OFFICE OF COMMUNICATIONS

Wholesale mobile voice call termination

Statement and notification extending the charge controls

This is the non confidential version of the Statement.
Confidential information and data have been redacted.
Redactions are indicated by “[✂]”.

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Contents

Section 1

Summary

1.1 This statement sets out Ofcom's conclusions concerning a proposal to extend the charge controls on 2G voice call termination for a further year after 31 March 2006 when they would otherwise expire. Ofcom set out its impact assessment of this proposal in a document entitled "Wholesale mobile voice call termination markets – a proposal to modify the charge control conditions " which was published by Ofcom on 7 June 2005 (the "June 2005 consultation").

1.2 The June 2005 consultation proposed that current charge controls on wholesale mobile voice call termination on 2G networks should be extended to 31 March 2007, and that, subject to the application of the Weights Adjustment Factor, the Target Average Charges should remain unchanged at 5.63ppm for Vodafone and O2 (which operate 2G networks at both 900 and 1800MHz) and 6.31 ppm for Orange and T-Mobile (which operate 2G networks at 1800MHz). To this effect, Ofcom consulted on modifying the charge control conditions.

The longer term perspective

1.3 A separate consultation document addressing questions about the future regulation, or deregulation, of mobile voice call termination on 2G and 3G networks after 31 March 2007 was published simultaneously on 7 June 2005. That document recognised, amongst other things, that asymmetric regulation of mobile voice call termination which is limited to termination across a particular network type (2G or 3G) or to termination by a subset of those mobile network operators which have SMP, has the potential to distort competition. Ofcom is evaluating responses to that consultation exercise, and expects to publish a further, more focussed, consultation during the spring of 2006 which will consider what is the appropriate approach to regulation after March 2007.

1.4 Ofcom does not intend that its decision in this document to extend the charge control to apply during the limited period 1 April 2006 to 31 March 2007 should in any way limit the range of conclusions which may be drawn by the continuing consultation exercise.

Ofcom's conclusion

1.5 Having reviewed the responses to the June 2005 consultation exercise, Ofcom has concluded that it should make modifications to the charge control conditions which extend the charge controls, at the same Target Average Charge, including the same Weights Adjustment Factor, which applied during the period 1 April 2005 to 31 March 2006, for a further year to 31 March 2007. The necessary modifications to the SMP services conditions MC3, MC4, MD3 and MD4 are explained at paragraph 4.12 below. The formal Notification setting out the modification to the SMP conditions is attached at Annex 1. Ofcom looks forward to continuing to work with stakeholders to determine the appropriate approach to regulation after March 2007.

Section 2

Introduction

Background

2.1 The markets considered in this document are wholesale mobile voice call termination on the 2G mobile networks of each of the 2G Mobile Network Operators in the UK, ie Vodafone, O2, T-Mobile and Orange ("the 2G MNOs").

2.2 In June 2004, Ofcom determined that each of the 2G MNOs, Hutchison 3G UK Limited ("H3G") and Inquam, had Significant Market Power ("SMP") in the market for mobile termination of voice calls on its network (the market definition on which the SMP finding was assessed drew no distinction between 2G, 3G or TETRA networks). Various SMP conditions were imposed on these MNOs, including charge controls which were imposed only on voice call termination on 2G networks by the 2G MNOs. Those charge control conditions will expire on 31 March 2006, if they are not amended before that date.

2.3 During the first half of 2005 Ofcom conducted a further analysis of the costs of terminating calls on 2G networks and updated the LRIC model used to determine the level of the charge control imposed in June 2004. The model was updated to reflect changes to a number of factors including demand, equipment costs and cost of capital. Ofcom also modelled a range of different assumptions in order to scope the likely impact of traffic migrations from 2G to 3G on the costs of voice call termination, as 3G phones start to become more widely used.

2.4 On 7 June 2005, Ofcom published a consultation document *Wholesale mobile voice call termination markets – a proposal to modify the charge control conditions* ("the June 2005 consultation"). In that document Ofcom explored the regulatory options available when the charge controls imposed in June 2004 expire on 31 March 2006. Ofcom identified 3 key options

Do nothing, and allow the charge controls to lapse,

Impose a 4 year charge control on 2G termination, or

Extend the existing charge control on 2G voice call termination by one year based on an updating of key inputs of Ofcom's 2G LRIC model

2.5 Having considered the potential impact of these different approaches, Ofcom proposed an initial conclusion, as set out in paragraph 4.8 of the June 2005 consultation, that to do nothing would result in excessive regulatory costs and unnecessary uncertainty for MNOs and purchasers of wholesale voice call termination. It was also Ofcom's view, as set out in paragraph 4.10 of that document, that it would be premature to impose a lengthy control on 2G voice call termination charges. Given the desirability of understanding the interactions between 2G and 3G costs, and given that Ofcom did not expect to receive the output from the commissioned analysis of 3G costs until 2006, Ofcom took the view, as set out in paragraph 4.11 of the June 2005 consultation, that the most appropriate option was to extend the existing charge control to 31 March 2007, and, subject to the application of the Weights Adjustment Factor, to leave the Target Average Charges unchanged at 5.63ppm for Vodafone and O2 (which operate 2G networks at both

900 and 1800MHz) and 6.31 ppm for Orange and T-Mobile (which operate 2G networks at 1800MHz). As Ofcom was satisfied that there had been no material change in these markets, it proposed to use its powers under the Communications Act 2003 (the “Act”) to modify the SMP charge control conditions so that they would continue to operate until 31 March 2007.

Consultation questions

2.6 The June 2005 consultation asked the following questions to inform the initial view summarised in paragraph 2.5 above;

> Do you agree that there continue to be separate markets for wholesale voice call termination on each MNO’s network (or, where the MNO operates both 2G and 3G networks, across both networks) and that the geographic extent of each market matches the scope of each mobile termination provider’s network(s)?
>
> Do you agree that each of the 2G MNOs continues to have SMP?
>
> Do you agree that Ofcom should extend the existing charge control on 2G voice call termination by one year?
>
> Do you agree that the Target Average Charges should remain unchanged?

Consultation responses from stakeholders

2.7 Ofcom received ten responses to the June 2005 consultation, from Vodafone, O2, Orange, T-Mobile, H3G, BT, the UK Competitive Telecommunications Association (UKCTA), Cable and Wireless, MCI, and one respondent [✂] which wished to remain anonymous.

2.8 Seven of the nine non confidential responses broadly agreed that the proposal to extend the present charge control for one year was appropriate, while the other two non confidential responses (from BT and O2) argued that Ofcom should instead impose a four year charge control from April 2006.

2.9 Three of the five mobile network operators (Vodafone, Orange and T-Mobile) agreed that the levels of the charge controls should remain unchanged from the levels imposed in June 2004, although Vodafone and T-Mobile both proposed changes to the operation of the Weights Adjustment Factor. H3G did not agree with the way in which Ofcom had reached its conclusion that the target average charges for the 2G MNOs should be maintained at the current levels, and argued that that the approach could potentially reduce incentives for migration from 2G to 3G. O2 had argued in favour of a four year charge control to apply to voice call termination on both 2G and 3G networks and, therefore, proposed a different approach to determining the level of the charge cap, based on benchmarking to 2G costs. All four of the non confidential responses from fixed network operators argued, however, that Ofcom should tighten the level of the charge control.

2.10 All responses recognised the importance attached to decisions about regulation of wholesale mobile voice call termination, and all placed much weight on the fact that Ofcom had initiated a parallel, wide ranging consultation on the longer term regulation of wholesale mobile voice call termination (*Wholesale mobile voice call termination- Preliminary consultation on future regulation* published on 7 June 2005).

Many responses, while adopting a pragmatic stance on the proposal, were concerned that neither their own responses to this narrow consultation exercise nor the conclusions drawn by Ofcom, should constrain, or set precedents for, decisions which should more properly be taken in the context of the review of longer term options for regulating, or not regulating, wholesale mobile voice call termination. Ofcom shares those concerns and objectives.

2.11 Section 3 of this Statement contains a more detailed summary of the responses received and Ofcom's view of those comments.

Response from the European Commission

2.12 The proposal contained in the June 2005 consultation was notified to the European Commission, other Member States and the Secretary of State on 7 June 2005. The Commission has examined the notification and has no comments.

Ofcom's statutory duties

2.13 Section 3(1) of the Act sets out Ofcom's principal duty, namely to further the interests of citizens in relation to communications matters; and to further the interests of consumers in relevant markets, where appropriate by promoting competition. Section 3(2) of the Act sets out a number of specific objectives that Ofcom is required to secure in carrying out its functions (focusing on goals that are specific to each of the sectors that Ofcom regulates). Section 3(3) of the Act requires Ofcom to have regard, in all cases, to the principles that regulatory activities should be transparent, accountable, proportionate, targeted, and consistent, and to otherwise reflect "best regulatory practice" as appropriate. Section 3(4) of the Act sets out certain matters to which Ofcom must have regard in performing its duties. Section 4 of the Act, which sets out Ofcom's duties for fulfilling Community obligations, applies to certain functions of Ofcom, notably its functions under Chapter 1 of Part 2 of the Act. In particular, Section 4(3) outlines Ofcom's duty to promote competition.

2.14 Reference to Ofcom's duties is of particular importance in understanding Ofcom's decision making process in the presence of significant uncertainty. There remain considerable uncertainties about the cost of mobile voice call termination on 3G networks, the future impact of the rollout of 3G networks on the costs of 2G voice call termination, and how the interactions between 2G and 3G costs should be treated in the context of a regulatory charge control. In these areas, Ofcom is on occasion obliged to rely on a degree of judgement, and in making its decisions will have regard to its relevant duties under the Act.

2.15 The matters in Section 3(4) of the Act are of particular relevance here, including the desirability of promoting competition and encouraging competition in relevant markets, and the interests of consumers in respect of choice, price, quality of service and value for money, as required by Section 3(5) of the Act.

2.16 Ofcom considers that the analysis and arguments outlined in this statement are consistent with its obligations under the Act.

2.17 Ofcom has considered its views on the issues discussed in this document in the context of its duties under the Act. The discussion of Ofcom's decision in this Explanatory Statement represents an Impact Assessment as defined by section 7 of the Communications Act 2003. In so doing, Ofcom has had regard to such general guidance as it considers appropriate, including its recent statement, *Better Policy Making: Ofcom's approach to Impact Assessments*, (http://www.ofcom.org.uk/about/accoun/policy_making/#content "Ofcom's impact assessment guidelines").

Section 3

Responses to the consultation exercise

3.1 Ofcom received ten responses to the June 2005 consultation, one of which was confidential. Non confidential responses were received from Vodafone, O2, Orange, T-Mobile, H3G, BT, UKCTA, Cable and Wireless and MCI. Many responses were strongly conditioned by the knowledge that the proposal relates to a short term charge control and that Ofcom would continue to explore with stakeholders what is the appropriate approach to regulation after March 2007.

3.2 As such, many respondents, while agreeing with all or some aspects of the proposal in the context of the proposed one year extension of the charge control, expressed disagreement with the market definition, the finding of market power and/or the basis on which the level of any charge control might be set in future. In this statement, Ofcom acknowledges these concerns and, while addressing them here, will also consider them in the context of the continuing market review which is intended to decide what form regulation, if any, should take after 31 March 2007. In general, where a respondent has stated that it does not intend to object to Ofcom's approach to market definition, market power and the appropriate levels of the charge control on this occasion, but has expressed reservations about the future, and past, application of these approaches, Ofcom has not sought to respond in detail to these concerns in this statement; such matters have more applicability to the consultation on future regulation and will be addressed in the course of that longer term review.

3.3 All but two of the nine non-confidential responses broadly agreed that the proposal to extend the present charge control for one year was a proportionate response to present circumstances. The exceptions, O2 and BT, argued that Ofcom should instead impose a four year charge control from April 2006. In responding to the proposal to leave the levels of the charge controls unchanged, Vodafone, Orange and T-Mobile agreed that the charge controls should be rolled forward unchanged from the levels imposed in June 2004, although Vodafone and T-Mobile proposed changes to the operation of the Weights Adjustment Factor (see paragraph 3.103 *et seq* below). H3G did not agree with the way in which Ofcom had reached its conclusion that the target average charges for the 2G MNOs should be maintained at the current levels, and argued that that the approach could potentially reduce incentives for migration from 2G to 3G. O2, which had argued in favour of a four year charge control to apply to voice call termination on both 2G and 3G networks, proposed that a single uniform Target Average Charge, benchmarked to 2G costs, should be set for 2G and 3G termination by all UK MNOs. All four of the responses from fixed network providers (ie those from BT, UKCTA, Cable and Wireless and MCI) argued, however, that Ofcom should tighten the level of the charge controls, principally by ignoring the effects of changes in 2G traffic volumes which might arise as a consequence of traffic migrating to 3G networks.

3.4 All of the 2G MNOs expressed serious concern about the impact of the continuing asymmetry between regulation of the 2G MNOs and regulation of H3G, particularly as H3G, in their view, is now a significant part of the UK mobile landscape. T-Mobile and O2 also noted that H3G's charges had not fallen in line with reductions in the 2G termination charges offered by other MNOs. All warned that the asymmetry was providing H3G with artificial advantages in competing for mobile subscribers and must be addressed. Indeed O2 went further and argued that Ofcom is incorrect in law to address only the time bound remedy on 2G charges and has a duty to consider all remedies, including those relevant to 3G networks.

