English, Carina Lawlor, Shay Lydon, Aidan Fahy, Niamh Counihan, Gerry Thornton, Liam Collins, Darren Maher, Tax Principals: Anthony Walsh, Greg Lockhart, John Kelly, Catherine Galvin. -London: Stanley Watson. - New York: John Ryan, -Palo Alto: Mark O'Sullivan. Of Counsel: William Prentice, Roderic Ensor. - Consultants: Arthur Moran, Emer Hunt, Frank Nowlan, Elizabeth Grace, Michael Tyrrell, Graham Richards, James Hickey, Don McAleese, Stuart Margetson.



- (ii) when the process of engagement with existing GSM licensees commenced;
- (iii) whether ComReg has requested "information regarding any transition activities that existing GSM licensees have already carried out and the transition plans that they have already made";
- (iv) when ComReg requested such information; and
- (v) whether ComReg used its powers under section 13D of the Communications Regulation Act, 2002 as amended in making such requests.

We reiterate our request for an explanation of points (i) to (v) above and believe it is imperative that ComReg respond to us directly on the above points without delay.

We also refer to your letter of 22 October 2012 which provides: "In relation to the first and third paragraphs under this heading, ComReg would note that at no point did it suggest that Vodafone or O2 had claimed "certain periods would be necessary in terms of an extension". These are your client's words". It is still not clear to us whether the possibility of failing to meet the 31 January 2012 deadline was raised by Vodafone / O2 prior to ComReg's letter of 14 September 2012. Can you please confirm the position and confirm that Vodafone and O2 have not claimed certain periods would be necessary in terms of an extension.

To date, ComReg has refused to provide information sought by our client on the issues identified or provide any reasonable justification for this refusal. We note you have suggested that our client has provided no explanation as to why it is seeking such categories of information or why it should be entitled to receive that information. That is plainly wrong; our client has made it quite clear that it is concerned by any delay to the commencement of Time Slice 1 as such a delay is likely to have an immediate adverse effect on it and a related immediate positive effect on its nearest rivals, Vodafone and O2 and that there is no necessity for an extension.

We do not think it is necessary or appropriate for H3GI to be asked to wait a further period for the response to the reasonable queries made ie, until the publication of the consultation which will include a full explanation of these issues. ComReg can publish the information sought otherwise than via a consultation eg, by way of an information notice or correspondence with affected parties and should do so. Our client is not asking for this information to the exclusion of other affected parties.

In addition, we ask ComReg to confirm whether it has actually received information regarding transition plans and activities deemed acceptable to ComReg and if not, what steps ComReg has taken or intends to take to address this deficiency.



# 3 Steps taken by ComReg and refusal to reduce the four week period referred to in the IM

In its letter of 22 October 2012, ComReg states: "... ComReg would confirm that, as is the case with all important projects of this nature, senior ComReg staff will be involved at all stages of the transition phase".

We call on ComReg to confirm that a senior and experienced ComReg manager will be appointed to project manage transitional activities once the results of the Auction are known to ensure completion of the transition plan by 31 January 2013 and to commit to weekly project meetings with all relevant stakeholders once the project plan has been finalised. We find it surprising that ComReg is not willing to confirm and commit to such a basic level of project management in respect of such an important and time-critical matter.

### 4 Need to closely monitor the time frames for transition activities and lack of clarity

ComReg states in its letter of 22 October 2012 that:

"ComReg can confirm that it has engaged Red-M Wireless Limited and Vilicom Engineering Limited to assist it in planning for transition activities that may be required so that ComReg can ensure that those activites are carried out in an efficient and timely manner. This will also clearly assist ComReg in determining whether transition activities can be carried out prior to 1 February 2013".

We would like to understand more about this engagement. Please confirm the scope of Red-M and Vilicom's engagement, and whether this engagement entailed any activity since ComReg published the last reports of Red-M and Vilicom. Please also confirm whether the engagement entail any activity between now and provision by the existing GSM licensees to ComReg of a transition activity proposal two weeks after the 800, 900 and 1800 MHz auction (the "Auction").

Given the seriousness of the issues raised in this letter, we request that ComReg respond to this letter by close of business on Wednesday 14 November 2012.

Yours faithfully

atheson

MATHESON

38. Hutchinson 3G Ireland ("H3GI"): email to ComReg "MBSA - Preparatory and Test and Trial Licences" (email dated 21 November 2012)

From: Mark HughesSent: 21 November 2012 12:54To: Samuel RitchieSubject: MBSA - Preparatory and Test and Trial Licences

Dear Samuel,

We would like to apply for a preparatory licence and a test and trial licence in respect of our block of 900 MHz as soon as possible. Could you provide me with a copy of the relevant application forms? Thanks.

Mark.



Mark Hughes Head of Regulatory 39. ComReg: reply to Matheson letter of 13 November 2012 (letter dated 22 November 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

## By Hand

## (HK/CM/640002/195)

20 November 2012

Matheson Solicitors 70 Sir John Rogerson's Quay Dublin 2

## Re: MBSA – Transition Activities and GSM 900 MHz Interim Licences

Dear Sir

I refer to the above matter and to your letter of 13 November 2012. ComReg notes the issues raised in your letter and addresses each of them below using the same headings as used in your letter.

ComReg notes your client's view reiterated at the beginning of your letter, that "a delay in commencement is unacceptable and unnecessary and that ComReg should be taking steps to ensure that this does not occur". However, ComReg does not propose to express a view on this matter in this exchange of correspondence as any requirement for interim licences in the 900 MHz band will be considered in the upcoming consultation on that matter.

## Timing of the Consultation

In response to your query under this heading, ComReg would note that it is not its practice to inform an individual operator of the exact date it expects to issue a particular consultation. However, ComReg can confirm that it intends to issue a consultation within a matter of days.

## Outstanding information regarding the decision to issue a consultation/entertain a possible delay

In relation to the information sought under points (i) to (v), ComReg rejects the assertion that it has not already satisfactorily responded to these requests in its letters of 10 October and 22 October 2012. In relation to point (i), ComReg has already clearly set out its position

on this matter in its letter of 10 October 2012. ComReg would also reiterate its view that, in relation to points (ii) to (v), your client is not entitled to the information sought for the reasons set out in its letter of 22 October 2012, and ComReg is not acceding to your request. Notwithstanding this, ComReg would point out that all non-confidential correspondence between ComReg and Auction participants (and their legal advisors, as appropriate) issued since the 6 July 2012 (i.e. the last publication date of non-confidential correspondence) will be published in due course. This of course will include all non-confidential correspondence between ComReg and your client (and your firm, as appropriate).

In relation to your client's expressed concerns regarding delay, ComReg would point out that it has not yet issued a consultation on this matter nor has it come to a decision. In addition, as ComReg has clearly stated above and previously, such important matters are more appropriately considered by ComReg and interested parties via a public consultation process rather than through this exchange of correspondence.

In relation to the penultimate paragraph under this heading, ComReg is surprised at your suggestion that an information notice would be appropriate in the circumstances. It is not ComReg's practice to issue an information notice shortly before the issuing of a public consultation. ComReg fails to see how doing so would aid it in any way in coming to a decision on this matter. Indeed, ComReg is of the view that such a step could only undermine the efficacy and even relevance of a public consultation. ComReg does not therefore propose to follow your suggestion.

In relation to the final paragraph under this heading, as you will know, the process for agreeing the Transition Project Plan has now commenced and the first step in this process is the discussion and submission of a Transition Project Proposal. During this time period ComReg will seek further information as required from all interested parties on a regular basis until the Transition Project Plan is finalised. Further, ComReg looks forward to your client's constructive participation in the transitional phase as required by Section 3.8 (Transition Rules) of the Information Memorandum (Document 12/52)

## Steps taken by ComReg and refusal to reduce the four week period referred to in the IM

ComReg is satisfied that it has already addressed the issues raised under this heading in its letters of 10 October and 22 October 2012. Notwithstanding this, ComReg would note that further important information regarding the Negotiation Phase and related issues has been sent to all Winning Bidders today. ComReg notes that this information is relevant to the issues raised by you under this heading and similar issues raised in recent letters issued by you on behalf of your client.

## Need to closely monitor the time frames for transition activities and lack of clarity

ComReg notes that it has already confirmed the scope of the engagement of Red-M Wireless Limited and Vilicom Engineering Limited in its letter of 22 October 2012. ComReg is not sure that it understands the purpose of the queries raised under this heading, but can confirm that they have assisted and will continue to assist ComReg in accordance with the scope of their engagement.

**Yours Sincerely** 

Dr. Samuel Ritchie

40. ComReg: reply to H3GI email of 21 November 2012 (letter dated 23 November 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

## **By Hand - Confidential**

23 November 2012

Mr. Mark Hughes Head of Regulatory Hutchison 3G Ireland 3<sup>rd</sup> Floor One Calrendon Row Dublin 2

Dear Mark

## Multi-Band Spectrum Award

I refer to your email of 21 November in relation to the Multi-Band Spectrum Award and in particular your query regarding the possibility of applying for Preparatory Licence and a Test and Trial licence in respect of H3GI's provisional spectrum assignment in Block G of 900 MHz band.

In relation to applying for a Preparatory Licence, you will be aware the Negotiation Phase of the Assignment Stage is currently in progress and any submissions to ComReg are due by 4pm Wednesday 28 November 2012. Once the Specific Lots associated with each Winning Bidder's spectrum rights have been determined, ComReg will commence the Negotiation and Grant Stage as set out section 3.7 of the Information Memorandum (IM).

As stated in paragraphs 3.145 to 3.147 of the IM, in the Negotiation and Grant stage:

"ComReg will notify each Bidder in writing whether or not it has been successful in acquiring Lots in the Award Process" and

"In the case of Winning Bids, ComReg will notify the Winning Bidders of their entitlement to obtain a Preparatory Licence and a Liberalised Use Licence, subject to compliance with certain obligations, as set out in paragraphs 3.150 and 3.152 below, including their obligation to pay the Upfront Fee."

Consequently ComReg will notify H3GI, and other Winning Bidders, about the application procedure for obtaining a Preparatory Licence at that time.

In relation to applying for a Test Licence, the application form and guidance notes for this Licence are available on ComReg's Test and Trial website at

- ComReg Document 05/35a: Application Form for a Wireless Test Licence <u>http://www.testandtrial.ie/uploads/files/ComReg0535a.pdf;</u>
- ComReg Document 05/35: Application Guidance Notes: Opportunities for Testing & Trialling Wireless Services and Technologies in Ireland <u>http://www.testandtrial.ie/uploads/files/ComReg0535.pdf</u>

While H3GI may apply for a Test Licence, it should be noted that ComReg may not be in a position to grant a Test Licence in Block G of 900 MHz band as this spectrum is currently licensed to another licensee, namely Telefonica O2. In this regard, ComReg would encourage H3GI to discuss this possibility with Telefonica O2 in advance of submitting an application for a Test Licence.

As you know, it is ComReg's policy to publish exchanges of correspondence such as this in accordance with its usual procedures. Accordingly, I would be grateful if you could indicate whether there is any specific confidential material in your e-mail that H3GI considers ought not to be published in accordance with these procedures.

I trust this clarifies matters.

