



# Wholesale mobile voice call termination

Preliminary consultation on future regulation

**Consultation document**

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## Section 1

# Summary

### The purpose of this review

- 1.1 In this document (the “Preliminary Consultation”), Ofcom is initiating its preliminary consideration of the issues which will need to be addressed when Ofcom next reviews the markets for wholesale mobile voice call termination. Ofcom concluded a review of these markets in June 2004 (see Statement *Wholesale mobile voice call termination* published by Ofcom on 1 June 2004; the “June 2004 statement”).
- 1.2 Ofcom is consulting separately on a proposal to extend the application of charge controls which apply to wholesale mobile voice call termination on the 2G networks of Vodafone, O2, Orange and T-Mobile (the “2G MNOs”) for an additional year. (See consultation document “Wholesale mobile voice call termination markets – a proposal to modify the charge control conditions” published by Ofcom on 7 June 2005; the “Charge Control Consultation”.)
- 1.3 The Charge Control consultation is proposing that new charge controls should apply during the period from 1 April 2006, when the present charge controls expire, until 31 March 2007. Ofcom is proposing to impose those new charge controls without conducting a further market review, relying instead on an assessment that there has been no material change in these markets since the June 2004 statement was published.
- 1.4. Ofcom intends to conclude a further review of the markets for wholesale mobile voice call termination before the new charge controls, which are being proposed in the Charge Control Consultation, expire in March 2007. This Preliminary Consultation is intended to initiate consideration of the issues which will need to be addressed during that further review. Some of the key concerns are summarised in the paragraphs which follow.

### Scope for fundamental change removing the causes of SMP

- 1.5 Phase 2 of Ofcom’s Telecoms Strategic Review, published on 18 November 2004, (“TSR”) noted that policies designed to promote infrastructure competition had been much more successful in mobile than in fixed networks. The TSR also noted, however, that the main area where there remains a need for enduring economic regulation in mobile is in call termination. As the TSR explained (see section 8.83), because of the Calling Party Pays (“CPP”) arrangement which exists in the UK, terminating operators effectively have a monopoly over the provision of call termination to their subscribers. In the absence of price controls, terminating rates would be set inefficiently high.
- 1.6 The TSR argued that if these problems were to persist into next generation mobile networks, it would be appropriate to look for arrangements which could alleviate the market power which network operators have over call termination, and so limit the need for regulatory intervention. With this in mind, the TSR was keen to explore other structures for call termination such as Bill and Keep and Receiving Party Pays (“RPP”). The TSR also noted, however, that

interconnection between IP based mobile networks could offer an opportunity for market based solutions to the call termination problem.

- 1.7 All of the responses to the TSR which commented on the possibility of a move to RPP considered that, on balance, the benefit, of greater competition, would be insufficient to justify contemplating the considerable disruption (both to the MNOs themselves and also in terms of consumer behaviour). Views on the prospects for IP based networks to alleviate the effects of SMP were more varied, with operators of fixed networks tending to express a degree of scepticism about the extent to which IP based solutions would have an impact on the market. However, most respondents welcomed Ofcom's stated intention to work with the industry to find a long term solution.
- 1.8 Ofcom is keen to stimulate further serious consideration of changes which the industry might implement, or which future technological developments might enable, which would remove the underlying causes of Significant Market Power ("SMP") in these markets. The prospect of SMP, and regulation, enduring into the indefinite future is not one which Ofcom finds attractive. Ofcom therefore encourages the mobile industry to renew its efforts to identify a change to market structures which would lead to a competitive market from which all regulation may be removed, and which would be beneficial to consumers.

### **Features of current regulation**

- 1.9 To the extent that the market may not be capable of being changed fundamentally during the foreseeable future, Ofcom may need to consider appropriate remedies for SMP going forward. Several features of regulation currently in force may come under pressure over the next few years, and Ofcom wishes to address these before the charge controls being proposed in the Charge Control Consultation expire and before the limitations of present regulation start to have an impact on the market.