3.5 Respondents' comments about the specific proposal, and Ofcom's view of those comments, are discussed in more detail in the following paragraphs

Responses concerning market definition

3.6 T-Mobile, Orange, Vodafone and O2 all disagreed with Ofcom's conclusions on market definition.

3.7 T-Mobile, Orange and Vodafone chose not to present any new evidence to support their views and each of these MNOs indicated that they would not wish to challenge the approach to market definition on this occasion. O2 provide some further evidence relating to the use of SMS, which is discussed below.

3.8 Vodafone, O2, T-Mobile and Orange stated that they believe mobile voice call termination is properly defined within a single cluster market for mobile services. T-Mobile argued that Ofcom incorrectly continues to test for a cluster market by considering only complementarities in demand rather than production. T-Mobile referred Ofcom to its earlier submissions in relation to the inquiries leading to the current charge controls. Orange stated that it does not accept and never has accepted that there are separate markets for wholesale voice call termination on each mobile network. However, Orange recognised the reasons, based on Ofcom's definition of the relevant product, why Ofcom believes that no adequate wholesale substitute currently exists for termination of calls to a specific MNO and did not propose to challenge the definition in the context of the proposal to extend the charge controls for a further 12 months. Vodafone stated that it has long considered that Ofcom's approach does not properly analyse the competitive constraints under which MNOs such as Vodafone actually operate. However, Vodafone was willing to accept the proposed extension of the charge control for a further 12 months on the understanding that the issue of market definition, as it relates to SMP, is addressed fully in the new market review.

3.9 H3G commented that, on the basis that this is an interim review, maintaining the current approach to market definition is proportionate and appropriate. [✂]

3.10 O2 presented a view, not dissimilar to the other 2G MNOs, that mobile voice call termination is part of a wider market for mobile services. However, O2 also made a number of further points related to Ofcom's analysis.

3.11 O2 noted that SMS is increasingly used as a substitute for voice calls and thereby acts a constraint on the termination charges for voice calls. O2 points to evidence which shows that 45% of consumers substitute making calls from fixed phones with text messages and that on average this is done eight times a week. O2 believes that with the increasing usage of SMS the extent of substitution will increase. O2 argues that Ofcom's view, that SMS does not act as a competitive constraint on voice termination because operators set the price of both, ignores the fact that almost all SMS messages are sent between mobile operators. O2 believes that this is significant because it means wholesale charges are generally "netted out" and do not affect retail pricing (and so competitive pricing of retail SMS can constrain wholesale voice call termination charges). In addition O2 noted that wholesale charges for fixed line operators for terminating SMS are set at similar levels to those of mobile operators and so the same netting out principle applies.

3.12 O2 argued that consumer research presented by Ofcom to support its market definition does not reflect reality, as such consumer research is always susceptible to distortions caused by asking people to respond to hypothetical situations. O2 submitted its own empirical evidence concerning the behaviour of called and calling parties which it believes is inconsistent with Ofcom's conclusions and the way alternative services may act to constrain wholesale mobile voice call prices. This evidence was sourced from O2 Germany's experience with its Genion service.

3.13 O2 also argued that the test proposed by Ofcom to establish whether another service acts as a constraint on the pricing of voice call termination is too prescriptive. O2 proposed that it is sufficient to consider a service as imposing a competitive constraint if:

> "Calling parties use the other service as a substitute to making mobile voice calls"; and
>
> "Calling parties appreciate the relative pricing of making a mobile voice call and of the other, substitute service".

3.14 Responses from fixed network operators BT, UKCTA, MCI and Cable and Wireless all agreed that there continue to be separate markets for wholesale voice call termination on each MNO's network. [✂]

Ofcom's view on responses to market definition

3.15 Ofcom continues to share the view of the European Commission that there are separate markets for voice call termination on each MNO's network. Ofcom's reasoning was given in Section 3 of the June 2005 consultation, in which Ofcom noted that there are no effective demand-side or supply-side substitutes for voice call termination to the subscribers of a specific MNO that could constrain mobile termination charges to the competitive level. While Ofcom has the right to define this, or any other market, in a way which reflects national circumstances and which may differ from the European Commission's definition, such a decision would have to be robustly justified on the basis of identified demand and supply patterns. Ofcom does not believe that, currently, a divergence from the views of the European Commission in respect of this market is warranted.

3.16 Ofcom notes the fundamental disagreement between its view and that of T-Mobile, Orange, Vodafone and O2 who all state that they believe a cluster market containing all mobile services is the appropriate market definition. Ofcom set out its view on this matter in paragraph 3.61 of the June 2005 consultation, including the view that few mobile owners consider the prices of incoming calls in addition to the prices of outgoing calls when choosing their mobile network, and that the evidence suggests that calls to mobiles are not part of the wider bundle of services on which MNOs compete for subscribers.

3.17 [✂]

3.18 In relation to O2's specific comments on Ofcom's analysis outlined above, Ofcom notes the research which suggests that callers with both a fixed phone and a mobile phone do substitute making a fixed to mobile call with sending a mobile text message and that usage of SMS is increasing. Ofcom does not consider that the research provides compelling evidence that such substitution reflects price rather than other factors. SMS is a limited substitute for making a call for the reasons set out in paragraph 3.68 of the June 2005 consultation, namely that SMS enables parties to exchange only relatively short messages and that SMS can be delayed because, unlike a mobile voice call, an SMS is transferred between networks on a store and forward basis. Ofcom also believes that even if substitution was extensive, substitution of SMS in place of a voice call would not impose a sufficient competitive constraint on wholesale voice termination charges as mobile operators set the wholesale prices of both SMS and voice termination on their network. O2 argues that if (as O2 believes) wholesale SMS termination charges do not affect retail pricing then retail SMS prices can impose a competitive constraint on wholesale voice termination charges. However, Ofcom disagrees with the argument that wholesale SMS termination charges do not affect retail SMS prices. Ofcom is of the opinion that, since wholesale charges are part of the marginal cost of providing retail SMS services, they do affect retail pricing decisions. Therefore terminating operators can influence the retail price of SMS and incoming voice calls through wholesale termination charges and therefore control the competitive constraint that retail SMS may impose on wholesale voice termination charges. Ofcom however intends to consider this issue as part of the market review.

3.19 O2 refers to a common complaint about consumer surveys; that consumers are asked to respond to hypothetical situations which may not reflect what they may do in practice. Ofcom recognises this risk and has taken care, in the design of its surveys, to minimise that risk. Furthermore, this consumer evidence about hypothetical situations has not been relied on in isolation to test for competitive constraints. Ofcom has also taken into account responses to surveys of actual awareness of mobile number ranges and the prices of calling particular networks; as noted in paragraph 3.14 of the June 2005 consultation, there needs to be sufficient awareness of these two issues before any sensitivity to changes in the prices of calling a particular network can be acted upon.

3.20 Ofcom notes with interest the information provided about O2 Germany's Genion service which appears to offer customers a choice between a Calling Party Pays (CPP) and a hybrid CPP/Receiving Party Pays (RPP) arrangement for paying for calls. The evidence in respect of a number of O2 Germany's subscribers suggests that these subscribers value incoming calls, in some cases, to the extent that they are willing to contribute towards the cost of receiving those calls in order to reduce the cost to others of calling them. The fact that they may pay to receive some calls may mean that their choice of network provider may be affected by mobile termination charges, which could impose a competitive constraint on the cost of mobile termination. However, it also appears that a significant number of O2 Germany subscribers do not care sufficiently about the cost to others of calling them to warrant paying some of the cost of incoming calls. These subscribers do not impose a competitive constraint on O2 Germany's termination charges. In the UK Ofcom has accepted that operators can offer special tariffs to those subscribers who do care about the cost to others of calling them (See para 3.42 of the June 2005 consultation). However, this pricing strategy allows operators to separate the more price sensitive customers from other customers and therefore limit the constraint they may potentially impose on the termination charge.

3.21 O2 argues that Ofcom's test to establish whether another service acts as a constraint on the pricing of voice call termination is too prescriptive. The three conditions set out in paragraph 3.14 of the June 2005 consultation were as follows):

> Callers must be sufficiently aware that they are calling a mobile and that they are calling a specific network;
>
> Callers must be sufficiently aware of the price of calling that particular network; and

Callers must be sensitive to changes in the prices of calling the network they want to reach, i.e. an increase in the termination charge above the competitive level must cause consumers to adapt their behaviour to find an alternative satisfactory way of contacting the person they want to call.

3.22 In Ofcom's view these conditions do not differ materially from the conditions proposed by O2. O2's first condition, that calling parties use the other service as a substitute to making mobile voice calls, can only be satisfied if callers are aware that the number they are calling belongs to a mobile subscriber (which is Ofcom's first condition). O2's second condition, that calling parties appreciate the relative pricing of making a mobile voice call and of the other, substitute service, is the same as Ofcom's second condition. Ofcom's third condition is important because even if callers are aware they are calling a mobile and of the relative prices of alternative ways to contact that mobile subscriber they still must be sufficiently price sensitive to substitute to an alternative method of contact. In Ofcom's view this assumption is implicit in O2's first condition that calling parties use other services as a substitute. Therefore in Ofcom's view there is no material difference between Ofcom and O2's conditions, and, to the extent that there is any difference, Ofcom considers that its three conditions are more transparent and precise.

3.23 In summary, Ofcom does not believe that any of the evidence submitted in response to the June 2005 consultation indicates that there has been a material change in the markets such that would necessitate a change to the market definition adopted in June 2004.

Responses to the proposed view on the existence of market power

3.24 None of the 2G MNOs accepted that it enjoys the independence of action necessary to justify a finding of dominance. However, in the context of the proposed 12 months extension of the present charge controls, all were content not to oppose the proposal on this basis.

3.25 Each of the 2G MNOs noted that they have each presented, in the context of the last market review, detailed arguments to support their view. MNOs chose not to set out their views in detail but did reiterate their general views as set out in the following paragraphs.

3.26 O2 argued that, given its view that wholesale mobile voice call termination constitutes part of the market for mobile services generally, in which none of the MNOs has SMP, the market is indeed competitive.

3.27 Orange accepted that, given Ofcom's market definition, it has a 100% market share. However Orange argued that, whilst this large market share may give rise to a presumption of SMP, it does not hold a position of SMP. Orange noted that its reasons for holding this view have been well documented in past market review submissions. Orange did not repeat its previous arguments but drew Ofcom's attention to its interconnection agreement with BT which, it says, prevents it from increasing its termination charge without BT's consent which, in its view, would almost certainly not be given. Orange does not, however, propose to challenge Ofcom's view in the context of the proposal to extend the present charge controls for a further year.

3.28 T-Mobile noted that it has previously submitted evidence on a range of constraints on mobile termination charges and these need to be considered in their aggregate impact. As part of its response to Ofcom's consultation on the future regulation of mobile termination T-Mobile set out evidence on more recent developments which it believes will further constrain termination charges. These include increased competitive impact from callers to mobiles substituting to alternative calling options such as on-net mobile to mobile calls and on-net SMS as substitutes for fixed to mobile calls and fixed to fixed calls as a substitute for fixed to mobile calls. T-Mobile also discussed alternatives that it believes will have a material market impact in the near future, such as instant messaging and VoIP calls.

3.29 Vodafone drew Ofcom's attention to submissions it made in previous market reviews in which it argues that it does not enjoy the independence of action in setting termination charges necessary for a finding of SMP.

3.30 H3G agreed that, given the market definition and current circumstances, it is appropriate to maintain the finding of SMP on the 2G MNOs. However, H3G stressed that it disagrees with Ofcom's approach to assessing market power and in particular in relation to countervailing buyer power. H3G noted that its views are presented in detail in its appeal to the Competition Appeals Tribunal against Ofcom's last market review finding that H3G had SMP. The Competition Appeal Tribunal has now handed down judgment in this matter (*Hutchison 3G (UK) Limited v Office of Communications,* case number 1047/3/3/04, judgment of 29 November 2005). The Competition Appeal Tribunal found that Ofcom erred in its determination of the existence of significant market power for H3G, because it did not carry out a full assessment of the extent to which BT had countervailing buyer power. However this statement deals with the remedies imposed on the 2G mobile operators, and as such is unaffected by this decision.

3.31 Responses from fixed network operators all agreed that each MNO has SMP in termination of calls on its own network.

Ofcom's view on responses to Market Power

3.32 Ofcom notes that the views of MNOs and Ofcom have been clearly documented in the context of the last market review and, as no new issues have been raised in the context of Ofcom's no material change consideration, Ofcom does not propose to reiterate in this Statement its reasons for maintaining its view, expressed in Section 3 of the June 2005 consultation, that there has been no material change in the markets. Furthermore, Ofcom also recognises that some of the views on market definition and on the existence of market power are inextricably linked, and a particular view on market definition may condition the view on the existence of market power; many responses, while disagreeing with the basis of Ofcom's approach to market definition, recognised that Ofcom's definition, if taken as a given, might strongly suggest the existence of market power.

Responses to the proposed extension of charge control by one further year

3.33 All non confidential responses from fixed and mobile operators, except those from BT and O2, agreed that it is appropriate to extend the charge control for a further 12 months to 31 March 2007. Both BT and O2 agreed that Ofcom should extend the charge controls, but these respondents argued that Ofcom should impose a four year long control from March 2006 as they believe there is little to be gained by imposing a one year charge control while options for future regulation are assessed.