Yours sincerely

**Dr Samuel Ritchie** 

41. H3GI: letter to ComReg "MBSA – Transitional Project Plan" (letter dated 12 December 2012)



3<sup>rd</sup> Floor One Clarendon Row, Dublin 2, Ireland

Registered Number: 316982 Place of Registration: Republic of Ireland

Dr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 BY COURIER AND EMAIL: samuel.ritchie@comreg.ie



12 December 2012

**Dear Samuel** 

## MBSA – TRANSITION PROJECT PLAN

I refer to: (i) ComReg Doc. No. 12/25, "Multi-band Spectrum Release – Release of the 800 MHz, 900 MHz and 1800 MHz Radio Spectrum Bands, Response to Consultation and Decision" (the "Decision"); (ii) ComReg Doc. No. 12/52, "Multi-band Spectrum Release Information Memorandum" (the "Information Memorandum"); (iii) ComReg Doc. No. 12/127, "Proposal to Extend the Duration of Existing Interim GSM 900 MHz Rights of Use – Consultation and Draft Decision" (the "Interim GSM 900 MHz Rights of Use – Consultation and Draft Decision" (the "Interim GSM 900 MHz Rights of Use Consultation"); and (iv) a meeting between Vodafone Ireland Limited ("Vodafone"), Telefonica O2 Ireland Limited ("O2"), Meteor Mobile Communications Limited ("Meteor") and Hutchison 3G Ireland Limited ("H3GI") on 10 December 2012 (the "Transition Project Plan Proposal Inter-operator Meeting"), and enclose: (i) a power-point presentation entitled "Draft Transition Project Proposal" from eircom/Meteor dated 10 December 2012 (the "Meteor Presentation"); and (ii) a power-point presentation entitled "MBSA Transition – Discussion between Existing and New Licensees" from O2 dated 11 December 2012 (the "O2 Presentation").

At the Transition Project Plan Proposal Inter-operator Meeting, Meteor presented the Meteor Presentation. Meteor stated that whilst it could complete 900 MHz transition activities by 16 April 2013, it was only willing to commit to 16 June 2013 because of the issue of liquidated damages. In relation to the delivery of hardware, Meteor conceded that this could occur before 28 February 2013. In relation to liquidated damages, Meteor clarified that the third bullet point amounted to a temporal cap ie Meteor would not be liable for any loss suffered after six weeks from 17 June 2013. Whilst O2 did not present its presentation at the meeting (circulated subsequently), it made proposals consistent with its presentation. O2 stated that whilst it could complete 900 MHz transition activities within three weeks of Meteor completing its 900 MHz transition activities because of the issue of Iiquidated damages. No other proposals were made.

As ComReg is aware, H3GI believes that the 900 MHz transition activities can be completed by 1 February 2013. Without prejudice to this position, H3GI is willing to accept a transition project plan with a deadline for 900 MHz transitional activities of 16 April 2013 and three weeks ie 7 May 2013 (the "May Deadline"). However, it is not willing to accept a transition project plan with a deadline for 900 MHz transitional activities of 16 June 2013 and six weeks ie 28 July 2013 (the "July Deadline"). The May Deadline is more than generous and consistent with ComReg's position as stated in the Interim GSM 900 MHz Rights of Use

Directors Robert Finnegan: Irish Canning Fok: British Frank Sixt: Canadian Robert Eckert: U.S.A Edmond Ho: British David Dyson: British Richard Woodward: British



Hutchison 3G Ireland Limited Registered office

One Clarendon Row, Dublin 2, Ireland

Registered Number: 316982 Place of Registration: Republic of Ireland



Consultation ie the end of April 2013. Meteor and O2 have both stated that they can complete 900 MHz transition activities by the May Deadline. The July Deadline is disproportionate and will result in, amongst other matters, an unacceptable delay to the provision of advanced services to consumers.

The Meteor and O2 presentations fall far short of H3GI's expectations in terms of a detailed transition project plan proposal in accordance with the Decision and Information Memorandum. In particular, H3GI is concerned about the lack of clarity surrounding O2's 1800 MHz transition activity commitment and plans. In relation to liquidated damages, H3GI regards this matter as already determined by the Decision and Information Memorandum. For the avoidance of doubt, H3GI requested and organised the Transition Project Plan Proposal Inter-operator Meeting (and not the existing GSM licensees).

H3GI looks forward to the prompt resolution of this matter by ComReg. In that regard, we are happy to meet with ComReg at its convenience.

Yours sincerely

Hennels/

DAVID HENNESSY Chief Technical Officer

Encl.

Directors Robert Finnegan: Irish Canning Fok: British Frank Sixt: Canadian Robert Eckert: U.S.A Edmond Ho: British David Dyson: British Richard Woodward; British 42. ComReg: letter to H3GI "All MBSA Winning Bidders – The Transition Project Proposal" (letter dated 21 December 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

## By hand and email

21 December 2012

David Hennessy Chief Technical Officer Hutchison 3G Ireland Limited 3rd Floor One Clarendon Row Dublin 2

## All MBSA Winning Bidders - The Transition Project Proposal

Dear Mr. Hennessy

Further to the submissions that ComReg received from all the MBSA Winning Bidders on 12 December 2012, and the individual Transition Project Proposals for ComReg's consideration contained therein, I am writing to you in relation to the Transition Project Plan for the MBSA process and the immediate next steps to finalise this plan.

ComReg notes that two of the Existing GSM Licensees (namely Meteor and Telefónica) submitted its own individual Transition proposal but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. In that regard, ComReg has requested its consultants, namely Red-M Wireless Limited and Vilicom Limited ('Red-M/Vilicom'), to review all relevant material including the individual Transition proposals submitted on 12 December and to recommend a Transition plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

Red-M/Vilicom has carried out this analysis and the Schedule to this letter sets out Red-M/Vilicom's analysis and recommendations on the MBSA Transition Plan. Amongst other things, Comreg notes that Red-M/Vilicom:



- have considered and analysed all the Transition information supplied by the Mobile Network Operators ('MNOs') and in particular their submissions of 12 December 2012;
- have recommended a Transition Plan that ComReg could adopt as its finalised Transition Project Plan for both the 900 MHz and 1800 MHz bands (the "Recommended Transition Plan"). The Recommended Transition Plan proposes that:
  - the Transition activities in the 900 MHz band be completed by the end of week 17 (26 April 2013);
  - the Transition activities in the 1800 MHz band be completed by end of week 14 (5 April 2013); and
  - o a fortnightly reporting period be incorporated into the plan.

Having had regard to all the relevant materials before it, including the individual transition proposals submitted on 12 December, and after carefully considering the Red-M/Vilicom analysis and recommendations, ComReg has formed the view that the Recommended Transition Plan is achievable by all of the relevant parties without imposing overly onerous obligations on Winning Bidders and would therefore be a proportionate measure. Accordingly, ComReg proposes to adopt the Recommended Transition Plan (as set out in Annex 2 of the Report in the Schedule to this letter) as the finalised Transition Project Plan. In arriving at this proposal, ComReg notes that, having analysed all the relevant Transition-related information provided to ComReg to date, Red-M/Vilicom's professional opinion is that *"the Recommended Transition Plan is both viable and achievable within the proposed timescales."* 

Should the Recommended Transition Plan be adopted as is, this would set the following Transition-completion dates for the 900 MHz and 1800 MHz bands.<sup>1</sup>

GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Vodafone	No Transition necessary	31 January 2013
Meteor	5 April 2013	No Transition necessary

Table 1: The proposed Transition-completion dates

<sup>&</sup>lt;sup>1</sup> Note the Transition Project Plan would also set out milestone dates against the specific Transition activities as outlined in the Recommended Transition Plan.



GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Telefónica	Meteor's 900 MHz Transition- completion date + 3 Weeks (i.e. 26 April 2013)	5 April 2013

Both generally, and against the background of the Liquidated Damages provisions set out in section 3.8.2 of the Information Memorandum, ComReg notes the Winning Bidders' submissions of 12 December 2012 regarding deadlines, and further notes that two GSM Licensees (namely Meteor and Telefónica) suggested that a later deadline date be set in order to provide for contingencies and/or matters not within their control.

While ComReg understands that unforeseen events could lead to delays in the implementation of a Transition plan and thus require provision to be made for additional contingencies, ComReg also notes the views of Red-M/Vilicom on the Recommended Transition completion dates, namely that:

- a) these dates are both viable and achievable; and
- b) these dates could be further accelerated by Meteor and Telefónica in respect of a number of items (equipment lead time, hybrid combiners and alternative solutions to cavity combiners).

This suggests to ComReg that some contingency-provision may, in effect, already be built into the Transition-completion dates for Meteor and Telefónica. To the extent that this is so, the provision for additional contingencies sought by Meteor and Telefónica would not appear to be strictly necessary.

Notwithstanding this, ComReg proposes to add a **two-week grace period** to the Transitioncompletion dates proposed above during which Liquidated Damages shall not trigger even if the above-mentioned 900 MHz and 1800 MHz Transition-completion dates are not achieved. This would set the below-mentioned dates as the dates following which the requirement to pay Liquidated Damages in accordance with the Information Memorandum would be triggered.



GSM Licensee	900 MHz Liquidated Damages date	1800 MHz Liquidated Damages date
Vodafone	No Transition necessary	14 February 2013
Meteor	19 April 2013	No Transition necessary
Telefónica	Meteor's 900 MHz Transition completion date + 5 Weeks (i.e. 10 May 2013)	19 April 2013

Table 2: The proposed dates following which the requirement to pay Liquidated Damages would apply

In relation to Liquidated Damages, ComReg would remind H3GI that all Winning Bidders, as a contractual pre-condition to participating in the MBSA, agreed to be bound by and to comply with the Transition Rules and are consequently required to abide by the finalised Transition Project Plan. In addition, ComReg would point out that the application and methodology for calculation of Liquidated Damages is clearly explained in Document 12/25 (Decision D04/12) and set out in Section 3.8.2 of the Information Memorandum.

ComReg is now seeking each Winning Bidder's views on the above proposals. In order to facilitate the finalisation of Transition Project Plan in early January 2013, ComReg requests that all views be submitted to <u>kevin.kennedy@comreg.ie</u> no later than **4pm on Tuesday 8** January 2013.

In submitting these views, the respondents must clearly identify any confidential information as ComReg intends to publish all information received on this proposal, subject to the treatment of confidential information as set out in ComReg Document 05/24.

In addition, and in accordance with paragraph 3.163 of the IM, it is ComReg's intention to publish the finalised Transition Project Plan on ComReg's website, having regard to the treatment of confidential information as set out in ComReg 05/24.

**Yours Sincerely** 

Dr. Samuel Ritchie

Page 4 of 5



SCHEDULE

## Recommendations to ComReg on the MBSA Transition Plan

Joint Report for ComReg

By



## 1 Recommendations to ComReg on the MBSA Transition Plan

This document sets out Red-M/Vilicom recommendations to ComReg on the Transition Plan for the Multi-Band Spectrum Award ('MBSA') Process. This document has been prepared using the information supplied to ComReg by the Mobile Network Operators ('MNOs') and, in particular, their submissions to ComReg dated 12 December 2012. As submissions received from all MNOs, including Hutchison 3G Ireland Limited ('H3GI'), have been considered by Red-M/Vilicom in preparing this document, the recommended Transition plan will assist all Winning Bidders.

As discussed further below, two Transition plans are considered in this document:

- (1) 'MNO Supplied Composite Transition Plan': This is a composite Gantt chart representation of the Transition timelines for Time Slice 1 proposed individually by the MNOs to ComReg in their submissions of the 12th December 2012 (see Annex 1).
- (2) 'Recommended Transition Plan': This is the Transition plan recommended by Red-M / Vilicom for the MBSA process (see Annex 2 which includes a Gantt chart representation of this plan).

## 1.1 The MNO Supplied Composite Transition Plan

The Assignment Round of the MBSA process was completed on 14<sup>th</sup> November 2012. A two week "Negotiation Phase" subsequently followed and this was concluded on the 28<sup>th</sup> November 2012. There were no changes in the spectrum assignments determined by the Assignment Round of the MBSA. ComReg held meetings with the MNOs during the week commencing the 3<sup>rd</sup> December 2012 to discuss the MBSA results and Transition preparations.

Following the Assignment Round of the MBSA process, there was a four week period during which the Existing GSM Licensees were required to collectively formulate and submit a Transition Project Proposal to ComReg. The deadline for submitting a Transition Project Proposal was 12<sup>th</sup> December 2012.