### **Distinctions between voice call termination on 2G and 3G networks**

- 1.10 Regulation currently applies only to voice call termination on 2G networks. However, purchasers of wholesale services terminating voice calls on mobile networks are unable to choose whether a call will be terminated on a 2G or 3G network, as the choice is determined by technical features within the mobile network and the mobile phone which is being called. Furthermore, Ofcom understands that the wholesale billing systems of the MNOs are currently unable to distinguish between calls which are terminated on 2G or 3G networks and, for this reason, MNOs charge the same price irrespective of whether the call is terminated on a 2G or a 3G network.
- 1.11 However, this does not mean that the charge determined by Ofcom for 2G termination is the charge actually paid by networks for termination. The MNOs are not prevented from setting a 3G termination charge above the regulated 2G rate and charging a blended rate for termination. This blended rate would be calculated as a weighted average of 2G and 3G rates, the weights representing the relative volumes of traffic terminating on 2G and 3G networks. In the absence of any controls on 3G termination rates, there is a risk that the uniform blended rate would rise inexorably as more and more traffic fell outside the scope of the price control.

## **Regulatory distortion**

- 1.12 Asymmetric regulation of mobile voice call termination charges which applies only to termination on 2G networks may also create artificial incentives for MNOs to terminate traffic on their unregulated 3G networks where, absent regulation, MNOs might consider such use of 3G networks to be inefficient. Thus, regulation of this kind may cause inefficient use of resources.
- 1.13 Separate charge controls applied to mobile voice call termination on 2G networks and on 3G networks, while avoiding the distinction between an unregulated form of termination and a regulated form of termination, also presents some risk that resources may be used inefficiently as MNOs may seek to use the network which they believe to be subject to lighter regulation; it is likely that MNOs will always enjoy some information advantages over third parties such as Ofcom, which may be exploited to commercial advantage.
- 1.14 Possible solutions to the risk of regulatory distortion range from abandonment of all charge controls to the imposition of a single control on the overall blended charge.

## **Costs of wholesale mobile voice call termination**

- 1.15 Ofcom has conducted an analysis of the costs of terminating voice calls on 2G networks, to inform the proposals in its Charge Control Consultation. This analysis has included an updating of the LRIC model used to determine the level of the charge control imposed in June 2004. The model has been updated to reflect changes to a number of factors including demand, equipment costs and cost of capital. Ofcom has also modelled a range of different assumptions about the impact of traffic migrations from 2G to 3G voice call termination, as 3G phones start to become more widely used. Further analysis will be carried out before the further market review is concluded in 2007.
- 1.16 Ofcom is commissioning a detailed analysis of 3G costs with a view to informing the wider debate, and expects to receive output from that study during 2006.
- 1.17 Given the risks that separate price control formulae for 2G and 3G voice call termination may undermine regulation of 2G voice call termination and may also give rise to inefficient incentives to use one or other network, it may be desirable, if charge controls are considered necessary, to take a wider view of voice call termination encompassing both 2G and 3G costs, particularly in view of the absence of choice for originating operators and the application of blended charges by MNOs. This will not be possible until 3G costs, and migration patterns and other interactions between the 2G and 3G networks, are better understood. The decision on when to take a wider view of mobile voice call termination costs will be particularly important. It will be important to take a number of considerations into account, including the potential for significant increases in voice call termination charges and whether or not there might be an effect on the resources available to develop 3G services. Ofcom will welcome views on the question of timing.

## **Next steps**

- 1.18 Comments on the issues addressed in this Preliminary Consultation should be delivered to Ofcom by 30 August 2005. After considering the views expressed,

Ofcom will issue a further consultation which will include an initial view on Ofcom's preferred approach to potential regulation of these markets after March 2007. Ofcom does not expect to make a formal proposal for consultation with a wide range of stakeholders including the European Commission and other NRAs before the summer of 2006. Ofcom expects to issue a final Statement at the end of 2006 or early in 2007.

## Section 2

# Introduction

## Background

2.1 In this document Ofcom is initiating its preliminary consideration of the issues which will need to be addressed when Ofcom next reviews the markets for wholesale mobile voice call termination. Ofcom concluded a review of these markets in June 2004 (see Statement *Wholesale mobile voice call termination* published by Ofcom on 1 June 2004; the “June 2004 statement”).

## A new regulatory regime

2.2 A new regulatory framework for electronic communications networks and services entered into force on 25 July 2003. The framework is designed to create harmonised regulation across Europe and is aimed at reducing entry barriers and fostering prospects for effective competition to the benefit of consumers. The basis for the new regulatory framework is five EU Communications Directives:

- Directive 2002/21/EC on a common regulatory framework for electronic communications networks and services (the “Framework Directive”);
- Directive 2002/19/EC on access to, and interconnection of, electronic communications networks and associated facilities (the “Access and Interconnection Directive”);
- Directive 2002/20/EC on the authorisation of electronic communications networks and services (the “Authorisation Directive”);
- Directive 2002/22/EC on universal service and users' rights relating to electronic communications networks and services, (the “Universal Service Directive”); and
- Directive 2002/58/EC concerning the processing of personal data and the protection of privacy in the electronic communications sector (the “Privacy Directive”).