3.34 O2, however, clarified that its view on this matter was subordinate to its view on the need to impose appropriate remedies on all MNOs with SMP, including H3G. In O2's view, however, little could be gained from delaying until 2007 a decision on longer-term controls as it would not be feasible in O2's view, to establish the LRIC of 3G termination. BT argued in favour of a four year charge control in part on the basis of consistency with Ofcom's charge control applied to BT's fixed network. BT also noted that one year price caps are administratively expensive in requiring repeated consultation, and also undesirable as they fail to provide an opportunity for regulated operators to outperform the efficiency targets.

3.35 [✂]

3.36 T-Mobile questioned the extent to which reductions in mobile voice call termination charges had been passed through to the prices of fixed to mobile calls, and argued that charge controls imposed to date had failed to meet their objectives and had harmed overall consumer welfare. Nevertheless, given Ofcom's commitment to a wider review of the mobile voice call termination market, T-Mobile was willing to accept an extension of the present charge controls, despite its reservations about the impact of such controls.

Ofcom's view on responses to the proposal to extend the charge control for a further year.

3.37 Ofcom understands the concerns expressed by 2G MNOs about the asymmetric regulation of H3G and, as was indicated in its consultation *Wholesale mobile voice call termination- Preliminary consultation on future regulation* which was published on 7 June 2005, intends to consider the matter as part of the longer term review.

3.38 Ofcom does not accept 02's argument that it is incorrect in law to address only the time-bound remedy on 2G charges and has a duty to consider all remedies, including those relevant to 3G networks. Ofcom has discretion as to what SMP services conditions it considers to modify. As discussed throughout this statement, and in particular in the paragraph below, Ofcom considers it is appropriate at this time to only modify the current charge controls. However, as has been mentioned before, Ofcom intends to consider the appropriateness or not of all regulation, as part of the forthcoming market review

3.39 Ofcom does not agree with BT and O2 that it will be no better placed in late 2006, compared with today, to determine the appropriate approach to regulation of wholesale mobile voice call termination. As stakeholders are aware, Ofcom has initiated a detailed cost modelling exercise to examine the underlying costs of 3G as well as 2G voice call termination. Ofcom recognises the possibility that the output of that exercise may need to be amplified by other considerations when determining the precise nature of appropriate regulation after March 2007, but Ofcom does believe that the results of this exercise will provide a significantly better understanding of the costs of wholesale mobile voice call termination on both 2G and 3G networks. When setting a price control in respect of network access, Ofcom is required by Section 88 of the Communications Act to take account of, amongst other things, the extent of the SMP provider's investment in the matters to which the condition relates. Ofcom therefore believes it would not be appropriate to take a decision on whether to impose a four year charge control until that decision can be informed by the output of the cost modelling exercise. For these reasons, Ofcom does not agree with BT and O2 that it should impose a four year long control from March 2006. [✂]

3.40 With reference to T-Mobile's observations about pass-through of charge reductions, Ofcom can confirm that it continues to make annual assessments of BT's compliance with its retail price control obligations, which take into account cost savings gained as a consequence of reductions in mobile voice call termination rates; Ofcom is currently assessing BT's compliance during the year which ended on 31 August 2005. Furthermore, Ofcom can also report that BT continues to take the view that it has passed through to customers the great majority of charge reductions which have taken effect since July 2003, and that this has been achieved specifically through reductions in the prices of fixed to mobile calls. Ofcom will continue to assess the extent of pass through.

Responses to the proposed level of the target average charge

Overview

3.41 Views on the appropriate level of the target average charge for the extended period of 12 months from 1 April 2006 to 31 March 2007 were varied. In the context of the proposed one year extension of the charge control, Orange, T-Mobile, and Vodafone, whilst expressing some concern about the precise methodology employed, agreed that the level of the charge control should remain unchanged. In contrast, the fixed network operators and H3G argued that the target charges should be reduced from the present levels. [✂] UKCTA pointed to what it perceives is a continuing interest in GSM Gateways as evidence that mobile termination rates are too high and encouraging inefficient and undesirable bypass of traditional mobile termination. O2, which had proposed that a four year control should be imposed on voice call termination on 2G and 3G networks by all MNOs, including H3G, from 1 April 2006, proposed that the appropriate level of the control should be established by reference to benchmarking against the LRIC of 2G voice call termination. However, O2 also indicated that it would be appropriate to make adjustments to the 2G LRIC as previously implemented by Ofcom, and in addition that there should be an allowance for the costs associated with a migration to 3G.

Cost of capital

3.42 Notwithstanding their acceptance that the existing charge controls should be extended, unchanged, for a further year, Vodafone and T-Mobile both questioned Ofcom's assumed cost of capital; T-Mobile specifically argued that the value of the equity risk premium used to estimate the charge control was too low at 4.5% (compared to 5.0%, which was used in the last market review). Vodafone observed that Ofcom had made frequent changes to its assumptions about the cost of capital in recent years, each causing a step change in the termination charge around the date of implementation. Vodafone argued that the assessment underlying Ofcom's latest view on the costs of capital was not sufficiently robust to warrant a further change.

Traffic migration

3.43 Those respondents who argued for a reduction in the level of the charge controls disagreed with Ofcom's proposal to take into account the potential increase in unit costs of 2G voice call termination which may arise due to lower 2G traffic volumes as traffic migrates to 3G networks.

3.44 UKCTA argued that reducing volumes of 2G terminations reflect an inefficiency arising from the running of two networks in parallel while 3G networks are rolled out. As such, UKCTA characterised the increased unit costs of 2G termination as a 3G implementation cost which should not be accommodated within the 2G charge control before the debate on regulation of 3G services has taken place. UKCTA believes it is unlikely that MNOs will increase retail charges for 2G services (at least not until they seek to retire their 2G networks) and, therefore, wholesale termination charges should not be treated any differently.

3.45 MCI further observed that the approach proposed by Ofcom appears to suggest that some of the implementation costs of 3G networks and the costs of migration from 2G to 3G should be funded by 2G call charges. MCI argued that adjustment of call volumes due to migrated traffic should result in a corresponding *reduction* in costs appropriate to the 2G network associated with assets which are shared with the 3G network. (MCI did not state what those reduced costs might relate to.)

3.46 Fixed network providers (BT, UKCTA, MCI and Cable and Wireless) argued that Ofcom's proposed approach to setting mobile termination charges is not consistent with its approach to setting termination charges on BT's fixed network. These operators argued that Ofcom had taken no account of likely migration of fixed termination services to BT's Next Generation Network (NGN) when setting charge controls for the period to 2009. As BT argued in its response to the June 2005 consultation, the costs on which the BT fixed network charge control were modelled were the PSTN costs, despite the fact that BT is likely to have replaced its network and moved to all-IP platforms by the end of the control; thus, in the context of BT's fixed network, Ofcom was proposing to consider at a later date how new services based on the new network platforms should be regulated.

3.47 H3G stated that it did not agree with the way in which Ofcom had reached its conclusion that the target average charges for the 2G MNOs should be maintained at the current level, and that Ofcom's reasoning was not sufficient to justify this conclusion. However, H3G also stated that, for the purposes of a one year extension of the charge control, it had no comments on the particular modelling exercise. H3G was, nevertheless, concerned that the way in which Ofcom had proposed to set the target average charge for the 12 months period from 31 March 2006 sets unfortunate precedents and fails to take into account incentives effects on 3G migration. In H3G's view, Ofcom has a statutory duty to act with a bias in favour of voice call termination on 3G networks by promoting migration from 2G to 3G networks. H3G also argues that the approach proposed by Ofcom fails even to ensure that incentive properties are neutral with respect to migration between 2G and 3G within the period of the proposed extension of the charge control.

3.48 In H3G's view, the approach would reward delay in migrating customers as MNOs would receive the benefits of assumed migration in subsequent years even if migration does not take place. H3G believes that operators should be required to show that they are actually migrating customers in sufficient volumes to have the cost effect identified by Ofcom. H3G also argues that the approach Is not consistent with the efficient operator principle because the assumed level of migration is not based on an "efficient" level of migration. Therefore this discriminates against those operators who may be efficiently migrating customers to 3G. H3G believes Ofcom should follow a similar approach to the last market review whereby all traffic is assumed to be carried over the 2G network.

3.49 Vodafone welcomed Ofcom's decision in the June 2005 consultation to make a preliminary consideration of the effects of migration of traffic from 2G to 3G networks, and noted that the use of a 2G forecast which assumes that 80% of traffic has migrated to 3G by the end of the decade would result in a higher cost of termination in 2005/06.

Asymmetry between charge caps applied to combined 900/1800 MHz and 1800 MHz MNOs

3.50 Vodafone and O2 both expressed concern that the charge control applied to Orange and T-Mobile (which operate networks at 1800MHz) continues to be above that applied to Vodafone and O2 (which operate networks at both 900MHz and 1800 MHz). Vodafone and O2 both claim that the differential is not justified, as 1800 MHz operators have rolled out their networks at a slower rate than the combined 900/1800 MHz operators and have thereby benefited from lower equipment costs (which has compensated for the need to deploy more equipment in the 1800MHz networks). Vodafone and O2 both noted that Ofcom's adjusted LRIC model also indicates that the differential between the costs of the combined 900/1800 MHz MNOs and the 1800 MHz MNOs has reduced significantly. Vodafone further argued that Ofcom's model understates the number of transceivers (TRXs) per sector in the 1800 MHz networks, and that a correction would reduce the assumed costs incurred by those MNOs.

Modelling approach

3.51 UKCTA questioned whether the LRIC model had taken into account economies of scope between the 2G and 3G networks; much of the 2G network, in UKCTA's view, being capable of re-use within the 3G network. This latter view was also expressed by Cable and Wireless.

3.52 Orange, while accepting that existing charge controls should be extended, unchanged, for a further year, believed that the 2G LRIC model contains a number of flaws, as demonstrated, in its opinion, by the material adjustments required to align capital and operating costs derived from the model with those obtained from cost accounting information. In particular, Orange stated that individual asset lives, the life of the 2G network, the recognition and allocation of fixed and common costs and the rate of traffic migration onto 3G networks need to be reviewed. In Orange's view the proposed Target Average Charge is at the lower bound of a reasonable estimate of the underlying cost of termination.

3.53 Whilst recognising that it may not be appropriate in this context for Ofcom to review comprehensively the efficient charge level, T-Mobile recommended reviewing the model to ensure that elasticities, economies of scale and the cost disadvantages associated with 1800MHz relative to 900MHz spectrum correspond to the best available empirical evidence.

3.54 Vodafone questioned whether Ofcom had applied the correct RPI adjustment when updating the 2G LRIC model, and also questioned the basis of the traffic growth assumptions adopted by Ofcom when adjusting that model (specifically whether Ofcom had taken an overall view of voice traffic, fixed as well as mobile, consistent with the view taken by Ofcom in its review of BT Network Charge Controls). Vodafone also commented on Ofcom's 2G modelling assumptions concerning the proportion of on-net traffic, both in the context of a retail market of five, rather than four, players, and in the context of on-net traffic which may now be carried in whole or in part on a 3G network.

3.55 [✂]

Non-network common costs

3.56 UKCTA argued that Ofcom's cost analysis is conservative and, in particular, non-network common costs have not been reduced to reflect increased volumes.

Network externality

3.57 BT argued that it is not appropriate to apply a network externality surcharge; in BT's view this had ceased to be appropriate as the high penetration levels of mobile phones means that it is no longer necessary to promote mobile subscriptions by subsidising MNOs' subscriber acquisition costs.

3.58 UKCTA disagreed with the inclusion of a network externality mark-up noting, however, that if it is to be included UKCTA would not expect it to increase with inflation when overall network costs are falling in both real and nominal terms.

Specification of condition

3.59 Vodafone requested that the Weights Adjustment Factor should not apply to the extended charge control, and argued that it is not relevant in the context of an absolute rate which recovers a specified level of cost. T-Mobile proposed that, on a temporary basis, the Weights Adjustment Factor should be dis-applied for year two of the price control allowing prices to be reset in relation to the target. Both MNOs argued that the factor undermines the cost based nature of the charge control by causing the LRIC based Target Average Charge to change as a consequence of changes in weightings between peak and off-peak traffic. T-Mobile further commented that the Weights Adjustment Factor has failed in one of its objectives, of keeping rates constant, as several MNOs have actually varied their charges.

3.60 While BT proposed that Ofcom should impose four year LRIC based charge controls, it also proposed that, if there is a genuine need to impose a very short term price cap, then Ofcom should extend the present charge control at the same rate of decline as settled by the Competition Commission in 2003; BT characterised this as a reduction in termination charges of about 10%.

Ofcom's view on the responses to the proposed level of the target average charge

Ofcom's Overview

3.61 As stated in paragraph 4.13 of the June 2005 consultation, in the context of an extension to the existing charge controls for one further year and given Ofcom's assessment that there has been no material change in markets since the last market review, there is merit in providing stability and maintaining the present charge controls at their existing levels. However, it is necessary to ensure that maintaining the charge controls at their existing levels falls within a reasonable range as justified by the available evidence. Towards this aim, Ofcom undertook some additional cost analysis as described in section 4 of the June 2005 consultation. In the first instance a number of input parameters were updated (see paragraph 4.14 of the June 2005 consultation) consistent with the existing conceptual methodology, simply to ensure that the model reflects the most recent actual data available. Secondly, the impact of traffic migration from 2G to 3G was examined, in light of Ofcom's broader study of these issues for the next market review (see paragraph 4.17 of the June 2005 consultation).