ComReg received an individual 'Transition Proposal' from two of the Existing GSM Licensees, Meteor and Telefónica. Vodafone did not provide a Transition Proposal, thereby suggesting that it would not be carrying out Transition activities beyond 31 January 2013. These proposals are presented on a composite basis in a Gantt chart in Annex 1.

## 1.2 The Recommended Transition Plan

Two of the Existing GSM Licensees, Meteor and Telefónica, submitted their own individual 'Transition Project Proposal' but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). Telefónica's submission on the 12<sup>th</sup> December 2012 states:

'As agreement was not reached among all operators present, it is not possible to present ComReg with an industry transition plan, however our proposal is, we believe agreeable to all existing GSM licensees and three of the four operators.'

In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. ComReg has requested Vilicom and Red-M to review all relevant material including the individual Transition Proposals submitted and to recommend a Transition Plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

## 1.2.1 The Recommended Transition Plan: 900MHz

The Recommended Transition Plan reduces the critical path timescale so that the Telefónica spectrum relocation at 900MHz concludes at the end of week 17 (*26<sup>th</sup> April 2013*), rather than week 19 (*10<sup>th</sup> May 2013*) as envisaged by the MNO Supplied Composite Transition Plan.

The two week reduction in the timescale for Transition activities has resulted from the following minor modifications to the individual proposals supplied by the MNOs:

## Meteor and Telefónica shared sites:

For the site share activity (identified as "Site Works Complete" for Meteor, and "Cavity Combiner Solution Ready" for Telefónica), one week has been removed from Meteor's supplied proposal. The Recommended Transition Plan shows a completion date for this activity in week 11 (15<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Meteor's supplied proposal showed "site works complete" in week 12 (22<sup>nd</sup> March 2013); whereas
- Telefónica's supplied proposal showed "cavity combiner solution ready" in week 11 (15<sup>th</sup> March 2013).

However, as the sites are shared sites, the Meteor and Telefónica activities should be capable of completion at the same time.

## Meteor Repeaters:

Two weeks have been removed from Meteor's supplied proposal for the repeater replace/retune activity.

- Meteor's supplied proposal showed "Repeater Replace/Retune Complete" in week 13 (29<sup>th</sup> March 2013).
- Telefónica's supplied proposal showed "Repeater Equipment Ready" in week 12 (19<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Telefónica has confirmed an eleven week timescale for the retuning/replacing of its repeaters. [Confidential Text Removed].
- Meteor would appear to have significantly fewer repeaters than Telefónica and given a similar level of effort, it should therefore be able to complete this activity more rapidly than Telefónica. The Recommended Transition Plan shows Meteor taking marginally less time (10 weeks) to complete this activity compared to 11 weeks for Telefónica.
- [Confidential Text Removed]
- Retuning/replacing repeaters is an activity which can be completed quicker if more manpower and resources are used.

We are of the view that the reduced critical path timescale (of two weeks) is both viable and achievable. Indeed, we note that the Transition timescales could possibly be further accelerated considering the following:

## Equipment Lead Times:

Meteor and Telefónica should be able to reduce the timescales associated with the 77 shared sites currently using cavity combiners, if the manufacturers can deliver the relevant replacement equipment at an earlier date.

## Hybrid Combiners:

Meteor described a 3-stage 'lift and shift' process for replacing the shared sites with new cavity combiners i.e.

- 1. Replacing the existing cavity combiners with hybrids,
- 2. Retuning the cavities offsite (or purchasing new ones)
- 3. Replacing the hybrid combiner with the new retuned cavity combiner

Meteor and Telefónica could implement steps 2 and 3 after the Transition Project Plan is complete.

## • Alternative Solutions to Cavity Combiners:

Meteor and Telefónica could also investigate alternative solutions to the cavity combiners at some of the 77 shared sites. These alternative solutions may reduce the ten week period currently assigned to the cavity combiner solution. For example, logical site sharing which would involve one operator adding equipment to their shared partners' NodeB cabinet. This might be accomplished more quickly.

In this light, we are of the view that a reduced critical path timescale of two weeks is reasonable.

## 1.2.2 The Recommended Transition Plan: 1800MHz

Telefónica did not supply a date for 1800MHz relocation, but stated in its submission of the 12<sup>th</sup> December 2012 that the transition implementation is complete at

## "O2 900MHz Transition Complete + 3 weeks",

which implies a completion date at the end of week 22 ( 28<sup>th</sup> May 2013).

The Recommended Transition Plan is drawn up on the basis of this statement i.e. the implementation of its relocation in the 1800MHz band will take 3 weeks. However, it suggests that Telefónica relocate in the 1800MHz band immediately after the 1800 MHz AFP (*Automatic Frequency Plan*) process is prepared. We see no reason why Telefónica could not complete its 1800MHz relocation during weeks 12 to 14 while waiting for Meteor to complete its 900MHz relocation. Therefore we recommend that the finalised Transition plan should require Telefónica's completion of 1800MHz relocation by week 14, the week ending 5<sup>th</sup> April 2013.

Telefónica's supplied proposal: AFP preparation complete in week 11 (14<sup>th</sup> March 2013) Telefónica's supplied proposal: 1800MHz Relocation complete in week 22 (28<sup>th</sup> May 2013) Recommended Transition Plan: 1800MHz Relocation complete in week 14 (5<sup>th</sup> April 2013)

## 1.2.3 The Recommended Transition Plan: Reporting Method

In its submission, Meteor suggested that it would publish a fortnightly report to ComReg and the other winning bidders, containing the following items:

- Progress against milestone dates; and
- Identification of any risks and mitigating actions.

This proposal seems reasonable and to ensure that ComReg has a view of the implementation of the finalised Transition Plan, the same proposal should be adopted by all GSM Licensees.

Further, when a transition activity (as set out in the Recommended Transition Plan in Annex 2) is completed by a GSM Licensee, it should notify ComReg and all other Winning Bidders immediately of this development and not wait for the fortnightly report to do so. This would seem reasonable in order to ensure full transparency for both ComReg and all MNOs during implementation of the Transition Project Plan.

Similarly, once a GSM Licensee has completed its relocation activities in a band (either the 900 MHz or the 1800 MHz band), it should immediately notify ComReg and the other Winning Bidders of this development and not wait for the fortnightly report to do so. Again, this would seem reasonable in order to ensure full transparency for all parties.

## **1.3 Recommendation**

In light of the above and taking account of all of the circumstances and proposals submitted by MNOs, we consider that the Recommended Transition Plan is both viable and achievable within the proposed timescales while avoiding any undue delay in the availability of liberalised spectrum. We therefore recommend that ComReg adopt this Recommended Transition Plan as its finalised Transition Project Plan for both the 900MHz and 1800MHz bands.

Andy Barnard Red-M Wireless Ltd Louise Hopkins Vilicom Engineering Ltd

Page 7 of 9

Recommendations to ComReg on the MBSA Transition Plan

VRN829\_300

# 2 Annex 1- MNO Supplied Composite Transition Plan - Gantt chart

	-2 14-Dec	-1 0 21-Dec 28-Dec		1 04-Jan 11	1 2 3 04-Jan 11-Jan 18-Jan	an 25-Jan	s n 01-Feb	6 08-Feb	7 15-Feb	8 22-Feb (	9 01-Mar 0	10 08-Mar 15	11 15-Mar 22	12 22-Mar 29-	13 1. 29-Mar 05-/	14 15 05-Apr 12-Apr	pr 19-Apr	17 pr 26-Apr	18 Ir 03-May	19 / 10-May	20 y 17-May	21 24-May	22 31-May
Activity						_										_							
Finalise and Issue Plan	START																						
Christmas Lockdown																							
Start Implementation																							
Complete 900MHz Relocation																							
Complete 1800MHz Relocation						END							_										
Finalise and Issue Plan	START		-			_											_						
Christmas Lockdown																	_						
Site Analysis Completed										5			_	-		_	_						
Complete 1800MHz Relocation														_			_						
Hardware Delivery																							
Site Works Complete																		_					
Repeater Replace/Retune (900MHz)																_	-						
900 MHz Spectrum Relocation													_				END	0					
Finalise and Issue Plan	START												-	-			-						
Christmas Lockdown													_				1						
AFP Preparation (900MHz)		-																					
AFP Preparation (1800MHz)																							
Cavity Combiner Solution Ready																							
Retune Repeaters (900MHz)																							
Relocate (1800MHz)						_						_											END
Relocate (900MHz)																-							

Figure 1: MNO Supplied Composite Transition Plan

Recommendations to ComReg on the MBSA Transition Plan

## VRN829\_300

## 3 Annex 2- Recommended Transition Plan – Gantt chart

Antivity     Activity       Activity     Activity       Activity     Activity       Activity     Activity       Activity     Activity       Christmas Lockdown     Start Implementation       Start Implementation     Complete 900MHz Relocation       Complete 1800MHz Relocation     Finalise and Issue Plan       Complete 1800MHz Relocation     Enalysis Completed       Complete 1800MHz Relocation     Hardware Delivery       Site Analysis Completed     Complete B00MHz       Complete 1800MHz Relocation     Hardware Delivery       Site Works Complete     B00MHz       Repeater Replace/Returne (900MHz)     900 MHz Spectrum Relocation       Finalise and Issue Plan     Christmas Lockdown       AFP Preparation (900MHz)     AFP Preparation (900MHz)		7-	-1	0	1	2	3	4	5 6	6 7	80	6	10	11	12	13	14	15	16	17	18	19	20	21	22
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Relocate (900MHz)																				END					

Figure 2: Recommended Transition Plan

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43. H3GI: reply to ComReg's letter of 21 December 2012 "MBSA – Transition Project Proposal" (letter dated 8 January 2013)



3<sup>rd</sup> Floor One Clarendon Row, Dublin 2, Ireland

Registered Number: 316982 Place of Registration: Republic of Ireland

Dr Samuel Ritchie Commission for Communications Regulation Abbey Court Irish Life Centre Lower Abbey Street Dublin 1 BY COURIER AND EMAIL: samuel.ritchie@comreg.ie



8 January 2013

Dear Dr Rtichie

MBSA - TRANSITION PROJECT PROPOSAL

I refer to your letter dated 21 December 2012.

Without prejudice and subject to the following comment, Hutchison 3G Ireland Limited ("H3GI") welcomes ComReg's proposed transition project plan. ComReg should adopt all of the reporting mechanisms recommended by Red-M and Vilicom in section 1.2.3 of their joint report dated 20 December (annexed to your letter).

Yours sincerely

pp. Melyugh DAVID HENNESSY

Chief Technical Officer

Directors Robert Finnegan: Irish Canning Fok: British Frank Sixt: Canadian Robert Eckert: U.S.A Edmond Ho: British David Dyson: British Richard Woodward: British 44. ComReg: letter to Meteor Mobile Communications ("MMC") "Transition activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 3 October 2012)



Commission for Communications Regulation

3 October 2012

Mr William McCoubrey Head of Regulatory Affairs - Mobile and Retail Meteor Mobile Communications Ltd 1 Heuston South Quarter St. Johns Road Dublin 8

## Ref: Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

Dear William

I am writing to you concerning Transition Activities in connection with ComReg's Multi-Band Spectrum Award (MBSA) process.

We appreciate that the efficient and timely completion of Transition Activities arising from the MBSA process is an important consideration for Existing GSM Licensees and Winning Bidders alike. We also appreciate the importance of ensuring that such Transition Activities are completed as effectively and efficiently as possible in terms of the overall benefits that will arise from the earliest availability of liberalised spectrum rights of use being made available in the MBSA process.