2.3 The Framework Directive provides the overall structure for the new regulatory regime and sets out fundamental rules and objectives which read across all five Directives. Article 8 of the Framework Directive sets out three key policy objectives which have been taken into account in the preparation of this consultation document, namely promotion of competition, development of the internal market and the promotion of the interests of the citizens of the European Union. The Authorisation Directive establishes a new system whereby any person will be generally authorised to provide electronic communications services and/or networks without prior approval. The general authorisation replaces the former licensing regime. The Universal Service Directive defines a basic set of services that must be provided to end-users. The Access and Interconnection Directive sets out the terms on which providers may access each others' networks and services with a view to providing publicly available electronic communications services. These four Directives were implemented in the UK on 25 July 2003. This was achieved via the Act.

- 2.4 The Privacy Directive established users' rights with regard to the privacy of their communications. This Directive was adopted slightly later than the other four Directives and was implemented by Regulations which came into force on 11 December 2003.

### **Market reviews**

- 2.5 The new Directives require national regulatory authorities ("NRAs"), such as Ofcom, to carry out reviews of competition in communications markets to ensure that regulation remains appropriate and proportionate in the light of changing market conditions. A series of market reviews has been carried out over the last eighteen months.
- 2.6 Each market review has three stages:
- definition of the relevant market or markets;
  - assessment of competition in each market, in particular whether any undertakings have significant market power ("SMP") in a given market; and
  - assessment of appropriate regulatory obligations where there has been a finding of SMP.

### **Characteristics of the wholesale mobile voice call termination markets today**

- 2.7 Ofcom shares the view of the European Commission that termination of voice calls on each mobile network constitutes a separate market in which the terminating MNO has a 100% market share. Furthermore, the callers who pay for the call under the Calling Party Pays arrangement have little or no countervailing power; they often have no commercial relationship with the terminating operator and no choice over who will terminate their call. Consequently, terminating operators appear to have no incentives to keep charges low.
- 2.8 Barriers to entry are currently very high (and perhaps absolute) as no alternative provider may currently terminate calls on a SIM card without the agreement of the MNO which provides service to the called party. As the TSR noted, because the need for intervention is independent of the number of firms terminating calls (and the level of competition in call origination), regulation is currently not a transient but a permanent feature. Thus, a growth in the number of providers of mobile services, perhaps arising from liberalisation of spectrum usage, is unlikely to have any impact on competition to terminate voice calls, as each provider is likely to have a 100% share of call termination to its customers.
- 2.9 When defining the mobile termination markets in June 2004, both 2G and 3G voice termination were included in the same market, as Ofcom judged that there is a common pricing constraint; originating operators are unable to determine what type of network will be used to terminate any given call and are likely to be presented with the same 'blended' rate by the terminating operator, irrespective of whether the call is terminated on a 2G or 3G network.