3.62 As stated in paragraph 4.26 the June 2005 consultation, Ofcom recognises merit in the argument that costs arising from migration to 3G are not relevant to the assessment of a regulated 2G charge for as long as 2G networks and spectrum are not exhausted and migration of voice call termination to 3G networks offers no advantages to customers. This argument would result in a lower target average charge (compared to the existing charge levels determined in June 2004) due to updating key input parameters, as advocated in some of the responses. However, Ofcom also recognises that there is merit in taking account of the effect of traffic migration to 3G where it can. While Ofcom's early analysis suggests that this may lead to a higher target average charge, Ofcom is undertaking significant work to understand better the interactions between 2G and 3G costs, resulting from migration and, as stated in paragraph 4.27 of the June 2005 consultation, Ofcom believes that it is not appropriate or feasible to resolve these issues at this time. Therefore, on the basis of the information currently available, Ofcom remains of the view that the best balance between the arguments is struck by maintaining charges at the current level for a further 12 months. However, this should not be interpreted to mean that Ofcom views the most likely rate of traffic migration to 3G to be that which exactly offsets the downward adjustments resulting from the parametric updates. Rather, Ofcom views maintaining the existing target average charges as a reasonable and appropriate approach in the context of the extension to the existing charge control, prior to a fuller understanding of the interaction between 2G and 3G costs, given the arguments for both lowering and raising the target average charges.

3.63 In its "Statement on wholesale mobile voice call termination" published on 1 June 2004 (the "June 2004 Statement"), Ofcom modelled future voice traffic (for the purposes of regulating 2G termination charges) *as if* it was carried on a 2G network of a reasonably efficient operator (see paragraph C.35 of the June 2004 Statement). Adoption of this scenario was not intended to negate the existence of 3G technology and its impact, nor the likelihood that in reality voice traffic will at least partially migrate to 3G networks. Rather, as stated in paragraph C.39 of the June 2004 Statement, Ofcom's view was that this represents a reasonable modelling approach for the purposes of setting regulated 2G termination rates, given that the timing and rate of migration of voice traffic from 2G to 3G networks is essentially a decision to be made by operators. Ofcom continues to believe that this is one reasonable approach for setting regulated 2G termination charges.

3.64 However, Ofcom is aware that there have been developments in the 3G market in the last 15 months with all five MNOs now having operational 3G networks offering 3G voice call termination and the number of 3G subscribers growing quickly: for example, H3G reported in excess of 3.2m 3G subscribers by the end of August 2005[1]; and Vodafone was reported to have over 380,000 3G customers by the same point[2]. In part as a result of these developments, Ofcom has a significant workstream underway to gain a better understanding of the impact of traffic migration from 2G to 3G and the costs of 3G voice call termination, as well as 2G voice call termination, which will provide an input into the next market review. This work to date has revealed that there are complex interactions between 2G termination costs and 3G termination costs resulting from 2G-3G migration as well as cost sharing issues between 2G and 3G networks. In light of greater appreciation of these issues, Ofcom believes that it is appropriate to recognise that, in addition to the reasonable approach taken in the June 2004 Statement (outlined in the preceding paragraph), there is an argument for taking into consideration traffic migration to 3G and hence

[1] See H3G press release 25 August 2005, http://www.three.co.uk/news/index.omp
[2] Financial Times, 20 September 2005, p20

lower volumes remaining on the 2G network. Ofcom also understands that, in the short to medium term, there are limitations on the extent of the control which mobile operators can exercise in respect of migration of voice call termination traffic from 2G to 3G. These issues are discussed further in paragraph 3.83 below.

3.65 At this stage in the development of 3G, the rate of migration of traffic from 2G to 3G is still unclear. Ofcom's current work in developing a new 2G-3G mobile LRIC model is designed to examine these issues, and the output will be used to inform the next market review. In advance of completion of that work, Ofcom believes that it is appropriate to consider the best available evidence to inform the level of an extension to the existing charge controls both with and without taking account of migration to 3G. As presented in the June 2005 consultation, based on the information available at this time, Ofcom remains of the view that it is appropriate to maintain the target average charge at the existing level for one further year.

3.66 O2 has proposed that, from April 2006, Ofcom should adopt a pragmatic approach of regulating all wholesale mobile voice call termination services (including those using 3G networks) at a rate benchmarked to the 2G LRIC level. Ofcom believes that it would be inappropriate and premature to adopt such an approach at this stage, prior to gaining an understanding of 3G costs and cost structures which is the purpose of Ofcom's detailed cost modelling exercise. Whilst Ofcom acknowledges O2's concern that the cost modelling exercise may not generate a single efficient charge level for 3G voice call termination, as opposed to a range of values, this concern does not render the exercise meaningless or uninformative.

3.67 Furthermore, O2's proposal that an allowance should also be incorporated for costs associated with migration to 3G recognises that there is an interaction between 2G and 3G which needs to be considered. Ofcom's work to date on the cost of voice termination on 3G suggests that these interactions are complex. Ofcom therefore believes that it is important to complete this work before making any judgements regarding the costs associated with migration to 3G (beyond the direct impact on 2G volumes), especially given O2's proposal to regulate the charges not only of 2G voice termination but also 3G voice termination, and against a background of varied deployment of 3G networks by the five mobile operators.

3.68 Ofcom notes UKCTA 's observation that interest in the use of Gateways to bypass traditional mobile termination might indicate dissatisfaction with the price of mobile termination, or at least a desire to reduce the retail price of calling from a fixed line to a mobile phone; the main purpose of Gateway services is indeed to provide cheaper access to mobile networks. Ofcom does not agree, however, that any continuing interest in using Gateway services necessarily indicates that the present charge controls are set at too high a level. As UKCTA implies, the advantage which users of Gateway services seek to enjoy is the lower price of on-net mobile calls compared with fixed to mobile. The low price of retail on-net calls relative to wholesale termination is an outcome of competition in retail mobile markets and, in particular, competition to supply a range of retail services, including both on-net and off-net calls.

Cost of capital

3.69 T-Mobile and Vodafone both argued against the cost of capital used by Ofcom to estimate the charge control. T-Mobile specifically argued against Ofcom's proposed reduction in the Equity Risk Premium ("ERP") to 4.5% from 5.0%, whilst Vodafone argued that in general Ofcom should not use a lower cost of capital unless there is a sufficiently strong reason to do so when set against the impact that changing the cost of capital has on the modelled costs.

3.70 As explained in Annex E of the June 2005 consultation, this reduction in the cost of capital from the value of 12% used in the last market review is due to two factors: firstly a reduction in the risk free rate from 4.75% to 4.6% warranted due to change in market rates; and secondly a reduction in the ERP from 5.0% to 4.5%.

3.71 These adjustment are in line with, and explained in further detail in, a separate Ofcom consultation and statement specifically addressing certain aspects of the cost of capital (see "Ofcom's approach to risk in the assessment of the cost of capital" http://www.ofcom.org.uk/consult/condocs/cost_capital/). In that consultation document Ofcom explained in detail its reasons for proposing to use a value for the ERP of 4.5%. In August 2005 Ofcom published its statement on this consultation which confirmed the proposal to reduce the ERP from 5.0% to 4.5% (See http://www.ofcom.org.uk/consult/condocs/cost_capital2/statement/). As part of that consultation Ofcom considered representations made by many stakeholders (including T-Mobile and Vodafone) and these are discussed in Section 4 of the statement in some detail. In addition Ofcom also considered representations which concerned its estimate of the risk free rate. In Section 8 (para 8.4 to 8.15) Ofcom's view of the appropriate risk free rate is discussed.

3.72 Ofcom believes it is appropriate to apply the reduced values of 4.5% for the ERP and 4.6% for the risk free rate in the context of the proposed extension of the charge controls on mobile call termination.

3.73 Ofcom believes it is appropriate for the cost of capital to be updated to reflect its current views. To not update the cost of capital for these two parameter changes would be inconsistent with Ofcom's view of their appropriate value.

3.74 A further change for consistency relates to the rate of inflation. In the June 2005 consultation, Ofcom assumed a real cost of capital of 11.0% based on an assumed forward looking rate of inflation of 2.7%. However, for consistency with the recent cost of capital consultation, Ofcom now believes it is more appropriate to calculate the real cost of capital on the basis of a 2.5% rate of inflation (see para 8.15 of the August 2005 statement), which results in a increase in the real cost of capital to 11.2%[3]. However, the effect of this amendment on the LRIC model output is negligible and therefore does not alter Ofcom's view of the appropriate level for the 1 year extension[4].

3.75 Vodafone also argued that changes in the cost of capital induce a disproportionate step change in the efficient termination charge around the year of implementation. Ofcom notes that the economic depreciation algorithm implemented in the 2G LRIC model takes account of changes in cost of capital that may influence the costs in the year in which the change occurs but does not regard this observation as justification for neglecting to update the cost of capital. However, Ofcom is reassessing the

[3] This is because the cost of capital is first calculated in nominal terms and then the cost of capital in real terms is derived from this using the rate of inflation. Ofcom's view of the nominal cost of capital is unchanged.

[4] This amendment results in an increase in the 2006/07 LRIC for voice termination of less than 1%. This is immaterial in the context of Ofcom's view as stated in paragraphs 4.26 to 4.27 of the June 2005 consultation, that there is significant uncertainty about the level of future 2G unit costs, and the best balance between the arguments for raising and reducing the level of the current charge controls is to maintain them at the existing level for one year.

appropriate implementation of the economic depreciation calculation and the appropriate path of cost recovery in the context of the next market review.

Traffic migration

3.76 Fixed operators argued against Ofcom's proposal to take into account the impact of traffic migrating from an operator's 2G network, to its 3G network. They believe the correct approach would be similar to that summarised in the statement "Review of BT's Network Charge Controls" published by Ofcom on 18 August 2005 (the "NCC"), where a "technology neutral" approach was taken to the move from BT's existing Public Switched Telephone Network ("PSTN") to its proposed IP-based Next Generation Network. The operators argued that Ofcom's approach to setting the 2G termination charge is inconsistent with the approach in the NCC and represents a departure from the approach taken to mobile call termination in June 2004. In Ofcom's view the approach which it proposed in the June 2005 consultation is appropriate to the circumstances addressed in the extension of the charge controls. The comparison with the approaches taken in both the NCC and the June 2004 statement on mobile call termination is discussed below.

3.77 In the last mobile call termination market review, Ofcom took the view that an appropriate ceiling for the reasonable costs of termination could be set by modelling costs as if all traffic is carried on the 2G network. Paragraph 4.26 of the June 2005 consultation noted that this remains a reasonable approach which Ofcom has taken into account in deriving the extension of the charge controls. However, in addition, for the reasons given in paragraphs 3.61 to 3.64 above, Ofcom believes that there is an argument for considering the impact of traffic migration to 3G and hence lower volumes remaining on the 2G network.

3.78 In the NCC Ofcom derived costs by including in the forecast the volumes of existing services that BT might in practice choose to deliver using a different technology, its proposed IP-based Next Generation Network. However, the volume of traffic expected to migrate from narrowband to broadband was excluded (i.e. where the end user chooses a broadband service). In considering the parallel between this approach and mobile termination, the question is whether 3G voice termination should be considered more akin to another technology that the MNO may choose to deliver the 'existing service' (2G voice termination), or instead to a distinct service chosen by the end user.

3.79 Ofcom has taken into account the costs of mobile termination including all forecast mobile voice termination volumes. As noted above, the modelling of costs as if all traffic is carried on the 2G network remains a relevant approach.

3.80 Also, Ofcom's approach to dealing with the reduction in demand for fixed narrowband services with the take-up of broadband services in the NCC is similar to the approach Ofcom has proposed with respect to migration from 2G to 3G networks. In the NCC Ofcom considered that reduced demand for narrowband services and especially for dial-up internet services would lead to a reduction in minutes carried over the PSTN and, given the presence of economies of scale, increased unit costs. Similarly in the June 2005 consultation Ofcom considered that migration from 2G to 3G handsets could result in a reduction in the minutes carried over an MNOs 2G network and therefore increased unit costs for 2G voice call termination.

3.81 Furthermore, in the NCC Ofcom considered that the take-up of broadband services that make use of PSTN assets would lead to economies of scope with existing narrowband services. In determining the costs of narrowband services, the impact of cost sharing with broadband services was captured through the addition of further volumes in the NCC cost model. Similarly in the June 2005 consultation Ofcom considered the possible sharing of assets between 2G and 3G networks, and conducted an initial simple analysis to estimate the magnitude of the potential reductions on 2G unit costs arising from economies such as site sharing (see paragraphs E.52-E.53 of the June 2005 consultation).

3.82 Another relevant consideration in the decision on how to treat 2G-3G migration is the degree to which MNOs control the timing and rate of migration. There is reason to believe that the timing and rate of migration of BT's voice traffic from its existing PSTN to its proposed NGN is a decision to be made by BT based on cost advantages and other commercial considerations. Whilst Ofcom believes that this may well be a fair description of the situation faced by MNOs in the transition from 2G to 3G networks, Ofcom is conscious that some MNOs have argued that such decisions are not necessarily within their control. For example, as stated in paragraph C.39 of the June 2004 Statement, Orange argued that the competitive requirement to offer 3G services drives the rollout of 3G handsets which at present will select the 3G network automatically if available, causing incoming calls to be terminated on the 3G network. As stated in paragraph C.39 of the June 2004 Statement, Ofcom continues to believe that technologies are likely to develop to enable MNOs to exercise sufficient control over their incoming traffic, however, in more recent discussions with MNOs, Ofcom has been made increasingly aware of the technical obstacles to achieving this in the short-term. To the extent that MNOs cannot control the timing and rate of migration, they are not in a position to take the most cost efficient route; if regulation assumes otherwise, by applying a technology neutral efficient benchmark for the cost of delivering voice call termination, MNOs may be unable to recover their actual costs.