In light of this, firstly, I wish to remind Meteor of the Transition Rules<sup>1</sup> which all Existing GSM Licensees (as well as all Winning Bidders) are required to comply with. These are detailed in section 3.8 of the Information Memorandum (ComReg Document 12/52). Among other things, the Transition Rules envisage that all Transition Activities would be completed before 31 January 2013.<sup>2</sup>

Please be assured that ComReg appreciates the limited time remaining until 31 January 2013 and continues to monitor the situation in relation to the timeframes for the completion of Transition Activities that will arise from the MBSA process.

<sup>&</sup>lt;sup>1</sup> See, in particular, paragraph 3.4.18 of Decision 04/12 (in Section 8 of Document 12/25).

<sup>&</sup>lt;sup>2</sup> Specifically, paragraph 3.159 of the Information Memorandum. Although, footnote 83 of paragraph 3.159 also acknowledges that: "*At the time that ComReg announces the results of the assignment round, it may review this deadline date.*"



Commission for Communications Regulation

To better inform ComReg's understanding of the nature and required timeframes for Transition Activities, please be advised that we are now seeking information on the preparations and capacity of Meteor to carry out Transition Activities (Relocation<sup>3</sup> and, if necessary, Retuning<sup>4</sup>) in compliance with the Transition Rules.

In that regard, ComReg notes that at this stage of the MBSA process your company should be in the planning phase of your Transition project and should therefore be able to provide details on the planning activities already carried out and plans for further steps. As noted in the joint technical reports<sup>5</sup> by Red-M Wireless Limited (Red-M) and Vilicom Limited (Vilicom), operators can commence the planning phase of their Transition projects in advance of the results of the MBSA process being known.

To assist ComReg in the timely completion of this project, ComReg is engaging Red-M Wireless Limited and Vilicom Limited to provide expert technical advice to it.

ComReg proposes that Red-M and Vilicom (and a ComReg representative if required) meet with appropriate, qualified personnel in your Company at your premises in the morning of 9 October. The scope of this meeting would be to discuss, and collect information and documentation on, the Transition activities that your company has already carried out and the Transition plans that your company has already made. To assist you in preparing for this discussion, Red-M and Vilicom suggest the following discussion items:

- preparation for implementation to date;
- outline project plan; and
- issues foreseen.

Please note that any confidential information discussed with, or provided to, Red-M / Vilicom at this meeting will be treated appropriately in accordance with ComReg's Guidelines on the Treatment of Confidential Information and the nondisclosure agreements between ComReg and Red-M and Vilicom.

<sup>&</sup>lt;sup>3</sup> 'Relocation' refers to the situation where an Existing GSM Licensee obtains an equal amount or a greater amount of spectrum rights in the 900/1800 MHz band and has to relocate its network to this new spectrum location.

<sup>&</sup>lt;sup>4</sup> 'Retuning' refers to the situation where an Existing GSM Licensee obtains less or no spectrum in the 900/1800 MHz band and has to retune its network to a point within this new spectrum bandwidth.

<sup>&</sup>lt;sup>5</sup> See Document 10/71c, Document 10/105b and, in particular, pages 15 and 16 of Document 12/22.



Commission for Communications Regulation

ComReg anticipates and appreciates your full co-operation with this important matter and requests that you contact Stephen Shannon of Vilicom at 086 8145299 in the first instance by 5 October to finalise the arrangements for this meeting.

Should you have any issues in relation to the matters covered in this letter, please contact me on +353 1 804 9650.

Yours sincerely

Kein Kennedy

Kevin Kennedy Spectrum Development Manager

cc (via e-mail): Stephen Shannon, Vilicom

45. MMC: letter to ComReg "Transitional Activities" (letter dated 5 October 2012)



Meteor Mobile Communications Limited 1 Heuston South Quarter St. John's Road, Dublin 8

T: +353 (0)1 671 4444 E: info@meteor.ie W: www.meteor.ie

5<sup>th</sup> October 2012

Kevin Kennedy Spectrum Development Manager Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1

## Strictly Confidential

## **Re: Transitional Activities**

Dear Kevin,

Further to your letter dated 3<sup>rd</sup> October 2012 and our subsequent conversations. As discussed on our calls Meteor has genuine concerns in relation to engaging with any external party in relation to transitional activities before the Assignment round. Our concerns relate largely to confidentiality and resource availability arising from our participation in the Multi-Band Spectrum Award (MBSA) process. There is a real concern on our part that the information disclosed to third parties regarding transitional activities could give insight into our strategy in the auction. We note your assurances regarding the treatment of confidential information however, we are unwilling to expose ourselves to any risk of third party disclosure, inadvertent or otherwise, at this extremely sensitive point in the MBSA process.

We note the imminent timescales associated with the MBSA process and we would expect the Assignment round to be concluded within the next few weeks. When this point is reached we intend to fully engage in the process to establish the Transition Project Plan in accordance with the rules set out in section 3.8 of the Information Memorandum.

During our conversation you requested a top-level view of the anticipated timescales required by Meteor to complete a relocation in the 900MHz and / or 1800MHz band. Detailed analysis will be undertaken once the outcome of the Assignment round is known. This may impact on our view of timescales. Subject to the preceding caveat we believe that Meteor could complete a relocation to vacant frequencies over a period of four to five months.

Yours sincerely,

W. M. lan

William McCoubrey Head of Regulatory Affairs – Mobile and Retail

Meteor Mobile Communications Limited, Private Company Limited by Shares, Registered in Dublin, Ireland No. 282645 Registered office: 1 Heuston South Quarter, St. John's Road, Dublin 8 VAT registration 82826450 46. ComReg: letter to MMC "Information Requirement pursuant to section 13D(1) of the Communications Regulations Act 2002" (letter dated 17 October 2012)



Commission for Communications Regulation Coimisiún Um Rialáil Cumarsáide

17 October 2012

William McCoubrey, Head of Regulatory Affairs - Mobile and Retail, Meteor Mobile Communications Ltd, 1 Heuston South Quarter, St. Johns Road, Dublin 8

### **BY REGISTERED POST & E-MAIL**

### INFORMATION REQUIREMENT PURSUANT TO SECTION 13D(1) OF THE COMMUNICATIONS REGULATION ACT 2002

### Reference: Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

Dear William

### A. Introduction

The Commission for Communications Regulation ("ComReg"), pursuant to its powers under section 13D of the Communications Regulation Acts, 2002 to 2011 ("2002 Act"), as inserted by section 6 of the Communications Regulation (Amendment) Act 2007, requires Meteor to provide ComReg with the written information set out below in section B.

As set out in ComReg Document 12/25<sup>1</sup>, all Existing GSM Licensees (as well as all Winning Bidders) are required to comply with the Transition Rules associated with the Multi-Band Spectrum Award (MBSA) process.<sup>2</sup> These Rules are detailed in section 3.8 of the Information Memorandum (ComReg Document 12/52<sup>3</sup>). Among

Commission for Communications Regulation An Coimisiún um Rialáil Cumarsáide Block DEF, Abbey Court, Irish Life Centre, Lower Abbey St, Dublin I Bloc DEF, Cuirt na Mainistreach, Ionad Irish Life, Sraid Na Mainistreach Iocht, Baile Atha Cliath I

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Telephone +353 | 804 9600 Fax +353 | 804 9665 Email info@comreg.ie Web www.comreg.ie

<sup>&</sup>lt;sup>1</sup> See http://www.comreg.ie/\_fileupload/publications/ComReg1225.pdf

<sup>&</sup>lt;sup>2</sup> See, in particular, paragraph 3.4.18 of Decision 04/12 (in Section 8 of Document 12/25).

<sup>&</sup>lt;sup>3</sup> See http://www.comreg.ie/\_fileupload/publications/ComReg1252.pdf



other things, the Transition Rules envisage that all Transition Activities would be completed before 31 January 2013.<sup>4</sup>

On 3 October 2012, ComReg sent a letter to Meteor seeking information on the preparations and capacity of Meteor to carry out the Transition activities (being Relocation and, if necessary, Retuning) in compliance with the Transition Rules.

In this letter, ComReg:

- stated that it is engaging Red-M Wireless Limited and Vilicom Limited to provide expert technical advice to it on the Transition Activities assocated with the MBSA process;
- proposed that Red-M and Vilicom (and a ComReg representative if required) meet with appropriate, qualified personnel in Meteor;
- proposed that the scope of this meeting would be to discuss, and collect information and documentation on the Transition activities that Meteor has already carried out and the Transition plans that Meteor has already made; and
- requested that Meteor contact Stephen Shannon of Vilicom in the first instance by 5 October to finalise the arrangements for this meeting.

In response to this letter, on 5 October 2012 Meteor submitted a letter to ComReg which stated, amongst other things, that it:

- has genuine concerns in relation to engaging with any external party in relation to transitional activites before the Assignment Round; and
- is unwilling to expose itself to any risk of third party disclosure, inadvertent or otherwise, at this extremely sensitive point in the MBSA process.

ComReg is dissatisfied with Meteor's response which may impede it in the exercise of its functions and, pursuant to section 13D of the 2002 Act, is now requiring the provision of the information set out in section B below.

### B. Information Requirement

Meteor is required to provide ComReg with the following written information sequentially, and strictly in accordance with the numbered questions below. These questions seek information on the preparations and capacity of your company to carry out the Transition activities (being Relocation and, if necessary, Retuning) in compliance with the above mentioned Transition Rules.

<sup>&</sup>lt;sup>4</sup> Specifically, paragraph 3.159 of the Information Memorandum. Although, footnote 83 of paragraph 3.159 also acknowledges that: "*At the time that ComReg announces the results of the assignment round, it may review this dead line date.*"



This information requirement should be carefully reviewed and completed by personnel in Meteor of appropriate seniority and appropriate knowledge.

### **B.1** Relocation activities

The questions under this heading refer only to  $\text{Relocation}^5$  activities. For the avoidance of doubt these questions refer to Relocation activities in both the 900 MHz and 1800 MHz bands.

1. Please indicate whether your company has carried out any pre-planning or planning activities<sup>6</sup> to prepare for the possibility of Relocation arising from the MBSA process.

If yes to question 1, please answer question 2, 3 and 4 below.

- 2. Please describe each Relocation scenario investigated in this preplanning/planning activity and its results and its conclusions. For each Relocation scenario investigated, this description is to set out:
  - (i) the Relocation scenario investigated indicating the frequency band or bands involved in this scenario and the frequency assignment investigated (i.e. relocating from your current frequency assignments in the 900/1800MHz band to the frequency range X1-X2 in the 900/1800MHz band);
  - (ii) the process steps and resourcing requirements involved in this Relocation scenario and the expected timescales associated with each process step. In this description, please indicate the order in which these process steps will be completed and whether these process steps can be carried out in parallel or not; and
  - (iii)the overall timescales expected with this Relocation scenario.

Identifying parts of the data-fill that relate to the frequency of operation, which will need to be modified,
Identifying parts of the GSM900, GSM1800 and UMTS data-fill, which will need to be modified to ensure handover between the networks,

<sup>&</sup>lt;sup>5</sup> 'Relocation' has the same meaning as assigned to it in the Information Memorandum Document 12/52, namely that '*Relocation' refers to the situation where an Existing GSM Licensee obtains an equal amount or a greater amount of spectrum rights in the 900/1800 MHz band and has to relocate its network to this new spectrum location.* 

<sup>&</sup>lt;sup>6</sup> As discussed in section 3.2 of Document 12/22 :

<sup>&</sup>quot;planning activities that an existing GSM Licensee could initiate in advance of the auction include;

Identifying all radio equipment that cannot be modified, such as band selective repeaters and source replacement equipment, if required,

<sup>•</sup> Ensuring correct landlord contact details for sites are available in case sites visits are required; and

<sup>•</sup> Producing a staff and resource plan for Implementation and Verification phases."