## Existing regulation of wholesale mobile voice call termination

- 2.10 Ofcom currently holds the view, previously maintained in the June 2004 Statement, that there are markets for wholesale voice call termination on each MNO's network (or, where the MNO operates both 2G and 3G networks, across both networks). Ofcom also currently holds the view previously maintained in the June 2004 Statement that Vodafone, O2, Orange, T-Mobile and Hutchison 3G UK ("H3G") each have SMP in the market for wholesale voice call termination on their own network (although Ofcom's finding of SMP in respect of H3G is currently being considered by the Competition Appeals Tribunal). The June 2004 Statement also found that Inquam had SMP in the market for wholesale mobile voice call termination on its network. However, Inquam's spectrum licences were revoked in October 2004 after the operating company became insolvent and, therefore, the position of Inquam is not relevant to this Preliminary Consultation.
- 2.11 The June 2004 Statement imposed remedies for SMP on the 2G MNOs as follows;
- Obligations to provide network access (ie 2G call termination) on fair and reasonable terms, where reasonably requested
  - Prohibition of undue discrimination in relation to matters connected with such network access
  - Obligations to supply to Ofcom copies of any new or amended access contracts
  - Obligations to give advance notification of price changes, and
  - Obligations to comply with the terms of a condition controlling termination charges.
- 2.12 The only requirement imposed on H3G by the June 2004 Statement was an obligation to publish and notify its charges for 2G voice call termination and to notify to Ofcom the volume of terminated call minutes (2G and 3G). (Inquam was required to give advance notification of price changes.) Further regulation was considered disproportionate at that time as the proportion of voice calls which are terminated on 2G networks was expected to fall. H3G has incentives to transfer traffic from O2's network, which it uses where it cannot offer coverage on its own 3G network, to its own 3G network.
- 2.13 No ex ante conditions were imposed in respect of wholesale termination of voice calls on 3G networks (except for the obligation imposed on H3G referred to in paragraph 2.12 above) as, at the time of the June 2004 Statement, Ofcom considered that, amongst other things, any adverse effects on consumers associated with high charges for 3G voice call termination were likely to be small given the very limited size of the subscriber base of the only MNO then offering 3G services.

## The purpose of existing regulation

- 2.14 In the June 2004 Statement, Ofcom expressed the view that, in the absence of regulation, or threat of regulation, 2G MNOs would have the ability and incentive to set charges for mobile voice call termination at the profit maximising (monopoly) level and, further, would have incentives to unduly discriminate in respect of charges, terms and conditions, particularly in respect

of voice call termination services required by a new entrant MNO. Either form of behaviour would be likely to restrict competition, to the disadvantage of end users.

### **Charge controls**

- 2.15 Ofcom believes that excessive charges would lead to detriments for consumers, and that the 'waterbed' effect, by which excess profits from termination services may be returned to mobile users via lower retail prices, does not provide a justification for the structure of charges that would arise in the absence of regulation.
- 2.16 The first reason is that the waterbed effect may not be complete, as competition in the retail market may not be sufficient to drive out all of the excess termination profits that would arise in the absence of regulation. However, secondly, even if the waterbed effect was fully effective in returning excessive profits to consumers, there are three other detrimental effects which arise from excessive termination charges:
- Reduction in economic efficiency; the presence of high termination charges subsidising low prices for retail mobile services provides consumers with distorted price signals. The overall effect is sub-optimal with the volume of calls to mobiles below the efficient level and usage of mobiles, as well as replacement of handsets, above the optimal level;
  - Undesirable distributional effects; for some consumers, the high cost of calling mobiles is compensated for by lower access and outgoing mobile charges, but those without a mobile phone who call mobiles are adversely affected as they do not receive any benefits from lower mobile access and origination charges.
  - Distortion of consumer choice; above-cost charges for fixed-to-mobile calls distort consumers' choice between making a fixed line call to a mobile or an on-net mobile-to-mobile call. Since mobile technology uses more resources than fixed technology this generates an inefficient allocation of resources.
- 2.17 These issues were discussed extensively in Ofcom's last market review (see Chapter 5 of the May 2003 consultation, Chapter 4 of the December 2003 and Chapter 4 of the June 2004 statement). In particular Ofcom's analysis of the reduction in economic efficiency, set out in Annex L of the December 2003 consultation set out a quantification of the benefits of charge control regulation compared with a hypothetical unregulated alternative which captured the benefits of avoiding a reduction in economic efficiency.
- 2.18. The cost-benefit analysis (which was limited to a quantification of the economic efficiency benefits and did not measure the gains from avoiding the other distortions) suggested a welfare gain of just under £1.5bn from imposing the charge control. This was derived by comparing the regulated charges with estimates of the much higher charges that could arise in the absence of regulation. The gain from smaller adjustments to termination charges would be very much lower, perhaps disproportionately so in the case of modest adjustments which may have little or no impact on consumer welfare or economic efficiency.

## **Other obligations imposed on 2G MNOS**

2.19 The obligations to meet reasonable demand for 2G voice call termination on fair and reasonable and not unduly discriminatory terms were intended to complement the charge controls and also intended to address the concern that MNOs have incentives to unduly discriminate, particularly in respect of voice call termination services required by a new entrant MNO. The obligation to notify charges and to supply copies of contracts to Ofcom were intended to facilitate compliance monitoring, as well as providing wholesale purchasers with sufficient notice of changes to enable advance planning.