3.83 Ofcom believes that it is appropriate to consider these complex issues alongside further understanding of the costs of termination over 2G and 3G networks in the context of the next market review. Ofcom recognises that consideration of 2G-3G migration may result in higher 2G termination charges than would have otherwise have been the case as adopted in the June 2004 Statement. As explained above, there is an argument that the costs of traffic migration should be taken into account and if MNOs are unable to control whether a call is terminated on their 2G or 3G network there may be concerns regarding cost recovery. Ofcom believes it appropriate to raise these concerns at this stage and recognise that, in light of the current market dynamics, there are arguments in favour of deriving appropriate termination charges both with and without taking account of migration.

3.84 H3G argues that Ofcom, in taking account of 3G migration, has not considered its effect on MNOs' incentives to migrate subscribers from 2G to 3G. As already noted, this is a complex issue which Ofcom intends to consider in the context of the next market review. However, Ofcom does not believe that its approach in this extension of the 2G voice call termination charges has changed MNOs' incentives.

3.85 At whatever level Ofcom decides to set the 2G charge control MNOs would be incentivised to maximise their profits by selling mobile services delivered by their 2G and 3G networks. In general when Ofcom sets the price for a regulated service this provides the regulated firm with the incentive to minimise its costs because this is the only way for it to increase its profits from the sale of the particular service. Hence the more important factor influencing incentives is that the regulated charge is divorced from actual costs and behaviour than the assumptions affecting the level at which the regulated charge is set. Avoiding a linkage between the MNOs' actual migration behaviour and the level of the regulated charge avoids distortion of the MNOs' incentives about optimal migration strategies. That is, because the regulated charge does not change depending on how much or how little traffic they migrate, the MNOs have incentives to minimise their costs. In contrast, linking the level of the regulated charge to the MNOs' actual migration behaviour, as H3G suggests, would distort incentives. It would provide an incentive to migrate traffic to 3G not because this would be more efficient, but because this would lead to an increase in the regulated charge for 2G termination.

3.86 In contrast to H3G's suggestion, the approach does not reward delay, because the MNOs receive the same regulated 2G charge whether or not they migrate traffic, and they do not receive a higher rate if they do not migrate. As explained above, in Ofcom's view, the charge control has desirable cost efficiency incentives that would be lost if the regulated charge were linked to the amount of migration in practice. For the same reason Ofcom does not accept that there is any discrimination against operators that may be efficiently migrating customers to 3G, as such operators will gain the benefits from such efficient migration such as through lower costs.

3.87 However, Ofcom notes that in the case of call termination it currently regulates only 2G termination. As discussed in Ofcom's June 2005 consultation on the future regulation of mobile call termination, MNOs may set 3G termination charges at their own discretion, subject to any relevant legislation such as the Competition Act 1998. This in itself may have an influence over an MNO's chosen migration strategy and is a matter to which Ofcom will give further consideration in the market review. Other important factors, beyond the charges for 2G and 3G call termination, include how the MNO's actual costs change as it follows different migration strategies.

3.88 In the context of an extension to the existing charge control for one year, and based on these arguments and the available information, as stated in paragraph 4.27 of the June 2005 Consultation, Ofcom believes that it is reasonable to maintain charges at the current level.

Asymmetry between charge caps applied to 900/1800 and 1800 MNOs

3.89 Ofcom has carefully considered O2 and Vodafone's proposal relating to both the slower and later rollout of 1800 MHz operators' 2G networks, and Vodafone's proposed increase in the assumed TRX per sector capacity of a macrocell for an 1800 MHz operator.

3.90 Ofcom has considered Vodafone's analysis and acknowledges that a simple application in the model of a slower network rollout for 1800 MHz operators could lead to charges closer to those currently derived for the combined 900/1800 MHz operators. However, Ofcom believes that Vodafone's delayed coverage profile for 1800 MHz operators is based on T-Mobile's network coverage, rather than the average position of the two 1800 MHz operators which would be a more appropriate benchmark. More critically, Ofcom believes that it would be inconsistent to assume a delayed network rollout for 1800 MHz operators without also applying a similar assumption to the profile of demand experienced on those networks. Ofcom believes that a realistic implementation of this effect would increase the unit costs of the 1800 MHz operators to the extent that it would cancel out the cost reducing effects of Vodafone's proposed adjustment, thus maintaining the 1800 MHz operators' efficient charge at a higher level. The argument has not, therefore, materially changed Ofcom's view of the reasonable level of charges for this statement. However, Ofcom currently intends to consider the appropriateness of the "average efficient operator" approach in the context of the next market review.

3.91 Ofcom has also considered Vodafone's arguments for increasing the assumed TRX per sector capacity in the model for 1800 MHz operators. However, Ofcom does not consider that Vodafone has presented definitive new evidence for such a capacity increase to be applied to the 2G LRIC model – whilst Ofcom acknowledges that significantly higher capacities may be theoretically achievable, as stated in paragraph F.101 of the consultation document "Wholesale mobile voice call termination" published by Oftel on 19 December 2003, Ofcom believes that there may be other constraints on what is practically achievable, such as limited physical capacity at urban sites. Ofcom has already considered the arguments for the more extreme revisions to the 1800 MHz operators' TRX per sector capacity previously suggested by Vodafone, as outlined in paragraphs F.99-F.101 of the December 2003 consultation document, and concluded that given the counter-arguments proposed by 1800 MHz operators and presented in that annex, there is no compelling reason to make further adjustments. Furthermore, even if Ofcom were to implement this adjustment, the impact would be minimal in the presence of the delay to the 1800 MHz operators' network rollout discussed above.

3.92 Ofcom also notes the point made by O2 and Vodafone, that the 2G LRIC model shows that the differential between the costs of combined 900/1800 MHz and 1800 MHz MNOs is reducing when looking at the base case demand scenario. However, as discussed in paragraphs 4.17 – 4.19 of the June 2005 consultation, Ofcom has looked at a range of plausible 2G traffic forecasts for the purpose of estimating a reasonable range of 2G unit costs in the light of subscriber migration to 3G. For many of these traffic scenarios, the absolute difference between the 900 MHz and 1800 MHz operators' efficient charges in 2006/07 is increased, rather than reduced, in relation to the difference presented in the June 2004 Statement. Consequently, Ofcom maintains its view that, on balance, it is appropriate to maintain the differential during the period 2006/7.

Modelling approach

3.93 UKCTA and Cable and Wireless expressed concern that the updated 2G LRIC model may fail adequately to take into account the economies of scale and scope between 2G and 3G networks. Ofcom wishes to draw attention to paragraphs E52 and E53 of the June 2005 consultation, in which Ofcom acknowledged that it would be appropriate to make an initial assessment of the likely impact of cost sharing between these networks. As was noted in paragraph E52, there is significant scope for site sharing, but based on the analysis undertaken in the 2G LRIC model, Ofcom considers that the resulting reduction in the efficient charge level is likely to be modest. Neither UKCTA nor Cable and Wireless have highlighted specific additional cost elements which they believe should be candidates for network cost sharing. Ofcom therefore maintains its view that it is appropriate to conduct a more detailed examination of this issue, and other issues related to cost sharing (for example Backhaul and MSC site acquisition costs) in the context of the next market review.

3.94 In relation to Orange and T-Mobile's comments on the need to review a number of key model input parameters, Ofcom appreciates the concern that, ideally, the model should reflect the latest available data. As stated in paragraph 4.14 of the June 2005 consultation, Ofcom has updated the key inputs of the model whilst retaining the same model structure and underlying conceptual methodology. However, neither Orange nor T-Mobile have submitted new information regarding model input parameters, and more importantly, Ofcom regards some of the issues raised as conceptual and therefore inappropriate to consider in the context of an extension to the existing charge controls. Ofcom intends to review these broader issues over the course of the next market review.

3.95 Vodafone argued for increased values of RPI in 2005/06 and beyond. The assumed RPI in the June 2005 version of the 2G LRIC model, set at 2.5% for all of these years, is based on the analysis set out in the recent Cost of Capital consultation. In any case, even if Ofcom accepted Vodafone's argument for higher RPI values, the impact on the termination charges for 2006/07 would not be material (the increase would be around 2% in the base case demand scenario).

3.96 In questioning the basis of Ofcom's 2G traffic forecasts, Vodafone argued that Ofcom's forecast growth in incoming and outgoing voice minutes per subscriber appear to be aggressive compared with some historical data. However, as described in paragraph E.27 of the June 2005 consultation, in periods where revised historical figures were unavailable, Ofcom has used the same growth rates in voice minutes per subscriber as assumed in the June 2004 version of the 2G LRIC model. Ofcom considers that these forecasts are consistent with the principle of a simple updating of model inputs, appropriate for a proposed extension of the existing charge controls. However, Ofcom has also tested more conservative demand forecasts, consistent with the slower growth rates experienced in some historical years, but believes that their effect on the level of the efficient charge is modest. The impact of such adjustments would be minor in the context of examining a wide range of plausible rates of migration to 3G networks. Ofcom intends to conduct a review of traffic and subscriber demand forecasts in the next market review.

3.97 Vodafone questioned the credibility of the assumption that a constant proportion of traffic, as calculated for a four player market, remains on-net in a five player market. Ofcom acknowledges the theoretical basis of Vodafone's argument; however, adjusting the model as Vodafone suggested so as to reflect a reasonable reduction in the proportion of on-net traffic does not have a material effect on the level of unit costs in 2006/07 (the increase would be around 0.5% in the base case scenario). Vodafone also suggested that on-net traffic should be divided into four separate elements, to reflect different levels of usage of the 2G and 3G networks by different types of on-net call. Ofcom does not believe that an implementation of this methodology would be reasonable in the existing 2G LRIC model which is not designed to forecast 3G network usage;; however, more sophisticated approaches to on-net traffic may be considered in the 2G/3G LRIC model that Ofcom is developing in order to inform its views for the next market review.

3.98 [✂]

Non-network common costs

3.99 Ofcom reported in paragraph E.54 of the June 2005 consultation that it proposed to maintain the non-network common costs mark-up at 0.41 ppm as, in the context of a proposed one year extension of the charge controls, it would be inappropriate to obtain detailed information from MNOs regarding their non-network common costs. Ofcom would not be able to derive a robust revised figure without at the same time asking operators to identify the costs of providing all the elements of service over which these non-network costs would be recovered. Ofcom is instead undertaking this exercise in connection with its project to develop a 2G/3G LRIC model.

Network externality

3.100 BT argued that since mobile penetration is relatively high the need for a mark-up to promote penetration is no longer required. However, it should be noted that the network externality mark-up reflects the optimal structure of prices which leads to the socially optimal level of penetration. There may be subscribers who would give up their subscription if the lower prices, which the mark-up on termination is intended to facilitate, were removed. Therefore the mark-up plays a role in maintaining, not simply increasing, penetration; Ofcom's view of this matter was summarised in Annex D of the June 2004 Statement. Ofcom intends to consider its approach to the network externality mark-up in the context of both 2G and 3G network subscribers during the next market review.

3.101 UKCTA argues that the mark-up itself, calculated in real 2000/01 prices (at 0.5ppm), should not be increased with inflation when overall network costs are falling in both real and nominal terms. However, Ofcom notes that since overall charges for 2G termination are constant in nominal terms, this implies that overall components of this charge are declining in real terms, including the externality mark-up.

Specification of condition

3.102 Both Vodafone and T-Mobile have proposed that the Weights Adjustment Factor (WAF) should not apply to the Target Average Charge (TAC) for the extended charge control period (2006/07) on the basis that it does not enable costs to be recovered at the rate of 5.63ppm for combined 900/1800 MHz operators and 6.31ppm for 1800 MHz operators. In response, Ofcom emphasises that the appropriate starting point for setting the level of the TAC for the extended charge control period is the final target at expiration of the existing charge controls: the TAC for this current year (2005/06) which, in accordance with the June 2004 Statement, is determined with reference to the WAF. The figures of 5.63ppm and 6.31ppm (unadjusted by the WAF) were the TACs for the historic period 1 September 2004 to 31 March 2005. Ofcom has not suggested that these figures are the appropriate cost levels for 2006/07. Rather, as stated in paragraph 4.27 of the June 2005 Consultation, Ofcom recognises that there are reasonable arguments to support the view that underlying costs in 2006/07 are lower than these figures, as well as arguments that underlying costs are higher. Ofcom proposed that, on balance, it would be appropriate to extend the existing charge controls, including the charge control mechanics incorporating the WAF, at the current levels.

3.103 Ofcom continues to believe that the WAF has important beneficial characteristics in maintaining consistency between the weighting mechanism used to determine a MNO's average interconnection charge (AIC) and the TAC which the AIC must not exceed. The TAC mechanism incorporating the WAF is well-established: an equivalent mechanism has operated in BT's retail and network price controls since 1984. The consistency characteristic was discussed in paragraphs 6.42-6.45 of the June 2004 Statement and in Annex I of the December 2003 Consultation. In particular, if the WAF is removed from the charge control mechanics, resulting in loss of consistency in the weighting of the AIC and the TAC, it is possible that an MNO could raise its prices at all times of day, or symmetrically, would have to lower its prices in order to comply with the charge control, simply as a consequence of a change in traffic mix by time of day. T-Mobile specifically suggests that the WAF is designed to keep rates constant and, as several MNOs have varied their rates, this has not been achieved. Contrary to this view, the WAF is not intended to ensure that MNOs do not change their rates as such an objective would be inappropriate and undesirable: MNOs, rather than Ofcom, are best positioned to determine their appropriate time of day pricing and should have the flexibility to do so. Maintaining consistency between the AIC and the TAC allows MNOs the flexibility to leave their time of day rates unchanged if they so choose, even if there are changes in traffic mix, rather than being forced to change these rates in order to comply with the charge control.