- 3. For each Relocation scenario investigated please describe any particular challenges that might be encountered and the mitigation activities that might be taken to address these challenges. This description is to outline:
  - (i) any critical stages where your plans might be dependent on third parties and the nature of these dependencies;
  - (ii) any dependencies on the Transition activities of the other Existing GSM Licensees; and
  - (iii)any other sensitivities/risks related to this particular Relocation scenario.
- 4. As a result of the MBSA process, it is possible that your company might have to carry out Relocation activities in both the 900 MHz and 1800 MHz bands. This may be carried out in either a sequential or a simultaneous manner. Please indicate:
  - (i) whether your pre-planning/planning preparations have investigated these two possibilities; and
  - (ii) whether any of the process steps or timescales involved with a Relocation scenario will differ based upon the approach taken (i.e. a simultaneous or a sequential process). If these process steps or timescales differ, please detail these differences.

Please verify your response to questions 1, 2, 3 and 4 above with the submission of pre-planning/planning documentation already prepared related to the Relocation scenarios investigated.

### **B.2** Retuning Activities

The questions under this heading refer only to Retuning<sup>7</sup> activities. For the avoidance of doubt these questions refer to Retuning activities in both the 900 MHz and 1800 MHz bands.

5. Please indicate whether your company has carried out any pre-planning or planning activities<sup>8</sup> to prepare for the possibility of Retuning arising from the MBSA process.

<sup>&</sup>lt;sup>7</sup> 'Retuning' has the same meaning as assigned to it in the Information Memorandum Document 12/52, namely that '*Retuning' refers to the situation where an Existing GSM Licensee obtains less or no spectrum in the 900/1800 MHz band and has to retune its network to a point within this new spectrum bandwidth.* 



If yes to question 5, please answer question 6, and 7 below.

- 6. Please describe each Retuning scenario investigated in this pre-planning/planning activity and its results and its conclusions. For each Retuning scenario investigated, this description is to set out:
  - (i) the Retuning scenario investigated indicating the frequency band or bands involved in this scenario and the frequency assignment investigated (i.e. retuning from your current frequency assignments in the 900/1800MHz band to the frequency range X1-X2 in the 900/1800MHz band);
  - (ii) the process steps and resourcing requirements involved in this Retuning scenario and the expected timescales associated with each process step. In this description, please indicate the order in which these process steps will be completed and whether these process steps can be carried out in parallel or not; and

(iii)the overall timescales expected with this Retuning scenario;

- 7. For each Retuning scenario investigated please describe any particular challenges that might be encountered and the mitigation activities that might be taken to address these challenges. This description is to outline
  - (i) any critical stages where your plans might be dependent on third parties and the nature of these dependencies;
  - (ii) any dependencies on the Transition activities of the other Existing GSM Licensees; and
  - (iii)any other sensitivities/risks related to this particular Retuning scenario.

<sup>8</sup> As discussed in section 3.2 of Document 12/22 :

- Preparing a new GSM network frequency plan based on 5MHz
- Moving traffic to alternative frequencies
- Enabling AMR
- Trialling a cluster area demonstrating the above measures.
- Identifying 900MHz sites to which new 1800 MHz and 2100MHz base stations could be added to

In addition to the technical activities listed above, there may be other planning activities which could occur.

- Identify any partners it may require during the transition (subcontractors, consultants etc.) and agree terms on which such support might be made available.
- Identify any arrangements (broadly described by ComReg as 'non-technical measures) that may be
  made. These may include discussions with other existing GSM licensees regarding spectrum sharing,
  leasing or other arrangements that might ease the transition period, provided such discussions comply
  with competition law and the auction rules (e.g. discussion should take place before such discussions are
  forbidden by any non-collaboration requirements of the auction process)."

<sup>&</sup>quot;It is suggested that an existing GSM licensee, in addition to the planning activities listed above [for Scenario 1 - Relocation] carry out the following technical activities:

Identifying and documenting the strategic network approach it would use to prepare for the scenario of
reduced spectrum for GSM purpose, noting that such a scenario may be necessary for the deployment of
UMTS 900. It is assumed the specific activities identified below are consistent with this strategic
approach.



Please verify your response to questions 5, 6, and 7 above with the submission of preplanning/planning documentation already prepared related to the Retuning scenarios investigated.

### C. Reasons for this information requirement

- 1. ComReg requires the information sought herein in order to carry out its statutory functions, in particular, to manage the radio frequency spectrum, including ensuring that the Transition Activities decribed at section A above are carried out in a timely and efficient manner.
- 2. ComReg requires the information sought herein because ComReg does not already have in its possession the information which is required.
- **3.** ComReg requires the information sought herein because it cannot obtain it from any source other than Meteor.

### D. Legal Basis

Having regard, in particular, to ComReg's functions and objectives as set out at sections 10(1)b and section 12(1)b of the 2002 Act, as well as its functions under the Framework Regulations<sup>9</sup> and the Authorisation Regulations<sup>10</sup>, ComReg now requires you, pursuant to section 13D of the 2002 Act, to provide ComReg with the written information set out above at section B.

### E. Consequences in the event of non-compliance

Please note that under sections 13D and 13E of the 2002 Act, criminal (or in the alternative civil) proceedings may be initiated by ComReg where:

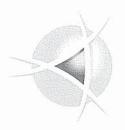
- an undertaking fails to comply with an information requirement within the specified time period; or
- an undertaking, in purporting to comply with such a requirement, provides to ComReg information which it knows to be false or misleading.

In this regard, I would draw your attention to the ComReg Information Notice regarding compliance with Section 13D(1) requests.<sup>11</sup>

<sup>&</sup>lt;sup>9</sup> European Communities (Electronic Communications Networks and Services) (Framework) Regulations 2011 (S.I. No. 333 of 2011), (the Framework Regulations).

<sup>&</sup>lt;sup>10</sup> European Communities (Electronic Communications Networks and Services) (Authorisation) Regulations 2011 (S.I. No. 335 of 2011), (the "Authorisation Regulations")

<sup>&</sup>lt;sup>11</sup> "Information requirements to undertakings pursuant to section 13D(1) of the Communications Regulation Acts 2002 to 2010 - Obligations for authorised operators in relation to providing data", ComReg Document No 10/63, 6 August 2010.



### F. Time period for compliance with the information requirement

Meteor is required to provide ComReg with a full written response to the questions set out in section B above, including the submission of relevant pre-planning/planning documentation already prepared related to these questions, by 4pm on 26 October 2012.

Please provide the required information in hardcopy format, signed by a person duly authorised by Meteor to do so on its behalf. In addition, please also provide the required information in electronic format on CD-ROM.

The required information will be collected from your organisation by ComReg. To make an appointment to collect this information, please contact Kevin Kennedy at ComReg on 01 804 9650 before 1pm on 26 October 2012.

If you have any queries in relation to this information request please contact Kevin Kennedy on 01 804 9650.

Yours sincerely

George Merrigan Director, Market Framework Commission for Communications Regulation

cc. Kevin Kennedy, ComReg

47. MMC: letter to ComReg "Transition activities associated with the Multi-Band Spectrum Award (MBSA) process" (letter dated 26 October 2012)



T: +353 (0)1 671 4444 E: info@meteor.ie W: www.meteor.ie

26<sup>th</sup> October 2012

George Merrigan Director, Market Framework Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1

### Strictly Private and Confidential

### Re:- Transition Activities associated with the Multi-Band Spectrum Award (MBSA) process

### Dear George

We refer to previous correspondence in relation to the above matter, including in particular your request for information issued pursuant to section 13D(1) of the Communications Regulation Act, 2002 in response to our letter of 3<sup>rd</sup> October. We regret that ComReg refused to take into account our very real and legitimate concerns concerning the exchange of information regarding transition activities and has had no regard to the fact that at this time, Meteor's resources are heavily engaged in ComReg's multi-band spectrum award (MBSA) process.

Furthermore, we do not understand how ComReg can invoke its powers under section 13D(1) of the 2002 Act during the primary round of the MBSA, seeking information to be supplied before the conclusion of the assignment round of the MBSA, in circumstances where the provision of this information at this time is not consistent with the timelines set out in the MBSA Information Memorandum (IM). In particular, paragraph 3.8 "Transition Rules" in the MBSA IM (ComReg 12/52 dated 25 May, 2012) provides that all Existing GSM Licensees are required to comply with the Transition Rules associated with the MBSA process and these require that Existing GSM Licensees, following notification of the results of the Assignment Round, work together to collectively formulate and submit a Time Slice 1 Transition Project Proposal within four weeks of the notification. It is only after the results of the Assignment Round are known that Meteor can meaningfully undertake detailed planning work. It is clear that the Rules do not place any obligation on Meteor to undertake speculative analysis or report on its preparatory work at the request of ComReg in advance of the results of the Assignment Round becoming known.

In these circumstances, it does not appear to us that the provision of the information requested by ComReg at this point in time can be considered in any way necessary to enable ComReg to carry its functions, as is required by section 13D and we ask accordingly that ComReg explains why it is requesting information on the Transition Project Proposal at an earlier stage than the timeline specifically established in the IM.

Without prejudice to our request for clarification, Meteor has set out the answers to the specific questions raised by ComReg. This information is disclosed on a strictly

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> private and confidential basis and ComReg should not disclose this information to any third party (including its consultant technical experts) without ensuring that the confidential nature of this information is retained at all times.

### **B1** Relocation Activities

### **Response to Question 1**

Meteor has undertaken some high-level preparatory work in relation to Relocation Activities in both the 900MHz and 1800MHz bands. Our analysis has been necessarily limited because a detailed analysis would require us to avail of resources within the Radio Access Network sharing arrangement with O2 (Mosaic). We do not believe that it would be appropriate at this point in time during the auction to commission Mosaic personnel any analysis that is directly relevant to our position / objectives in respect of the MBSA process.

### **Response to Question 2**

Answer (i):

The relocation of 900 and 1800 bands from Meteor's current allocation to any other allocation has been examined

Answer (ii):

Steps and resources required:-

- a. Co-ordinate timelines with other operators;
- b. Baseline current performance metrics;
- c. Re-tune of the 900 MHz network will have to be addressed in phases as the use of the 900 MHz cavity combiner method rather than logical share to consolidate Meteor and O2 sites means a physical swap or re-tune of this equipment is required to change GSM 900 frequencies. A single big bang re-tune can therefore not be done overnight. The 900 MHz cavity combiners utilised for "Lift and shift" consolidated sites need to be manually re-tuned there are 51 sites currently using these. The logistics of swapping these units out for ones tuned to new O2 and Meteor bands are critical. If spectrum acquired by the operators is adjacent a new combiner product would have to be delivered by Mosaic supplier at very short notice. Cavity combiners were not used for 1800, so the process will be the same for 1800 spectrum sliding but without the requirement to swap out these units;
- Prepare planned areas or DT scripts of new frequency plan (Using CAN (Cellular Network Admin) planned area in the OSS);
- e. Run planned area / scripts (Fall back areas to be created also) what is the fall back area? This is defined so that if there are any issues when re-tuning, the activity can be rolled back to return the network to its original state;

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- f. Drive tests (Sample areas only per BSC probably too much to drive all sites involved in retune phases);
- g. Post retune stats monitoring this will be main focus post re-tune as drive testing will be "light";

Resources Requirements-these are high-level and indicative only at this stage. They can therefore not be assumed final. Meteor has not allocated any resources yet and will be awaiting the auction result before doing so.

Activity	Resources
Co-ordinate with other operators	2
Baseline current performance metrics	2
Prepare planned areas or DT scripts of new frequency plan	3
Retune of network in 3 phases (incl. cavity combiner swapout)	4
Drive tests (sample areas only)	2
Post retune stats monitoring	1

Answer (iii)

No detailed time line has been drawn up as it depends on the overall timing (no physical work can be undertaken in the month of December during the Christmas freeze period), the delivery of necessary hardware and the co-ordination with other operators. However we currently estimate the total time duration it will take to do this work will be in the region of 4 months.