## **Scope for fundamental change removing the causes of SMP**

2.20 Ofcom has been disappointed by the muted nature of debate about changes which the industry might implement, or which technology might bring about, which could remove the underlying causes of SMP in these markets. Section 3 of this consultation exercise explores the prospects for structural change and presents a challenge to the mobile industry to consider how the sources of enduring SMP in mobile voice call termination might potentially be removed.

## **Issues for future regulation where SMP persists**

2.21 Purchasers of wholesale services terminating voice calls on mobile networks are currently unable to choose whether a call will be terminated on a 2G or 3G network, as the choice is determined by technical features within the mobile network and the mobile phone which is being called. Furthermore, Ofcom understands that the wholesale billing systems of the MNOs are currently unable to distinguish between calls which are terminated on 2G or 3G networks and, for this reason, MNOs charge the same price for terminating calls on either 2G or 3G networks.

2.22 However, this does not mean that the charge determined by Ofcom for 2G termination is the charge actually paid by networks for termination. The MNOs are not prevented from setting a 3G termination charge above the regulated 2G rate and charging a blended rate for termination. This would be calculated as a weighted average of 2G and 3G rates, the weights representing the relative volumes of traffic terminating on 2G and 3G networks. In the absence of any controls on 3G termination rates, there is a risk that the uniform blended rate would rise inexorably as more and more traffic fell outside the scope of the price control.

2.23 Asymmetric regulation of mobile voice call termination charges which applies only to termination on 2G networks may also create artificial incentives for MNOs to terminate traffic on their unregulated 3G networks where, absent regulation, MNOs might consider such use of 3G networks to be inefficient. Thus, regulation of this kind may cause inefficient use of resources.

2.24 Separate regulation of mobile voice call termination on 2G networks and on 3G networks (for example, distinct charge caps applying to termination on 2G networks and on 3G networks), while avoiding the distinction between an unregulated form of termination and a regulated form of termination, also presents some risk that resources may be used inefficiently as MNOs seek to use the network which they believe to be subject to lighter regulation; it is likely that MNOs will always enjoy some information advantages over third parties such as Ofcom, which may be exploited to commercial advantage.

2.25 Ofcom is inviting stakeholders to comment on these concerns, and some of the options are explored in Section 4.

**Next steps**

2.26 This consultation closes 30 August 2005. Section 5 explains how stakeholders can make representations.

### Section 3

## Prospects for the underlying causes of SMP to be eroded

### Prospects for change

3.1 There are currently few if any signs that the market will deliver fundamental change which could materially alter the competitive landscape in the period up to 2010 or in the foreseeable future, though some observers have commented that the growth of VoIP may have the potential to alter the market. It is possible, however, to conceive of technological and commercial changes which could remove the underlying causes of SMP if there was a strong incentive to achieve this. These options tend to revolve around either implementation of a variant of the Receiving Party Pays (“RPP”) principle or the use of technology to enable more than one MNO to terminate calls on each mobile phone. The remedies so far identified tend to be highly interventionist and potentially very disruptive to the markets. Ofcom is determined, however, to explore thoroughly all of the options for removing the underlying causes of SMP and, thereby, for opening the way to a potential removal of all regulation from these markets.

### Receiving Party Pays

3.2 Where the RPP principle applies, there is a direct commercial relationship between the terminating operator and the customer which pays to receive the call; under this scenario, the cost of receiving calls would be taken into account by purchasers selecting a provider of mobile services and this is likely to cause MNOs to compete, in part, on charges for receiving calls. Although common in North America, European MNOs have not shown any enthusiasm for this arrangement and, in the medium term, it seems highly unlikely that a widespread change to RPP will be introduced by the industry. A high degree of industry co-ordination would be required to implement RPP, as any MNO which chose to retain the present CPP principle would place itself at a commercial advantage in attracting mobile customers (who pay less under CPP than RPP). It is conceivable that MNOs could be required to operate RPP principles, perhaps by having termination charges set below cost or, indeed, at zero, so that the cost of termination cannot be recovered from originating operators (sometimes known as the Bill and Keep approach), but this would be a major change to commercial models and potentially very disruptive to the mobile industry. While this approach would reduce the level of cost analysis conducted by Ofcom, it cannot be said that, overall, it would reduce the level of regulatory intervention. Such a change is also likely to be very unpopular with consumers.