3.104 Following the responses from Vodafone and T-Mobile, which raise concerns about the characteristics of the WAF in relation to movements in underlying costs, Ofcom has undertaken further analysis. Ofcom recognises that consistency is not the only factor relevant to the WAF but that there are a number of further issues associated with movements in underlying costs. Ofcom notes that there is a complex behaviour dependent on the inter-relationship of a number of linked issues such as: movements in traffic, structure of prices, structure of costs, volumes of types of traffic (eg direct minutes, ported-in minutes). The complexity of these cost-related issues is significant and Ofcom considers that the interaction between them has the potential to lead to complications, both with or without the application of the WAF. As these issues are potentially wide-ranging, reaching beyond the matter of traffic weights alone, this is an area which merits further investigation. Ofcom believes that the appropriate place to undertake this further analysis and discussion is in the context of the next market review.

3.105 In light of the above observations regarding cost issues, Ofcom has decided that, in the context of a one year extension to the existing charge control, it is appropriate to maintain the WAF at its current values prior to a further investigation in the next market review, as opposed to changing the WAF as referred to at paragraph 4.30 of the June 2005 consultation. This approach has the effect of ensuring that the TAC for the extended charge control period (2006/07) will remain at exactly the same level as the TAC for the current year 2005/06. Maintaining the WAF at its current values is achieved by retaining the existing definition of the WAF in terms of the average revenue in the first period of the charge control (1 September 2004 to 31 March 2005) divided by the AIC for the same first period. The TAC for 2006/07 is then set as 5.63ppm multiplied by this WAF for combined 900/1800 MHz operators and 6.31ppm multiplied by this WAF for 1800 MHz operators. This is identical to the definition of the TAC for the current year 2005/06 and no longer requires the generalised definition of the WAF for multiple years proposed in the June 2005 Consultation. Ofcom has modified the SMP services conditions to reflect this.

3.106 BT argued that the one year extension of the charge control should extrapolate the downward trend from previous charge control years. However, Ofcom is mindful of its obligation to ensure that any charge control takes due consideration of an analysis of costs. As highlighted above, Ofcom recognises that there are reasons to believe that the underlying costs moving forwards could be higher or lower than the levels used to set the existing charge control and Ofcom does not believe that there is any conclusive evidence that 2G unit costs will continue to decline. Ofcom therefore holds to the position, as stated in the June 2005 consultation, that maintaining the charge control at the same nominal level strikes the best balance between uncertain and opposing factors.

Section 4

Conclusion and next steps

Summary of the issue

4.1 The regulatory controls on the charges which Vodafone, O2, Orange and T-Mobile may set for mobile termination of voice calls on their 2G networks will expire on 31 March 2006 unless action is taken by Ofcom.

No material change in the markets

4.2 Ofcom is satisfied that there has been no material change in the markets for mobile voice call termination by Vodafone, O2, Orange and T-Mobile since the last market review was concluded in June 2004. That view was set out in paragraph 2.20 of the June 2005 consultation, and consequently stakeholders were invited to say whether they agreed that there continue to be separate markets for wholesale voice call termination on each MNO's network (or, where the MNO operates both 2G and 3G networks, across both network(s)) and that the geographic extent of each market matches the scope of each mobile termination provider's network(s). Stakeholders were also asked whether they agreed that each of the 2G MNOs continues to have SMP. Stakeholders views on these issues were summarised at paragraphs 3.6 to 3.14 and 3.24 to 3.31 above respectively. Ofcom has considered all responses to those questions and remains of the view that in light of, amongst other things, the absence of any new supply-side or demand-side substitutes and the continuing 100% market share of each MNO, there has been no material change in the markets since the last market review, for the reasons set out more fully in section 3 of the June 2005 consultation.

Options for action when the present charge controls expire on 31 March 2006.

4.3 In the light of the initial conclusion on no material change, Ofcom considered the following options for action which may be taken when the present charge controls on mobile voice call termination by the 2G MNOs expire on 31 March 2006;

Option 1 Do nothing, and allow the charge controls to lapse,

Option 2 Impose a 4 year charge control on 2G termination, or

Option 3 Extend the existing charge control on 2G voice call termination by one year based on an updating of key inputs of Ofcom's 2G LRIC model

4.4 These options were set out in detail in the June 2005 consultation and the comments received in response to that document have been taken into account by Ofcom.

4.5 As explained in more detail below, Ofcom has concluded that option 3, which was presented in the June 2005 consultation as Ofcom's preferred option, is the most appropriate, for the reasons set out below.

Option 1 - Do nothing

4.6 Under section 6 of the Act, Ofcom has a duty to ensure that it does not impose or maintain unnecessary regulatory burdens. Ofcom has considered whether the most appropriate course of action would be to take no action in relation to the Charge Controls conditions, relying instead on the other obligations (which are not time limited) to meet reasonable requests for Network Access on fair and reasonable terms. The conditions requiring the supply of 2G voice call termination on fair and reasonable terms would enable claims of excessive pricing to be addressed. However, this approach is likely to generate a high degree of uncertainty about what is the fair and reasonable level. Where Ofcom has a clear understanding of costs, this approach, while light in touch, may be considered perverse. The approach is also likely, at some point, to cause a wholesale purchaser of mobile voice call termination services to test what is the compliant level of charges, by alleging that current charges are not fair and reasonable. Thus, the "light touch" may be short lived and have served only to have created a period of uncertainty.

4.7 Ofcom's has concluded, therefore, that this option has few advantages and would result in unnecessary uncertainty for MNOs and purchasers of wholesale voice call termination.

Option 2 – Impose a 4 year charge control on 2G voice call termination

4.8 It is Ofcom's usual practice, when imposing charge controls, to do so for a period of 3 or 4 years, as a charge control period of this duration provides a reasonable degree of stability for purchasers and suppliers and provides an incentive for suppliers to reap the benefits of efficiency savings over that period. However, in the case of wholesale mobile voice call termination, the rollout of 3G networks, and the close cost and technical interactions between voice call termination on 2G and 3G networks indicate to Ofcom that it should not take decisions on a long term charge control for wholesale mobile voice call termination on 2G networks without first understanding and investigating the implications regarding the costs of terminating voice calls on 3G networks, given the significant relationship and interaction between 2G and 3G costs. Ofcom has commissioned consultants to investigate 3G costs but, given the complexity, does not expect to be able to draw any firm conclusions until after the present Charge Control conditions expire in March 2006.

4.9 In these circumstances, therefore, Ofcom has concluded that it would be inappropriate to impose a lengthy control on 2G voice call termination charges.

Option 3 Extend the existing charge control on 2G voice call termination by one year based on an updating of key inputs of Ofcom's 2G LRIC model

4.10 Given the desirability of understanding the interactions between 2G and 3G costs, and given that Ofcom does not expect to receive the output from the commissioned analysis of 3G costs until 2006, Ofcom proposed in the June 2005 consultation that it should extend the existing charge controls for a period of one year while a broad analysis of 2G and 3G costs can be carried out. Having updated key inputs to its 2G LRIC model, Ofcom proposed in the June 2005 consultation that the Target Average Charges should remain unchanged.

4.11 The June 2005 consultation invited stakeholders to comment on the proposal to extend the existing charge controls for a further year and to leave the Target Average Charges unchanged, subject to the application of the Weights Adjustment Factor for the additional period. Ofcom has considered carefully all of the responses received, and Ofcom's views on those responses were set out in detail in Section 3 above. Having considered all responses, Ofcom has concluded that it should proceed with extending the charge controls, at the same Target Average Charge, including the same Weights Adjustment Factor, which applied during the period 1 April 2005 to 31

March 2006, for a further year to 31 March 2007. For the reasons given in paragraphs 3.104 and 3.105, Ofcom has concluded that it is not appropriate to update the Weights Adjustment Factor to take account of further changes in traffic weights for the period from 1 April 2006 to 31 March 2007.

4.12 A formal Notification making the necessary modifications to the SMP conditions to reflect this modification is attached at Annex 1. These modifications are amended from those in the June 2005 consultation. The modifications Ofcom has made to the SMP services Conditions MC3, MC4, MD3 and MD4 are; inserting:

(a) a reference, in the definition of “Base Year” and “Relevant Year” for each of the conditions to the additional one year period, defined as the Relevant Year;

(b) a reference in the fourth paragraph of each condition as to what the Target Average charge for the Third Relevant Year means; and

(c) in the eighth and ninth paragraphs, the necessary references to the Second and Third Relevant Years, to ensure that any appropriate adjustments to the charges can be made in the Second and Third Relevant Years.

Ofcom looks forward to continuing to work with stakeholders to determine the appropriate approach to regulation after March 2007.

Communications Act tests

4.13 In modifying SMP Conditions, Ofcom is required to meet various tests set out in the Act. These tests and Ofcom's assessment of how these are met in connection with the proposed modifications to the Charge Control conditions are set out below.

Section 3 of the Act – Ofcom’s general duties

4.14 Section 3(1) of the Act sets out the principal duty of Ofcom. Ofcom is required by this section to carry out its functions in line with this duty.

4.15 Ofcom considers that the modifications to the Charge Control conditions falls within the scope of section 3(1) of the Act. In particular, Ofcom considers that the following duties are appropriate to this issue:

- Section 3(1)(b) states that Ofcom should "further the interests of consumers in relevant markets, where appropriate by promoting competition";
- In carrying out this duty, Section 3(2)(b) states that Ofcom is required to secure "the availability throughout the United Kingdom of a wide range of electronic communications services";
- Also, Ofcom must have regard to "the desirability of promoting competition in relevant markets" (Section 3(4)(b)); and "the desirability of encouraging investment and innovation in relevant markets" (Section 3(4)(d)) when performing these duties.

4.16 In the absence of any regulation, the 2G MNOs would have the incentive and ability to set an excessively high charge for wholesale mobile voice call termination on 2G networks and this would lead to excessively high prices paid by consumers. In the absence of these modifications there would be a high degree of uncertainty about what is the fair and reasonable charge for 2G voice call termination, and a high probability that termination charges will rise. Therefore, Ofcom considers that by regulating the amount which 2G MNOs may charge for wholesale mobile voice call termination on 2G networks, to ensure that charges are cost reflective, the proposal will, among other things, further the interests of consumers.

Section 4 of the Act – European Community requirements for regulation

4.17 Section 4 of the Act requires Ofcom to act in accordance with the six European Community requirements for regulation. In summary these requirements are to:

- promote competition in the provision of electronic communications networks and services, associated facilities and the supply of directories;
- contribute to the development of the European internal market;
- promote the interests of all persons who are citizens of the European Union;
- not favour one form of or means of providing electronic communications networks or services, i.e. to be technologically neutral;
- to encourage the provision of network access and service interoperability for the purpose of securing:
  - efficient and sustainable competition; and
  - the maximum benefit for customers of Communications Providers; and
- encourage compliance with certain standards in order to facilitate service interoperability and secure freedom of choice for the customers of Communications Providers.

4.18 Ofcom considers that modifying the charge control to apply for an additional year for wholesale mobile voice call termination on 2G networks will further the interests of consumers by, amongst other things, preventing 2G MNOs from charging excessively and by encouraging efficient use of resources.

Section 47 – the setting or modifying of conditions

4.19 Section 47(2) of the Act requires Ofcom to ensure that any modification of a condition is:

- objectively justifiable in relation to the networks, services, facilities, apparatus or directories to which it relates;
- not unduly discriminatory against particular persons or against a particular description of persons;
- proportionate to what it the modification is intended to achieve; and
- transparent in relation to what it is intended to achieve.

Objectively justifiable

4.20 The modification to the Charge Control conditions is objectively justifiable because in the absence of this regulation, 2G MNOs would have the incentive and ability to set an excessively high charge for wholesale mobile voice call termination on 2G networks and this could lead to excessively high prices paid by consumers. An alternative reliance on the SMP conditions which require the provision of Network

Access on fair and reasonable terms would generate uncertainty about the terms on which wholesale mobile voice call termination on 2G networks will be provided.

Non-discriminatory

4.21 Section 47(2) requires that a modification must not discriminate against any party. As set out at paragraph 4.44 of the June 2005 consultation, Ofcom does not consider that the absence of 2G charge control conditions on H3G discriminates against the 2G MNOs. As explained at paragraph 5.63 of the June 2004 Statement, where H3G is unable to provide voice call termination services using its own 3G network, it switches calls at the gateway MSC and thereafter uses the 2G radio network of a 2G MNO as part of a roaming agreement. Ofcom considers that, in view of the sunk costs incurred by H3G in constructing its own network, H3G has strong incentives to use its own 3G network, in preference to the 2G network of the other party. Furthermore, the volume of calls terminated by H3G on a 2G network is very much lower than the volume of calls terminated in this way by any one of the 2G MNOs. Consequently, Ofcom's view remains that the introduction of such regulation on H3G would not currently meet the proportionality test in section 47 of the Act. This situation may change, and the next market review will consider what form any regulation, if any, of H3G (and the 2G MNOs) should take.