### **Response to Question 3**

Answer(i)

Please see point c above in response to question 2(ii).

Answer (ii)

Given the Mosaic relationship and shared resources we may be dependent to a greater extent on the activities of O2.

Answer (iii)

We have not identified any other sensitivities / risks. It must be remembered that we have not yet undertaken detailed analysis.

### **Response to Question 4**

Answer (i)

We believe that the planning activities for Relocation activities in the 900MHz and 1800MHz bands can be undertaken simultaneously.

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Answer (ii)

We believe that the implementation activities should be conducted sequentially for each band.

We have not prepared any pre-planning / planning documentation at this time.

### **B2** Retuning Activities

### **Response to Question 5**

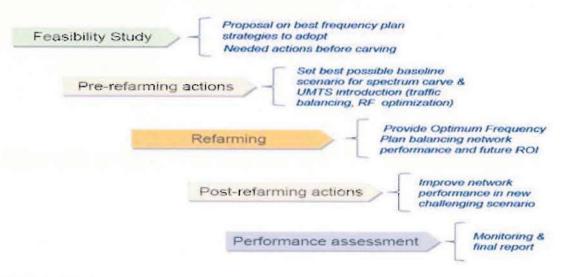
We have not conducted any material investigation in respect of Time Slice 1 Retuning activities. Such activities are not directly relevant to Meteor given that our existing GSM Licence does not expire until the beginning of Time Slice 2. We are unwilling to comment on Time Slice 2 Retuning in any detail at this time.

### **Response to Question 6**

Answer (i) Please see response to question 5

Answer (ii)

Please see response to question 5. In a more generic manner we would observe that the activities required indicate a high level plan as follows:



### a. Feasibility Study

This accounts for acceptance definition, building and creating the necessary projects, data collection, network audit, capacity and RF audits, evaluation of the best frequency plan strategies

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### b. Pre-refarming activities

This accounts for feature introduction/audit and RRM optimisation prior to the removal of frequencies (2G traffic balancing and 3G iRAT optimisation)

### c. New frequency plan generation

This refers to new measurements, consistency checks, IM generation and validation, generation of optimised frequency plans for both bands (assumed dual band network), optimisation of the neighbour list (does not take into account implementation times)

### d. Post-refarming activities Further RRM optimisation

Answer (ii)

No detailed time line has been drawn up.

### **Response to Question 7**

- (i) There is likely to be a strong dependence on the equipment vendor in retuning scenarios and an operator would be relying on the vendor's previous experience in performing a retune in the most resource effective way.
- (ii) There is a need for strong co-ordination between all operators for the reallocation of spectrum but for the re-tuning it should not be necessary to co-ordinate.
- (iii) However if there is a retune and reallocation at the same time the coordination across the operators could be significant.

We trust that this provides you with the information required. In the meantime, we urgently await confirmation that the information disclosed will be kept confidential by ComReg and its third party advisors. Further, we require clarification as to the change in the timelines as set out in the IM.

Yours sincerely,

W. M'Carly

William McCoubrey Head of Regulatory Affairs – Mobile and Retail

48. MMC: letter to ComReg "Multi-Band Spectrum Award – Transition Project Proposal (letter dated 12 December 2012) eircom Limited 1 Heuston South Quarter St. John's Road, Dublin 8 Tel +353 1 671 4444

www.eircom.ie



12<sup>th</sup> December 2012

Dr Samuel Ritchie Manager Spectrum Operations Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1

### Multi-Band Spectrum Award - Transition Project Proposal

Dear Dr Ritchie,

Further to your letter dated 27<sup>th</sup> November. I am writing to inform of the following matters in respect of our endeavours to formulate a Transition Project Proposal with the other Winning Bidders.

A meeting was convened with representatives from Meteor Mobile Communications (MMC), Hutchison 3G (H3G), Telefonica O2 (TO2) and Vodafone (Vf) on 10<sup>th</sup> December 2012. At this meeting MMC set out its proposed components for its contribution to a draft Transition Project Proposal in a PowerPoint presentation. A copy of that presentation "Draft Transition Project Proposal" dated 10<sup>th</sup> December is enclosed for reference. TO2 outlined its proposal verbally and circulated a PowerPoint presentation summarising its position after the meeting. A copy of the TO2 presentation, "MBSA Transition" dated 11<sup>th</sup> December 2012 is also enclosed for reference. It was noted that no party is dependent on Vodafone completing transition activities in the 900MHz or 1800MHz band. The parties engaged in a constructive question and answer session regarding the proposals and agreed to have a teleconference on 11<sup>th</sup> December to feedback on the proposals. On the teleconference it was agreed that each party would communicate directly with ComReg setting out their views on the MMC and TO2 proposals.

As such we are not in a position to submit a collectively agreed Transition Project Proposal to ComReg.

It is our understanding from comments made during the meetings that TO2 and Vf are generally supportive of the 900MHz transition proposals put forward by MMC. H3G appears supportive of our 'aggressive ambition' target date of 16<sup>th</sup> April 2013, however we understand H3G may have concerns regarding our proposals regarding the proposed Milestone date of 16<sup>th</sup> June 2013. We highlighted to H3G that our 'aggressive ambition' plan contains risk and no contingency has been factored in should those risks crystallise. As such we cannot accept 16<sup>th</sup> April as a binding date in the context of Liquidated Damages.

We offer the following comments in regard to TO2's proposals. The timescales proposed by TO2 to complete transition activities in the 900MHz band appear reasonable. TO2 proposes that Block L in the 1800MHz band would be made available to us in 'similar timescales'. We have requested TO2 to consider releasing Block L in advance of transitioning to its new Blocks in the 1800MHz. We note that TO2 has reserved its

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position regarding Liquidated Damages. We believe there must be a consistent approach to Liquidated Damages in any Transition Project Plan established by ComReg.

Please do not hesitate to contact William McCoubrey should you require any further information regarding our position.

Yours sincerely

Joel Wachtler

Director of Strategy and Business Development

49. MMC: Presentation sent to ComReg "Draft Transition Project Proposal" (presentation dated the 12 December 2012)



# **Draft Transition Project Proposal**

10<sup>th</sup> December 2012

Draft / Without prejudice

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- Identification of transition activities
- Milestone dates for completion of transition activities
- Dependent transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages



### Identification of transition activities

- Milestone dates for completion of transition activities
- Dependent transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages



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### **Transition Activities**

- 1. MMC to move from C/D to A/B
- 2. TO2 to move from F/G to C/D



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### **Transition Activities**

3. TO2 to move from I/J/K to A/B/C



- Identification of transition activities
- Milestone dates for completion of transition activities
- Dependent transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages

Milestone dates		elicom <b>meteor</b>
<ul> <li>Milestone da</li> <li>Aggress</li> <li>LD s will</li> </ul>	<ul> <li>Milestone date for completion of transition activity 1: 16 June, 2013</li> <li>Aggressive ambition to complete 16 April, 2013</li> <li>LD s will apply from Milestone date (16 June, 2013)</li> </ul>	16 June, 2013 3)
<ul> <li>Milestone dates advised by TO2</li> </ul>	<ul> <li>Milestone dates for completion of transition activity 2 and 3 to be advised by TO2</li> </ul>	and 3 to be
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- Site Analysis Completed 4<sup>th</sup> Jan 2013
  - Hardware Delivery 28<sup>th</sup> Feb 2013
- Site works Complete 23<sup>rd</sup> Mar 2013
- Repeater Replace/Retune Complete 29<sup>th</sup> Mar 2013
- MMC Spectrum Relocation Complete 16<sup>th</sup> April 2013

## TPP Requirements (IM 3.159)



- Identification of transition activities
- Milestone dates for completion of transition activities
- Dependant transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages

Dependant 7	<b>Dependant Transition Activities</b>	eircom meteor
<ul> <li>Transition Act</li> </ul>	<ul> <li>Transition Activity 2 is dependent on completion of Transition Activity 1</li> </ul>	tion of Transition Activity 1
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## TPP Requirements (IM 3.159)



- Identification of transition activities
- Milestone dates for completion of transition activities
- Dependent transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages

Monitoring mechanism	elikcom meteor
<ul> <li>MMC will publish fortnightly report to ComReg and Winning Bidders</li> </ul>	and Winning Bidders
<ul> <li>Progress against aggressive ambition</li> </ul>	
<ul> <li>Progress against Milestone date</li> </ul>	
<ul> <li>Identification of any risks and mitigating actions</li> </ul>	ons

## TPP Requirements (IM 3.159)



- Identification of transition activities
- Milestone dates for completion of transition activities
- Dependent transition activities
- Compliance monitoring mechanism
- Attribution and acceptance of liability for liquidated damages

Liquidated damages	eircom meteor
<ul> <li>MMC will accept liability delay damages in the form of liquidated damages if Milestone date for activity 1 (end of 16 June, 2013) is missed due any negligent act or omission caused solely and directly by MMC. For clarity, force majeure events are excluded;</li> </ul>	form of liquidated of 16 June, 2013) is sed solely and directly excluded;
<ul> <li>As standard, liquidated damages are the sole and exclusive remedy and constitute a genuine pre-estimate of loss suffered (if any). The liquidated damages will be paid to ComReg as per IM and the winning bidders do not have any independent recourse to MMC;</li> </ul>	and exclusive remedy suffered (if any). The s per IM and the recourse to MMC;
<ul> <li>Amount of Liquidated Damages will be calculated from 17<sup>th</sup> June 2013 for a period of 6 weeks.</li> </ul>	ated from 17 <sup>th</sup> June

50. ComReg: letter to MMC "All MBSA Winning Bidders – The Transition Project Proposal" (letter dated 21 December 2012)



Commission for **Communications Regulation** Coimisiún Um **Rialáil Cumarsáide** 

### By hand and email

21 December 2012

Mr. William McCoubrey Head of Regulatory Affairs – Mobile and Retial Meteor Mobile Communications Ltd 1 Heuston South Quarter St. Johns Road Dublin 8

### All MBSA Winning Bidders – The Transition Project Proposal

Dear Mr. McCoubrey

Further to the submissions that ComReg received from all the MBSA Winning Bidders on 12 December 2012, and the individual Transition Project Proposals for ComReg's consideration contained therein, I am writing to you in relation to the Transition Project Plan for the MBSA process and the immediate next steps to finalise this plan.

ComReg notes that two of the Existing GSM Licensees (namely Meteor and Telefónica) submitted its own individual Transition proposal but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. In that regard, ComReg has requested its consultants, namely Red-M Wireless Limited and Vilicom Limited ('Red-M/Vilicom'), to review all relevant material including the individual Transition proposals submitted on 12 December and to recommend a Transition plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

Red-M/Vilicom has carried out this analysis and the Schedule to this letter sets out Red-M/Vilicom's analysis and recommendations on the MBSA Transition Plan. Amongst other things, Comreg notes that Red-M/Vilicom:



- have considered and analysed all the Transition information supplied by the Mobile Network Operators ('MNOs') and in particular their submissions of 12 December 2012;
- have recommended a Transition Plan that ComReg could adopt as its finalised Transition Project Plan for both the 900 MHz and 1800 MHz bands (the "Recommended Transition Plan"). The Recommended Transition Plan proposes that:
  - the Transition activities in the 900 MHz band be completed by the end of week 17 (26 April 2013);
  - the Transition activities in the 1800 MHz band be completed by end of week 14 (5 April 2013); and
  - o a fortnightly reporting period be incorporated into the plan.