3.3 Most of those who commented on this question when responding to the TSR considered that, on balance, the benefit, of greater competition, would be insufficient to justify contemplating the considerable disruption (both to the MNOs themselves and also in terms of consumer behaviour). Ofcom is not presently proposing to require MNOs to adopt RPP principles, but would welcome any further constructive thoughts on whether a transition to RPP could be made to work in any particular circumstances.

**Question 1: Could RPP principles be made to work to the advantage of consumers in the UK? If so, how?**

**Technological change enabling competitive termination**

3.4 Technological change can be envisaged which would allow the originating network operator to choose which mobile network should terminate each call. The extensive rollout of mobile networks means that at any time each mobile phone is generally within the coverage area of 4 or 5 different mobile networks. Technical changes, such as multiple SIM cards and common, shared or duplicated location registers, would be needed if originating operators are to be offered a choice of terminating network, and implementation costs could be significant. Nevertheless, much of the technology is understood and it is conceivable that, for example, an MNO could use its own network to terminate calls on the handset of a customer of another MNO, and a fixed network operator could select the cheapest MNO to terminate the calls which it originates. If limited to termination of incoming calls, such arrangements need not disrupt the relationship between each MNO and its retail customers (customers need be no more aware of such arrangements than they are of existing call origination and transit arrangements between network operators). The industry appears not to have given serious consideration to the viability of such schemes. As with implementation of RPP, any change would require significant co-operation or regulatory intervention. If imposed by regulation (and CPP arrangements make it unlikely that subscriber pressure will force a change), this option is likely to be considered highly interventionist, and certainly not one which Ofcom would consider without first consulting very extensively, including with the appropriate international standards bodies. Ofcom does not propose to initiate such formal consultation at this time, but is encouraging the mobile industry to initiate discussion and exploratory research which would enable the pros and cons of such an arrangement to be better understood. In the meantime, Ofcom is inviting stakeholders more broadly to comment on the prospects for competitive termination offered by technical change.

**Question 2: Is it realistic to believe that a competitive market for wholesale termination of voice calls could be made to operate successfully. How might such arrangements work?**

**Voice over IP**

- 3.5 It is conceivable that Voice over IP (“VoIP”) may eventually enable callers and called parties to use mobile data services to terminate or receive voice calls. Given the very much lower bandwidth of voice compared with some of the broadband services which industry observers anticipate will be accessed by mobile phone users in future, voice call termination if charged for at the same price per bit as, for example, a high resolution video or music service may be very much cheaper than even today’s regulated charge for voice call termination (if per bit charges are to be maintained at a level which is commercially attractive for conveying high bandwidth services, and assuming that it is difficult or impossible for MNOs to distinguish between VoIP and other types of data calls).
- 3.6 The payment arrangements for VoIP calls are also very different to PSTN calls to mobiles in that both parties pay for the data which they send and receive (outside the operator walled garden or portal). The individual making the on-line call only pays to be on-line (which does not include a termination charge) and

the target of the call (if he answers the call) similarly only pays when connected to the website/portal/call server. Thus, in a VoIP call both the called and the calling parties pay for receiving/making it. Such a partial RPP arrangement changes the incentives on the called party and is likely to affect his behaviour, although it is still unclear in what specific manner. For example, it is possible that the called party may not accept VoIP calls because he would have in part to pay for them, thus forcing the calling party to reach him via a standard voice call to his mobile, for which he would not have to pay. However the growth of data and IP services may start to accustom mobile phone users to paying to access data, and may make mobile phone users more willing to accept incoming VoIP calls .

- 3.7 It is not clear, however, when VoIP will become widely available and accepted and whether present disadvantages, such as the requirement that the called party be “on-line” when called, can be overcome. It is also unclear whether MNOs will develop the technology needed to price discriminate according to the nature of the data being conveyed (voice, video, music etc) or to block the ability to make VoIP calls.
- 3.8 Fixed network operators which, when responding to the TSR, commented on the prospects for IP based Interconnection to alleviate the effects of dominance in this market, were generally sceptical about the extent to which IP technology would alter the market. Nevertheless, it seems to Ofcom that IP based technology may offer the best chance that the fundamental nature of the mobile termination market can be altered. Ofcom would welcome more considered views on this issue.