Proportionate

4.22 The modification to the Charge Control conditions is proportionate. As noted above, Ofcom considers that in the absence of any regulatory controls MNOs have an incentive and ability to increase charges to the monopoly level. Consequently some form of control is required. While the conditions requiring the supply of 2G voice call termination on fair and reasonable terms (which is not time limited) would enable claims of excessive pricing to be addressed, this approach is likely to generate a high degree of uncertainty about what is the fair and reasonable level. Ofcom's view is that this option would result in excessive regulatory costs and unnecessary uncertainty for MNOs and purchasers of wholesale voice call termination.

4.23 The modification to the Charge Control to apply for an additional year is proportionate to MNOs as it achieves the objective of controlling average charges while allowing MNOs to retain some discretion over the charges levied at different times of the day, and allowing MNOs to make a reasonable return.

Transparent

4.24 The modification to the Charge Control conditions is transparent as to what it is seeking to achieve because the requirements on the 2G MNOs are clearly set out in the condition and explained in the accompanying statement.

Section 87(4)

4.25 In addition, Ofcom has taken into account the factors set out in section 87(4) of the Act and, in particular, the technical viability of installing and using facilities that make Network Access unnecessary. The current level of technological development does not allow any other provider to provide termination on a specific network apart from the provider of that network, and this generates an absolute barrier to entry. No technological means of terminating a call elsewhere seems likely to become available and commercially viable in the near future.

Section 88

4.26 Ofcom also considers that the tests in section 88 of the Act have been met. Among other things, there is a risk that, in situations where SMP is persistent, pricing will be distorted and not at competitive levels. A charge control is necessary in order to promote competition and provide benefits to end users, as it acts to control the charge for a wholesale input to retail services in the absence of competition reducing prices. In addition, a charge cap promotes efficiency as it provides incentives for MNOs to reduce their costs during the controlled period.

Annex 1

Notification

NOTIFICATION UNDER SECTIONS 48(1) AND 86 OF THE COMMUNICATIONS ACT 2003

Notification of the modification of SMP services conditions MC3 and MC4 inrelation to O2 and Vodafone, and SMP services conditions MD3 and MD4 in relation to Orange and T-Mobile

WHEREAS:

(A) the Director General of Telecommunications (the "**Director**") made, in accordance with regulation 6 of the Electronic Communications (Market Analysis) Regulations 2003 (S.I. 2003/330), proposals for identifying certain services markets, making market power determinations in relation to those markets and the setting of SMP services conditions in relation to 3, Inquam, O2, Orange, T-Mobile and Vodafone by way of publication of a notification on 15 May 2003 (the "**First Notification**");

(B) by virtue of the Communications Act 2003 (Commencement No. 1) Order 2003 (S.I. 2003/1900 (C. 77)) made under sections 411 and 408 of the Act:

(i) certain provisions of the Communications Act 2003 (the "**Act**") were commenced on 25 July 2003 for the purpose only of enabling the networks and services functions under those provisions to be carried out by the Director; and

(ii) those provisions of the Act are to have effect as if references to the Office of Communications ("**OFCOM**") were references to the Director;

(C) having considered all responses duly made to the First Notification and revised certain of his proposed proposals in the light of those responses, the Director issued a further notification pursuant to sections 48(2) and 80 of the Act setting out his proposals for the identification of services markets, the making of market power determinations in relation to those markets and the setting of SMP services conditions in relation to 3, Inquam, O2, Orange, T-Mobile and Vodafone on 19 December 2003 (the "**Second Notification**");

(D) a copy of the Second Notification was sent to the Secretary of State for Trade and Industry (the "**Secretary of State**") in accordance with section 50(1)(a) of the Act, and to the European Commission and to the regulatory authorities of every other Member State in accordance with sections 50(3) and 81 of the Act;

(E) in the Second Notification and the accompanying explanatory statement, the Director invited representations about any of the proposals set out therein by 6 February 2004, which was later extended to 10 February 2004;

(F) on 29 December 2003, OFCOM took over the responsibilities and assumed the powers of the five former regulators it replaced, including the Director. In particular, by virtue of section 408(5) of the Act, anything done by or in relation to the Director during the period beginning on 25 July 2003 and ending on 29 December 2003 for the purposes of, or in connection with, the carrying out of networks and services functions is to have effect as if it had been done by or in relation to OFCOM.

(G) OFCOM having considered every representation duly made, and thereafter on 1 June 2004 pursuant to sections 48(1) and 79 of the Act by way of publication of a Notification (the "**Final Notification**") determined that among other things O2, Orange, T-Mobile and Vodafone have significant market power in the following markets:

(a) wholesale voice call termination provided by O2 (such termination being provided via O2's 2G and 3G mobile network);

(b) wholesale voice call termination provided by Orange (such termination being provided via Orange's 2G and 3G mobile network);

(c) wholesale voice call termination provided by T-mobile (such termination being provided via T-mobile's 2G and 3G mobile network); and,

(d) wholesale voice call termination provided by Vodafone (such termination being provided via Vodafone's 2G and 3G mobile network);

(H) as a result of the market power determination referred to in recital (G) above, O2, Orange, T-Mobile and Vodafone have been subjected to a number of SMP services conditions, including SMP services conditions MC3, MC4 (O2 and Vodafone), MD3 and MD4 (Orange and T-Mobile);

(I) on the 1 September 2004, OFCOM published a notification under sections 48 (1) and 86 of the Act at Annex A to the accompanying statement entitled "*Wholesale Mobile Voice Call Termination charge controls – request for consent Explanatory Statement*" with the effect of modifying SMP services conditions - MC3, MC4, MD3 and MD4 as set out in Annex A to the Final Notification (as amended);

(J) furthermore, on the 7 June 2005, OFCOM proposed to modify further the amended SMP services condition MC3, MC4, in respect of its application to O2 and Vodafone, and MD3 and MD4 in respect of its application to Orange and T-Mobile in the markets listed at recital (G) above as set out in the Schedules to the Final Notification;

(K) copies of this notification ("**the Notification**") and the accompanying explanatory statement were sent to the Secretary of State in accordance with section 50(1)(a) of the Act, and to the European Commission and the regulatory authorities of every other Member State in accordance with section 50(3) and 81 of the Act;

(L) OFCOM invited representations about the proposals set out in the Notification and the accompanying explanatory statement by 30 August 2005;

(M) by virtue of section 48(5) of the Act, OFCOM may give effect to any proposals to set or modify SMP services conditions as set out in the Notification, with or without modification, where:

(i) they have considered every representation about the proposals made to them within the period specified in that notification; and

(ii) they have had regard to every international obligation of the United Kingdom (if any) which has been notified to them for this purpose by the Secretary of State;

(N) OFCOM received responses to the Notification and have considered every such representation made to them in respect of the proposals set out in the Notification and the accompanying explanatory statement; and the Secretary of State has not notified OFCOM of any international obligation of the United Kingdom for this purpose;

(O) the European Commission has not made a notification for the purposes of Article 7(4) of the Framework Directive as referred to in section 82 of the Act and the proposals do not relate to a transnational market as referred to in section 83 of the Act;

NOW, therefore, OFCOM hereby publish this Notification to make the following decisions:

1. OFCOM in accordance with sections 48(1) and 86 of the Act hereby modify the SMP services conditions MC3, MC4, MD3 and MD4 in Annex A of the Final Notification (as amended), as set out in the Schedules to the Notification.

2. The effect of, and OFCOM's reasons for making, the decisions referred to in paragraph 1 above is set out in the accompanying explanatory statement.

3. In making the above-mentioned modifications, OFCOM are satisfied for reasons set out in the accompanying explanatory statement that, in accordance with section 86 of the Act, there has not, since the SMP service conditions referred to in paragraph 1 above were set, been a material change in the markets identified or otherwise used for the purposes of the above-mentioned market power determinations by reference to which the said SMP service conditions were set or last modified

4. OFCOM consider that the decisions referred to in paragraph 1 above comply with the requirements of among others sections 45 to 50 and sections 78 to 92 of the Act, as appropriate and relevant to each of the decisions.

5. In making all of the decisions set out in the Notification, OFCOM have considered and acted in accordance with their general duties in section 3 of the Act and the six Community requirements in section 4 of the Act.

6. Except insofar as the context otherwise requires, words or expressions shall have the meaning assigned to them in the Notification and otherwise, words or expressions shall have the meaning assigned to them in the Final Notification and otherwise, any word or expression shall have the same meaning as it has in the Act.

7. For the purpose of interpreting this Notification:

(a) headings and titles shall be disregarded; and

(b) the Interpretation Act 1878 (c. 30) shall apply as if the Notification were an Act of Parliament.

8. The Schedules to the Notification shall form part of the Notification.

Philip Rutnam

Partner, Competition and Strategic Resources

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2002

16 December 2005

SCHEDULE 1

Modification to SMP services conditions MC 3 and MC 4 imposed on O2 and Vodafone under sections 45, 87 and 88 of the Act as a result of the analysis of the wholesale voice call termination provided by O2 (such termination being provided via O2's 2G and 3G mobile network), in which O2 has been found to have significant market power, and the voice call termination provided by Vodafone (such termination being provided via Vodafone's 2G and 3G mobile network), in which Vodafone has been found to have significant market power

i) The definitions for "Base Year" and "Relevant Year" in Annex A, Schedule 3, Part 1 to the Final Notification (as amended) shall be deleted and replaced in their entirety as follows:

" "**Base Year**" means:

(a) for the First Relevant Year, the period of 7 months ending on 31 March immediately preceding that Relevant Year;

(b) for the Second Relevant Year, the period of 12 months ending on 31 March immediately preceding that Relevant Year; and

(c) for the Third Relevant Year, the period of 12 months ending on 31 March immediately preceding that Relevant Year;

" "**Relevant Year**" means any of the following:

(i) the period of 7 months beginning on 1 September 2004 and ending on 31 March 2005 (the "First Relevant Year");

(ii) the period of 12 months beginning on 1 April 2005 and ending on 31 March 2006 (the "Second Relevant Year"); or

(iii) the period of 12 months beginning on 1 April 2006 and ending on 31 March 2007 (the "Third Relevant Year"); "

ii) In Annex A, Schedule 3, Part 2 to the Final Notification (as amended), SMP services conditions MC3 and MC4 shall be deleted and replaced in their entirety as follows:

"Condition MC3 – Control of Fixed-to-Mobile Interconnection Charges

MC3.1 Except in so far as Ofcom otherwise consent under paragraph MC3.9 below, the Dominant Provider shall take all reasonable steps to secure that, during any Relevant Year, the Average Interconnection Charge does not exceed the Target Average Charge for any such Year.

MC3.2 In this Condition, the Average Interconnection Charge means the average of the Fixed-to-Mobile Interconnection Charges during the Relevant Year in question, which shall be weighted according to:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the Base Year.

MC3.3 For the purposes of calculating the Average Interconnection Charge where any Fixed-to-Mobile Interconnection Charges are in force during a part only of the Relevant Year (commencing or ending at a date in the course of the Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the corresponding part of the Base Year.

MC3.4 For the purposes of this Condition, the Target Average Charge means:

(a) for the purpose of the First Relevant Year, 5.63 pence per minute;

(b) for the purpose of the Second Relevant Year, 5.63 pence per minute multiplied by the Weights Adjustment Factor; and

(c) for the purpose of the Third Relevant Year, 5.63 pence per minute multiplied by the Weights Adjustment Factor.

MC3.5 In paragraph MC3.4:

(a) the Weights Adjustment Factor means the Average Revenue divided by the Average Interconnection Charge in the First Relevant Year; and

(b) the Average Revenue means the average of the Fixed-to-Mobile Interconnection Charges during the First Relevant Year, weighted according to:

(i) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(ii) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls), in the First Relevant Year.

MC3.6 For the purposes of calculating the Average Revenue where any Fixed-to-Mobile Interconnection Charges are in force during a part only of the First Relevant Year (commencing or ending at a date in the course of the First Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in that part of the First Relevant Year.

MC3.7 The Dominant Provider shall not make any Fixed-to-Mobile Interconnection Charge for:

(a) a Fixed-to-Mobile Call which terminates on a recorded announcement provided by the Dominant Provider informing the caller of an inability to complete that call so as to establish a two-way path where the mobile handset used by the called party is switched off, or rings and remains unanswered, or where coverage is not available from the Dominant Provider's 2G Public Electronic Communications Network; and

(b) an unanswered Fixed-to-Mobile Call which is diverted in respect of the period before that call is answered.

MC3.8 Notwithstanding (and without prejudice to the generality of) the obligation imposed on the Dominant Provider by paragraph MC3.1 above:

(a) if the Dominant Provider has failed to secure that the Average Interconnection Charge has not exceeded the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall make such adjustments to its Fixed-to-Mobile Interconnection Charges and by such day in the following Relevant Year as Ofcom may direct for the purpose of remedying that failure. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MC3.1 above in that Relevant Year; and

(b) if it appears to Ofcom that the Dominant Provider is likely to fail to secure that the Average Interconnection Charge for the Third Relevant Year does not exceed the Target Average Charge for that Year, the Dominant Provider shall make such adjustments to its Fixed-to-Mobile Interconnection Charges and by such day in that Year as Ofcom may direct for the purpose of avoiding that failure.

MC3.9 Where the Average Interconnection Charge is less than the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall not make such adjustments to its Fixed-to-Mobile Interconnection Charges in the following Relevant Year to recover the difference between the Average Interconnection Charge and the Target Average Charge for the First or Second Relevant Year, unless Ofcom have given their prior written consent to such adjustments. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MC3.1 in that Relevant Year.