Having had regard to all the relevant materials before it, including the individual transition proposals submitted on 12 December, and after carefully considering the Red-M/Vilicom analysis and recommendations, ComReg has formed the view that the Recommended Transition Plan is achievable by all of the relevant parties without imposing overly onerous obligations on Winning Bidders and would therefore be a proportionate measure. Accordingly, ComReg proposes to adopt the Recommended Transition Plan (as set out in Annex 2 of the Report in the Schedule to this letter) as the finalised Transition Project Plan. In arriving at this proposal, ComReg notes that, having analysed all the relevant Transition-related information provided to ComReg to date, Red-M/Vilicom's professional opinion is that *"the Recommended Transition Plan is both viable and achievable within the proposed timescales."* 

Should the Recommended Transition Plan be adopted as is, this would set the following Transition-completion dates for the 900 MHz and 1800 MHz bands.<sup>1</sup>

GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Vodafone	No Transition necessary	31 January 2013
Meteor	5 April 2013	No Transition necessary

Table 1: The proposed Transition-completion dates

<sup>&</sup>lt;sup>1</sup> Note the Transition Project Plan would also set out milestone dates against the specific Transition activities as outlined in the Recommended Transition Plan.



GSM Licensee	900 MHz Transition-completion date	1800 MHz Transition- completion date
Telefónica	Meteor's 900 MHz Transition- completion date + 3 Weeks (i.e. 26 April 2013)	

Both generally, and against the background of the Liquidated Damages provisions set out in section 3.8.2 of the Information Memorandum, ComReg notes the Winning Bidders' submissions of 12 December 2012 regarding deadlines, and further notes that two GSM Licensees (namely Meteor and Telefónica) suggested that a later deadline date be set in order to provide for contingencies and/or matters not within their control.

While ComReg understands that unforeseen events could lead to delays in the implementation of a Transition plan and thus require provision to be made for additional contingencies, ComReg also notes the views of Red-M/Vilicom on the Recommended Transition completion dates, namely that:

- a) these dates are both viable and achievable; and
- b) these dates could be further accelerated by Meteor and Telefónica in respect of a number of items (equipment lead time, hybrid combiners and alternative solutions to cavity combiners).

This suggests to ComReg that some contingency-provision may, in effect, already be built into the Transition-completion dates for Meteor and Telefónica. To the extent that this is so, the provision for additional contingencies sought by Meteor and Telefónica would not appear to be strictly necessary.

Notwithstanding this, ComReg proposes to add a **two-week grace period** to the Transitioncompletion dates proposed above during which Liquidated Damages shall not trigger even if the above-mentioned 900 MHz and 1800 MHz Transition-completion dates are not achieved. This would set the below-mentioned dates as the dates following which the requirement to pay Liquidated Damages in accordance with the Information Memorandum would be triggered.



GSM Licensee	900 MHz Liquidated Damages date	1800 MHz Liquidated Damages date
Vodafone	No Transition necessary	14 February 2013
Meteor	19 April 2013	No Transition necessary
Telefónica	Meteor's 900 MHz Transition completion date + 5 Weeks (i.e. 10 May 2013)	19 April 2013

Table 2: The proposed dates following which the requirement to pay Liquidated Damages would apply

In relation to Liquidated Damages, ComReg would remind Meteor that all Winning Bidders, as a contractual pre-condition to participating in the MBSA, agreed to be bound by and to comply with the Transition Rules and are consequently required to abide by the finalised Transition Project Plan. In addition, ComReg would point out that the application and methodology for calculation of Liquidated Damages is clearly explained in Document 12/25 (Decision D04/12) and set out in Section 3.8.2 of the Information Memorandum.

ComReg is now seeking each Winning Bidder's views on the above proposals. In order to facilitate the finalisation of Transition Project Plan in early January 2013, ComReg requests that all views be submitted to <u>kevin.kennedy@comreg.ie</u> no later than **4pm on Tuesday 8** January 2013.

In submitting these views, the respondents must clearly identify any confidential information as ComReg intends to publish all information received on this proposal, subject to the treatment of confidential information as set out in ComReg Document 05/24.

In addition, and in accordance with paragraph 3.163 of the IM, it is ComReg's intention to publish the finalised Transition Project Plan on ComReg's website, having regard to the treatment of confidential information as set out in ComReg 05/24.

**Yours Sincerely** 

Dr. Samuel Ritchie

Page 4 of 5



SCHEDULE

Page 5 of 5

## Recommendations to ComReg on the MBSA Transition Plan

### Joint Report for ComReg

By



### 1 Recommendations to ComReg on the MBSA Transition Plan

This document sets out Red-M/Vilicom recommendations to ComReg on the Transition Plan for the Multi-Band Spectrum Award ('MBSA') Process. This document has been prepared using the information supplied to ComReg by the Mobile Network Operators ('MNOs') and, in particular, their submissions to ComReg dated 12 December 2012. As submissions received from all MNOs, including Hutchison 3G Ireland Limited ('H3GI'), have been considered by Red-M/Vilicom in preparing this document, the recommended Transition plan will assist all Winning Bidders.

As discussed further below, two Transition plans are considered in this document:

- (1) 'MNO Supplied Composite Transition Plan': This is a composite Gantt chart representation of the Transition timelines for Time Slice 1 proposed individually by the MNOs to ComReg in their submissions of the 12th December 2012 (see Annex 1).
- (2) 'Recommended Transition Plan': This is the Transition plan recommended by Red-M / Vilicom for the MBSA process (see Annex 2 which includes a Gantt chart representation of this plan).

### 1.1 The MNO Supplied Composite Transition Plan

The Assignment Round of the MBSA process was completed on 14<sup>th</sup> November 2012. A two week "Negotiation Phase" subsequently followed and this was concluded on the 28<sup>th</sup> November 2012. There were no changes in the spectrum assignments determined by the Assignment Round of the MBSA. ComReg held meetings with the MNOs during the week commencing the 3<sup>rd</sup> December 2012 to discuss the MBSA results and Transition preparations.

Following the Assignment Round of the MBSA process, there was a four week period during which the Existing GSM Licensees were required to collectively formulate and submit a Transition Project Proposal to ComReg. The deadline for submitting a Transition Project Proposal was 12<sup>th</sup> December 2012.

ComReg received an individual 'Transition Proposal' from two of the Existing GSM Licensees, Meteor and Telefónica. Vodafone did not provide a Transition Proposal, thereby suggesting that it would not be carrying out Transition activities beyond 31 January 2013. These proposals are presented on a composite basis in a Gantt chart in Annex 1.

### 1.2 The Recommended Transition Plan

Two of the Existing GSM Licensees, Meteor and Telefónica, submitted their own individual 'Transition Project Proposal' but no overall 'Transition Project Proposal' was collectively formulated and submitted in accordance with ComReg Document 12/52 (the "Information Memorandum"). Telefónica's submission on the 12<sup>th</sup> December 2012 states:

'As agreement was not reached among all operators present, it is not possible to present ComReg with an industry transition plan, however our proposal is, we believe agreeable to all existing GSM licensees and three of the four operators.'

In accordance with the Information Memorandum, ComReg must assess the merits of all Transition proposals and, having regard to all relevant information at its disposal, formulate and implement a Transition Project Plan. ComReg has requested Vilicom and Red-M to review all relevant material including the individual Transition Proposals submitted and to recommend a Transition Plan that would take into account:

- the activities as outlined in each operator's individual Transition proposal;
- other relevant responses and materials; and
- the desirability of enabling all Winning Bidders to deploy advanced services as early as reasonably practicable.

### 1.2.1 The Recommended Transition Plan: 900MHz

The Recommended Transition Plan reduces the critical path timescale so that the Telefónica spectrum relocation at 900MHz concludes at the end of week 17 (*26<sup>th</sup> April 2013*), rather than week 19 (*10<sup>th</sup> May 2013*) as envisaged by the MNO Supplied Composite Transition Plan.

The two week reduction in the timescale for Transition activities has resulted from the following minor modifications to the individual proposals supplied by the MNOs:

### Meteor and Telefónica shared sites:

For the site share activity (identified as "Site Works Complete" for Meteor, and "Cavity Combiner Solution Ready" for Telefónica), one week has been removed from Meteor's supplied proposal. The Recommended Transition Plan shows a completion date for this activity in week 11 (15<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Meteor's supplied proposal showed "site works complete" in week 12 (22<sup>nd</sup> March 2013); whereas
- Telefónica's supplied proposal showed "cavity combiner solution ready" in week 11 (15<sup>th</sup> March 2013).

However, as the sites are shared sites, the Meteor and Telefónica activities should be capable of completion at the same time.

### Meteor Repeaters:

Two weeks have been removed from Meteor's supplied proposal for the repeater replace/retune activity.

- Meteor's supplied proposal showed "Repeater Replace/Retune Complete" in week 13 (29<sup>th</sup> March 2013).
- Telefónica's supplied proposal showed "Repeater Equipment Ready" in week 12 (19<sup>th</sup> March 2013).

In support of this reduction it is noted that:

- Telefónica has confirmed an eleven week timescale for the retuning/replacing of its repeaters. [Confidential Text Removed].
- Meteor would appear to have significantly fewer repeaters than Telefónica and given a similar level of effort, it should therefore be able to complete this activity more rapidly than Telefónica. The Recommended Transition Plan shows Meteor taking marginally less time (10 weeks) to complete this activity compared to 11 weeks for Telefónica.
- [Confidential Text Removed]
- Retuning/replacing repeaters is an activity which can be completed quicker if more manpower and resources are used.

We are of the view that the reduced critical path timescale (of two weeks) is both viable and achievable. Indeed, we note that the Transition timescales could possibly be further accelerated considering the following:

### Equipment Lead Times:

Meteor and Telefónica should be able to reduce the timescales associated with the 77 shared sites currently using cavity combiners, if the manufacturers can deliver the relevant replacement equipment at an earlier date.

### Hybrid Combiners:

Meteor described a 3-stage 'lift and shift' process for replacing the shared sites with new cavity combiners i.e.

- 1. Replacing the existing cavity combiners with hybrids,
- 2. Retuning the cavities offsite (or purchasing new ones)
- 3. Replacing the hybrid combiner with the new retuned cavity combiner

Meteor and Telefónica could implement steps 2 and 3 after the Transition Project Plan is complete.

### Alternative Solutions to Cavity Combiners:

Meteor and Telefónica could also investigate alternative solutions to the cavity combiners at some of the 77 shared sites. These alternative solutions may reduce the ten week period currently assigned to the cavity combiner solution. For example, logical site sharing which would involve one operator adding equipment to their shared partners' NodeB cabinet. This might be accomplished more quickly.

In this light, we are of the view that a reduced critical path timescale of two weeks is reasonable.

### 1.2.2 The Recommended Transition Plan: 1800MHz

Telefónica did not supply a date for 1800MHz relocation, but stated in its submission of the 12<sup>th</sup> December 2012 that the transition implementation is complete at

### "O2 900MHz Transition Complete + 3 weeks",

which implies a completion date at the end of week 22 ( 28<sup>th</sup> May 2013).

The Recommended Transition Plan is drawn up on the basis of this statement i.e. the implementation of its relocation in the 1800MHz band will take 3 weeks. However, it suggests that Telefónica relocate in the 1800MHz band immediately after the 1800 MHz AFP (*Automatic Frequency Plan*) process is prepared. We see no reason why Telefónica could not complete its 1800MHz relocation during weeks 12 to 14 while waiting for Meteor to complete its 900MHz relocation. Therefore we recommend that the finalised Transition plan should require Telefónica's completion of 1800MHz relocation by week 14, the week ending 5<sup>th</sup> April 2013.

Telefónica's supplied proposal: AFP preparation complete in week 11 (14<sup>th</sup> March 2013) Telefónica's supplied proposal: 1800MHz Relocation complete in week 22 (28<sup>th</sup> May 2013) Recommended Transition Plan: 1800MHz Relocation complete in week 14 (5<sup>th</sup> April 2013)

### 1.2.3 The Recommended Transition Plan: Reporting Method

In its submission, Meteor suggested that it would publish a fortnightly report to ComReg and the other winning bidders, containing the following items:

- Progress against milestone dates; and
- Identification of any risks and mitigating actions.