MC3.10 In this Condition:

'**Average Interconnection Charge**' has the meaning given to it in paragraph MC3.2;

'**Average Revenue**' has the meaning given to it in paragraph MC3.5;

'**Target Average Charge**' shall have the meaning given to it in paragraph MC3.4;

and

'**Weights Adjustment Factor**' has the meaning given to it in paragraph MC3.5.

"Condition MC4 - Control of Mobile to Mobile Interconnection Charges

MC4.1 Except in so far as Ofcom otherwise consent under paragraph MC4.9 below, the Dominant Provider shall take all reasonable steps to secure that, during any Relevant Year, the Average Interconnection Charge does not exceed the Target Average Charge for any such Year.

MC4.2 In this Condition, the Average Interconnection Charge means the average of the Mobile-to-Mobile Interconnection Charges during the Relevant Year in question, which shall be weighted according to:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the Base Year.

MC4.3 For the purposes of calculating the Average Interconnection Charge where any Mobile-to-Mobile Interconnection Charges are in force during a part only of the Relevant Year (commencing or ending at a date in the course of the Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls), in the corresponding part of the Base Year.

MC4.4 For the purposes of this Condition, the Target Average Charge means:

(a) for the purpose of the First Relevant Year, 5.63 pence per minute;

(b) for the purpose of the Second Relevant Year, 5.63 pence per minute multiplied by the Weights Adjustment Factor; and

(c) for the purpose of the Third Relevant Year, 5.63 pence per minute multiplied by the Weights Adjustment Factor.

MC4.5 In paragraph MC4.4:

(a) the Weights Adjustment Factor means the Average Revenue divided by the Average Interconnection Charge in the First Relevant Year; and

(b) the Average Revenue means the average of the Mobile-to-Mobile Interconnection Charges during the First Relevant Year, weighted according to:

(i) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(ii) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the First Relevant Year.

MC4.6 For the purposes of calculating the Average Revenue where any Mobile-to-Mobile Interconnection Charges are in force during a part only of the First Relevant Year (commencing or ending at a date in the course of the First Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in that part of the First Relevant Year.

MC4.7 The Dominant Provider shall not make any Mobile-to-Mobile Interconnection Charge for:

(a) a Mobile-to-Mobile Call which terminates on a recorded announcement provided by the Dominant Provider informing the caller of an inability to complete that call so as to establish a two-way path where the mobile handset used by the called party is switched off, or rings and remains unanswered, or where coverage is not available from the Dominant Provider's 2G Public Electronic Communications Network; and

(b) an unanswered Mobile-to-Mobile Call which is diverted in respect of the period before that call is answered.

MC4.8 Notwithstanding (and without prejudice to the generality of) the obligation imposed on the Dominant Provider by paragraph MC4.1 above:

(a) if the Dominant Provider has failed to secure that the Average Interconnection Charge has not exceeded the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall make such adjustments to its Mobile-to-Mobile Interconnection Charges and by such day in the following Relevant Year as Ofcom may direct for the purpose of remedying that failure. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MC4.1 above in that Relevant Year; and

(b) if it appears to Ofcom that the Dominant Provider is likely to fail to secure that the Average Interconnection Charge for the Third Relevant Year does not exceed the Target Average Charge for that Year, the Dominant Provider shall make such adjustments to its Mobile-to-Mobile Interconnection Charges and by such day in that Year as Ofcom may direct for the purpose of avoiding that failure.

MC4.9 Where the Average Interconnection Charge is less than the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall not make such adjustments to its Mobile-to-Mobile Interconnection Charges in the following Relevant Year to recover the difference between the Average Interconnection Charge and the Target Average Charge for the First or Second Relevant Year, unless Ofcom have given their prior written consent to such adjustments. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MC4.1 in that Relevant Year.

MC4.10 In this Condition:

'**Average Interconnection Charge**' has the meaning given to it in paragraph MC4.2;

'**Average Revenue**' has the meaning given to it in paragraph MC4.5;

'**Target Average Charge**' shall have the meaning given to it in paragraph MC4.4; and

'**Weights Adjustment Factor**' has the meaning given to it in paragraph MC4.5. "

SCHEDULE 2

Modification to SMP services conditions MD 3 and MD 4 imposed on T-Mobile and Orange under sections 45, 87 and 88 of the Act as a result of the analysis of the wholesale voice call termination provided by T-Mobile (such termination being provided via T-Mobile's 2G and 3G mobile network), in which T-Mobile has been found to have significant market power, and the voice call termination provided by Orange (such termination being provided via Orange's 2G and 3G mobile network), in which Orange has been found to have significant market power

i) The definitions for "Base Year" and "Relevant Year" in Annex A, Schedule 4, Part 1 to the Final Notification (as amended) shall be deleted and replaced in their entirety as follows:

" '**Base Year**' means:

(a) for the First Relevant Year, the period of 7 months ending on 31 March immediately preceding that Relevant Year;

(b) for the Second Relevant Year, the period of 12 months ending on 31 March immediately preceding that Relevant Year; and

(c) for the Third Relevant Year, the period of 12 months ending on 31 March immediately preceding that Relevant Year;

"'**Relevant Year**' means any of the following

(i) the period of 7 months beginning on 1 September 2004 and ending on 31 March 2005 (the "First Relevant Year");

(ii) the period of 12 months beginning on 1 April 2005 and ending on 31 March 2006 (the "Second Relevant Year"); or

(iii) the period of 12 months beginning on 1 April 2006 and ending on 31 March 2007 (the "Third Relevant Year"); "

ii) In Annex A, Schedule 4, Part 2 to the Final Notification (as amended) SMP services conditions MC3 and MC4 shall be deleted and replaced in their entirety as follows:

"Condition MD3 – Control of Fixed-to-Mobile Interconnection Charges

MD3.1 Except in so far as Ofcom otherwise consent under paragraph MD3.9 below, the Dominant Provider shall take all reasonable steps to secure that, during any Relevant Year, the Average Interconnection Charge does not exceed the Target Average Charge for any such Year.

MD3.2 In this Condition, the Average Interconnection Charge means the average of the Fixed-to-Mobile Interconnection Charges during the Relevant Year in question, which shall be weighted according to:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the Base Year.

MD3.3 For the purposes of calculating the Average Interconnection Charge where any Fixed-to-Mobile Interconnection Charges are in force during a part only of the Relevant Year (commencing or ending at a date in the course of the Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the corresponding part of the Base Year.

MD3.4 For the purposes of this Condition, the Target Average Charge means:

(a) for the purpose of the First Relevant Year, 6.31 pence per minute;

(b) for the purpose of the Second Relevant Year, 6.31 pence per minute multiplied by the Weights Adjustment Factor; and,

(c) for the purpose of the Third Relevant Year, 6.31 pence per minute multiplied by the Weights Adjustment Factor.

MD3.5 In paragraph MD3.4:

(a) the Weights Adjustment Factor means the Average Revenue divided by the Average Interconnection Charge in the First Relevant Year; and

(b) the Average Revenue means the average of the Fixed-to-Mobile Interconnection Charges during the First Relevant Year, weighted according to:

(i) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(ii) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the First Relevant Year.

MD3.6 For the purposes of calculating the Average Revenue where any Fixed-to-Mobile Interconnection Charges are in force during a part only of the First Relevant Year (commencing or ending at a date in the course of the First Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Fixed-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in that part of the First Relevant Year.

MD3.7 The Dominant Provider shall not make any Fixed-to-Mobile Interconnection Charge for:

(a) a Fixed-to-Mobile Call which terminates on a recorded announcement provided by the Dominant Provider informing the caller of an inability to complete that call so as to establish a two-way path where the mobile handset used by the called party is switched off, or rings and remains unanswered, or where coverage is not available from the Dominant Provider's 2G Public Electronic Communications Network; and

(b) an unanswered Fixed-to-Mobile Call which is diverted in respect of the period before that call is answered.

MD3.8 Notwithstanding (and without prejudice to the generality of) the obligation imposed on the Dominant Provider by paragraph MD3.1 above:

(a) if the Dominant Provider has failed to secure that the Average Interconnection Charge has not exceeded the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall make such adjustments to its Fixed-to-Mobile Interconnection Charges and by such day in the following Relevant Year as Ofcom may direct for the purpose of remedying that failure. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MD3.1 above in that Relevant Year; and

(b) if it appears to Ofcom that the Dominant Provider is likely to fail to secure that the Average Interconnection Charge for the Third Relevant Year does not exceed the Target Average Charge for that Year, the Dominant Provider shall make such adjustments to its Fixed-to-Mobile Interconnection Charges and by such day in that Year as Ofcom may direct for the purpose of avoiding that failure.

MD3.9 Where the Average Interconnection Charge is less than the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall not make such adjustments to its Fixed-to-Mobile Interconnection Charges in the following Relevant Year to recover the difference between the Average Interconnection Charge and the Target Average Charge for the First or Second Relevant Year, unless Ofcom have given their prior written consent to such adjustments. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MD3.1 in that Relevant Year.

MD3.10 In this Condition:

'**Average Interconnection Charge**' has the meaning given to it in paragraph MD3.2;

'**Average Revenue**' has the meaning given to it in paragraph MD3.5;

'**Target Average Charge**' shall have the meaning given to it in paragraph MD3.4; and

'**Weights Adjustment Factor**' has the meaning given to it in paragraph MD3.5.

"Condition MD4 - Control of Mobile to Mobile Interconnection Charges

MD4.1 Except in so far as Ofcom otherwise consent under paragraph MD4.9 below, the Dominant Provider shall take all reasonable steps to secure that, during any Relevant Year, the Average Interconnection Charge does not exceed the Target Average Charge for any such Year.

MD4.2 In this Condition, the Average Interconnection Charge means the average of the Mobile-to-Mobile Interconnection Charges during the Relevant Year in question, which shall be weighted according to:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the Base Year.

MD4.3 For the purposes of calculating the Average Interconnection Charge where any Mobile-to-Mobile Interconnection Charges are in force during a part only of the Relevant Year (commencing or ending at a date in the course of the Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the corresponding part of the Base Year.

MD4.4 For the purposes of this Condition, the Target Average Charge means:

(a) for the purpose of the First Relevant Year, 6.31 pence per minute;

(b) for the purpose of the Second Relevant Year, 6.31 pence per minute multiplied by the Weights Adjustment Factor; and

(c) for the purpose of the Third Relevant Year, 6.31 pence per minute multiplied by the Weights Adjustment Factor.

MD4.5 In paragraph MD4.4:

(a) the Weights Adjustment Factor means the Average Revenue divided by the Average Interconnection Charge in the First Relevant Year; and

(b) the Average Revenue means the average of the Mobile-to-Mobile Interconnection Charges during the First Relevant Year, weighted according to:

(i) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(ii) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in the First Relevant Year.

MD4.6 For the purposes of calculating the Average Revenue where any Mobile-to-Mobile Interconnection Charges are in force during a part only of the First Relevant Year (commencing or ending at a date in the course of the First Relevant Year), the weighting shall be derived from:

(a) the profile by Charging Period of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the profile by Charging Period of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls); and

(b) the volumes by month or part-month of the Dominant Provider's minutes of Mobile-to-Mobile Calls (except in so far as Ofcom otherwise Consent in writing that the weighting shall be derived from the volumes by month or part month of the Dominant Provider's sum of minutes of Fixed-to-Mobile Calls and Mobile-to-Mobile Calls),

in that part of the First Relevant Year.

MD4.7 The Dominant Provider shall not make any Mobile-to-Mobile Interconnection Charge for:

(a) a Mobile-to-Mobile Call which terminates on a recorded announcement provided by the Dominant Provider informing the caller of an inability to complete that call so as to establish a two-way path where the mobile handset used by the called party is switched off, or rings and remains unanswered, or where coverage is not available from the Dominant Provider's 2G Public Electronic Communications Network; and

(b) an unanswered Mobile-to-Mobile Call which is diverted in respect of the period before that call is answered.

MD4.8 Notwithstanding (and without prejudice to the generality of) the obligation imposed on the Dominant Provider by paragraph MD4.1 above:

(a) if the Dominant Provider has failed to secure that the Average Interconnection Charge has not exceeded the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall make such adjustments to its Mobile-to-Mobile Interconnection Charges and by such day in the following Relevant Year as Ofcom may direct for the purpose of remedying that failure. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MD4.1 above in that Relevant Year; and

(b) if it appears to Ofcom that the Dominant Provider is likely to fail to secure that the Average Interconnection Charge for the Third Relevant Year does not exceed the Target Average Charge for that Year, the Dominant Provider shall make such adjustments to its Mobile-to-Mobile Interconnection Charges and by such day in that Year as Ofcom may direct for the purpose of avoiding that failure.

MD4.9 Where the Average Interconnection Charge is less than the Target Average Charge for the First or Second Relevant Year, the Dominant Provider shall not make such adjustments to its Mobile-to-Mobile Interconnection Charges in the following Relevant Year to recover the difference between the Average Interconnection Charge and the Target Average Charge for the First or Second Relevant Year, unless Ofcom have given their prior written consent to such adjustments. Such adjustments in the Second or Third Relevant Year shall not be relevant for the purpose of establishing compliance with paragraph MD4.1 in that Relevant Year.

MD4.10 In this Condition:

'**Average Interconnection Charge**' has the meaning given to it in paragraph MD4.2;

'**Average Revenue**' has the meaning given to it in paragraph MD4.5;

'**Target Average Charge**' shall have the meaning given to it in paragraph MD4.4; and

'**Weights Adjustment Factor**' has the meaning given to it in paragraph MD4.5. "