This proposal seems reasonable and to ensure that ComReg has a view of the implementation of the finalised Transition Plan, the same proposal should be adopted by all GSM Licensees.

Further, when a transition activity (as set out in the Recommended Transition Plan in Annex 2) is completed by a GSM Licensee, it should notify ComReg and all other Winning Bidders immediately of this development and not wait for the fortnightly report to do so. This would seem reasonable in order to ensure full transparency for both ComReg and all MNOs during implementation of the Transition Project Plan.

Similarly, once a GSM Licensee has completed its relocation activities in a band (either the 900 MHz or the 1800 MHz band), it should immediately notify ComReg and the other Winning Bidders of this development and not wait for the fortnightly report to do so. Again, this would seem reasonable in order to ensure full transparency for all parties.

### **1.3 Recommendation**

In light of the above and taking account of all of the circumstances and proposals submitted by MNOs, we consider that the Recommended Transition Plan is both viable and achievable within the proposed timescales while avoiding any undue delay in the availability of liberalised spectrum. We therefore recommend that ComReg adopt this Recommended Transition Plan as its finalised Transition Project Plan for both the 900MHz and 1800MHz bands.

Andy Barnard Red-M Wireless Ltd Louise Hopkins Vilicom Engineering Ltd

Recommendations to ComReg on the MBSA Transition Plan

# 2 Annex 1- MNO Supplied Composite Transition Plan – Gantt chart

Ope	2013 week number	-2	7	0	1	2 3	4	s	9	2	80	б	10	11	12	B	14	15	16	17	18	19	20 21	1 22
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Figure 1: MNO Supplied Composite Transition Plan

## 3 Annex 2- Recommended Transition Plan - Gantt chart

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Figure 2: Recommended Transition Plan

51. MMC: reply to ComReg's letter of 21 December 2012 "Re: Transition Project Proposal" (letter dated 9 January 2013)

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9<sup>th</sup> January 2013

Kevin Kennedy Spectrum Development Manager Commission for Communications Regulation Abbey Court Irish Life Centre Dublin 1

### Re: The Transition Project Proposal

Dear Kevin,

Further to Dr Ritchies's letter of 21<sup>st</sup> December setting out ComReg's proposed Transition Plan (TP). We request that the following comments be addressed in any finalised TP.

Before commenting on the substantive matters in respect of the proposed TP we wish to put our approach to the Transition planning phase in context. The MBSA process has taken ComReg longer to administer than anticipated. As a consequence it is physically not possible to complete transition activities prior to 1<sup>st</sup> February 2013. If the auction had completed during the Summer in all likelihood transition activities could have been completed by now in an orderly manner. The transition activities are a non-trivial exercise which must be planned and undertaken with care so that disruption to customers in terms of continuity and quality of service is minimised. At the same time we fully acknowledge it is important to ensure that Winning Bidders, including ourselves, gain access to spectrum as early as reasonably practicable. (Confidential: Indeed our own plans to launch new services using the new spectrum are well advanced.) It is against this backdrop and with a co-operative spirit that we put forward our proposed TP as set out in our letter of 12th December. As highlighted in that letter we put forward an aggressive plan with the ambition to complete our 900MHz transition by 16th April. We are therefore disappointed that ComReg now seeks to foreshorten our aggressive plan and put Meteor in the invidious position of compromising its technical implementation to its detriment and to the detriment of its customers and / or facing the risk of substantial financial penalties which could be in the order of €40k per day's delay beyond a stipulated date.

We note "ComReg has formed the view that the Recommended Transition Plan is achievable by all of the relevant parties without imposing overly onerous obligations on Winning Bidders and would therefore be a proportionate measure." We do not consider that ComReg's proposals are proportionate. We further note that ComReg appears to have reached this view wholly reliant on the analysis conducted by Red-M / Vilicom. The Red-M / Vilicom Report has reached erroneous conclusions and cannot be relied upon by ComReg to justify shorter timescales as we demonstrate below.

The Red-M / Vilicom Report recommends that Meteor's proposed TP be shortened so that the completion date for Meteor's 900MHz transition activities would be 5<sup>th</sup> April rather than 16<sup>th</sup> April. This is put forward on the basis that Meteor has overestimated time required to complete site works by a week and is deemed to be able to undertake repeater works faster.

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### Meteor and Telefonica shared sites

Red-M / Vilicom have recommended that Meteor's timeline be reduced by one week due to an apparent discrepancy between Meteor's "site works complete" and Telefonica's "cavity combiner solution ready" target dates. It is disappointing that ComReg's advisers did not seek to clarify this discrepancy with either Meteor or Telefonica. Meteor and Telefonica rely on a shared resource for the operation and maintenance of their respective radio access networks. This resource is referred to as "Mosaic". Both parties independently approached Mosaic to establish plans for the transition activities. Mosaic provided the date of 22<sup>nd</sup> March as a date they felt reasonably confident of achieving. They also noted 15<sup>th</sup> March as a possible date but not a date they had any confidence of achieving. Accordingly, it is clear, from the advice received from Mosaic that it is not possible to achieve completion by 15<sup>th</sup> March. Therefore, this date is not reasonable and unachievable.

It is unfortunate that ComReg's experts made no attempt to contact us after our submission on 12<sup>th</sup> December to clarify any matters of uncertainty but instead preferred to rely on sweeping and incorrect assumptions. In any event, we hope that this letter clarifies this issue and we would be happy to meet with your advisers to walk them through our proposed TP in order to demonstrate that we have offered an aggressive timeline with no buffer other than the proposed grace period.

### Meteor Repeaters

The Report recommends that two weeks be removed from Meteor's repeater replace/retune activity. This does not in our view justify the imposition of an earlier 900MHz transition completion date. The repeaters are not on the critical path for this project and so any reduction in time for repeater solution completion is irrelevant to the overall project timeline. The repeater retune must take place immediately prior to the network retune so that the repeater operates on the correct frequency, otherwise there will be a loss of service to those customers. The retune itself will occur 29<sup>th</sup> March followed by optimisation and resolution of performance issues and a stabilisation period bringing us to 16<sup>th</sup> April. We would be happy to meet with ComReg's advisers to clarify this matter.

The report also attempts to suggest that there is potential scope for further reduction in the timescales put forward by Meteor arising from equipment lead times, hybrid combiners and alternative solutions to cavity combiners.

### **Equipment Lead times**

We note the Report's observation regarding supplier lead times. This observation is not sufficient to justify or support a conclusion that we have added contingency to our proposed TP. The main equipment required for this project is Radio Base Station cards and hybrid combiners. The orders for the equipment have been placed and we are working towards confirming delivery dates with the suppliers however delivery dates are not confirmed at this time.

Forecasted dates for equipment delivery remain as per the project plan. A very real risk to our project remains as our proposed TP requires site works begin immediately following equipment delivery. Again, we would be happy to meet with ComReg's advisers to walk them through our proposed TP in order to demonstrate that we have offered an aggressive timeline with no buffer other than the proposed grace period.



### **Hybrid Combiners**

We note the Report's statement that "Meteor could implement steps 2 and 3 after the Transition Project Plan." This is indeed the case and is already reflected in the timescales put forward by Meteor. The Report's comment in this regard is therefore irrelevant.

### Alternative Solutions to Cavity Combiners

The Report appears to suggest that Meteor and Telefonica have not explored all efficient options to resolve the cavity combiner issue. In particular the Report suggests that logical site sharing might be accomplished more quickly.

The Report is misleading for two reasons. First, Red-M / Vilicom provide no evidence to substantiate their suggestion that logical site sharing may be accomplished more quickly. It is counter-intuitive to suggest that logical sharing can be achieved more quickly. Logical sharing requires the installation of new equipment and the integration of active elements of both networks. This is a more complex task than the replacement of an existing cavity combiner with hybrids. The Report's conclusions in this regard cannot be relied upon to suggest there is scope for further reduction in timescales. Second, it is wrong for Red-M / Vilicom to infer that Meteor has not considered the best solutions. We have developed a plan taking into account a range of factors including time to implement and quality of service impact. It is a fact that our proposed plan includes logical sharing on 19 of the 77 sites. We consider this to be the optimal mix of hybrid combiner / logical sharing to achieve a timely transition whilst preserving continuity and quality of service for our customers.

### **1800MHz Transition**

The Report recommends that Telefonica completes its 1800MHz relocation "*while waiting for Meteor to complete its 900MHz relocation*". We are surprised by this recommendation given that Red-M and Vilicom are fully aware that Telefonica and Meteor rely on a single, shared resource for the operation and maintenance of their respective RANs. The recommendation to require the 1800MHz and 900MHz transition activities to take place at the same time creates unnecessary exposure for Meteor in respect of successfully implementing its 900MHz transition in an effective and timely manner. We believe a more pragmatic approach would be for Telefonica to migrate from the few channels it occupies in Block 1800/L during March allowing Meteor full access to its 1800MHz blocks. Telefonica can then complete its 1800MHz transition in an orderly manner after the 900MHz transition is fully complete.

Taking all of the above into account our target date of 16<sup>th</sup> April 2013 must be recognised for what it is; It is an 'aggressive ambition' consistent with our desire to complete transition activities as rapidly as possible. To be clear our aggressive target date of 16<sup>th</sup> April 2013 does not contain any buffer or contingency timescale. This must be addressed through the establishment of an appropriate grace period. It is erroneous to suggest that contingency provision has been built into the plan proposed by us on 12<sup>th</sup> December. As noted in our proposal our 'aggressive ambition' plan contains risk and no contingency has been factored in should those risks crystallise.

Accordingly, we cannot accept 19<sup>th</sup> April as a binding date from which Liquidated Damages would accrue. In circumstances where ComReg proposes to impose delay damages of significant financial value amounting to €40k per day, ComReg is duty bound

to establish a reasonable completion date from which those damages will accrue. In establishing the completion date ComReg must allow for sufficiently reasonable time for completion taking into account the timelines reasonably required to order, deliver, install and test the equipment and retune the entire network by third party suppliers including a reasonable period of time to allow for contingency for unforeseen events. It is important to note from a commercial perspective that in achieving the TP completion date, we are fully reliant on our third party suppliers to deliver on time. Further, it is important that ComReg takes into account the fact that Meteor is not in a position to impose on such third parties the same delay damages which ComReg is imposing upon us. Therefore, we are not in the commercial position of being able to "flow down" or "back off" our risk to delay damages to our third party suppliers and cannot mitigate our exposure to such delay damages.

In that context, our proposal is that the completion date including the grace period (i.e. the date from which liquidated damages would accrue) should at the very least be 16<sup>th</sup> May, 2013. This date is based on the equipment lead time and the work required to implement and test the TP and retune our network. This date also takes into account a reasonable contingency period to allow for any unforeseen delays which cannot be mitigated given that we are reliant on third party suppliers. It is imperative that in finalising the TP, ComReg takes into account the fact that Meteor is reliant on its third party suppliers to deliver the TP on time. In this context, it is normal commercial practice to allow for a reasonable buffer period to elapse before imposing delay damages. This is particularly the case where the delay damages are particularly onerous as is the case in the rollout of the TP where Meteor could be exposed to delay damages in the region of €40k per day.

It is also important that ComReg acknowledges that such damages will not arise in the event of force majeure.

Finally, it is necessary that we emphasise again the importance in ComReg fixing a reasonable completion date. We have provided all the relevant information which should inform that decision and we are available to meet with your advisors to demonstrate that our proposal is reasonable.

Yours sincerely

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William McCoubrey Head of Regulatory Affairs – Mobile and Retail