**Question 3: Is VoIP likely to have a significant impact on the market for mobile voice call termination during the period to 2010? What are the possible obstacles to this outcome and how might industry or Ofcom overcome these?**

### **Other options for removing the underlying source of SMP**

- 3.9 Ofcom has been disappointed that the mobile industry has not given more consideration to other mechanisms which might remove the underlying source of SMP, and is inviting MNOs to give the issue more serious thought. Although Ofcom is determined to explore all options for enabling the emergence of competition in these markets, Ofcom recognises the possibility, however, that long term price regulation may be preferable to any development (whether industry led or otherwise) which would remove SMP in this market. Ofcom is inviting stakeholders to comment on this possibility and on whether this outcome could serve the best interests of consumers.
- 3.10 Prior to publication of the June 2004 Statement, Ofcom engaged with the mobile industry with a view to identifying technical or commercial developments which could remove the underlying causes of SMP in mobile voice call termination, thus enabling withdrawal of regulation. Responses from MNOs tended to focus on the availability, now or in the future, of demand side alternatives to voice calls terminating on mobile phones. Ofcom concluded in the June 2004 Statement that none of these alternatives would impose sufficient constraints on pricing of mobile voice call termination. The reasons for this conclusion are discussed below, to assist stakeholders in responding to the present consultation and in presenting any information about new developments which might cause Ofcom to change its view:

## **SMS**

3.11 Ofcom is of the view that SMS does not provide an adequate alternative for voice calls to mobile phones on the demand side. This is due to the fact that consumers perceive SMS as a limited substitute for a voice call and as an activity largely additional to voice calls to mobile phones. The main reasons for this are that SMS enables parties to exchange only relatively short messages (the number of characters in a message is limited) and that SMS can be delayed, because, unlike a mobile voice call, an SMS is transferred between networks on a “store and forward” basis. Furthermore, currently, each MNO can only supply SMS termination to the subscribers of its own network. Hence, SMS termination to a specific mobile customer is offered by the same MNO that provides voice termination to that customer, and the MNO is unlikely to do so in such a way which would impose any additional constraint on the level of the charges for voice termination on its network. It is very unlikely that an MNO will undercut its own charges.

## **Instant Messaging, Unified messaging services and ‘message clips’**

3.12 Mobile Instant Messaging, unified messaging services and ‘message clips’ (short voice or video message sent over the IP network) could also develop as a potential substitute for voice calls. However, these technologies are not deployed by MNOs in a large scale on their networks and it is difficult to assess when they will become commercially available. Moreover, Ofcom is of the view that, as with SMS, these services, once available, are unlikely to put any competitive pressure on voice call termination charges, as the same MNO sets the termination and usage charge for all these services.

## **Private wire services and mobile-to-mobile adaptations**

3.13 Private wire services are usually provided as leased lines that connect a corporate private exchange to a mobile network. They allow corporate customers to make and receive calls to and from mobile phones without paying the retail price for fixed-to-mobile calls. Under private wire arrangements, the price for calls from fixed-to-mobiles is lower than the price paid by the generality of fixed line customers.

3.14 Mobile-to-mobile adaptations, such as GSM gateways, consist of devices which allow fixed-to-mobile calls to be converted to on-net mobile-to-mobile calls. Using this facility, fixed to mobile calls can be made from fixed phones but are converted to mobile-to-mobile calls and then carried and charged in the same way as calls from mobiles. This allows the subscriber to take advantage of lower prices for on-net calls rather than paying the standard price for calls from fixed-to-mobiles.

3.15 It has been suggested that Commercial operation of gateways could be used to provide lower prices to a wider range of customers for fixed-to-mobile calls. Commercial operation of gateways is currently unlawful, unless authorised under a licence issued under the Wireless Telegraphy Act 1949. Ofcom is planning to consult within the next few weeks on a range of options for the future regulation of the use of GSM gateways. An alternative regulatory approach which could allow all customers for fixed-to-mobile calls to benefit from the lower prices of retail on-net calls is considered in section 4 below. This involves obliging the MNOs to provide call termination at prices which are linked to the MNOs’ retail tariffs for all interconnection provision. The



advantages and disadvantages of this approach to regulation of mobile call termination charges are set out in paragraphs 4.10 to 4.14.

### **Multiple SIM cards**

3.16 Paragraph 3.4 above considered the feasibility of technological change enabling originating operators to choose on which mobile network a call to any mobile phone will be terminated. A similar result could be achieved if mobile phone users used different SIM cards to receive and make calls. However many subsidised handsets are SIM locked by the MNO until expiry of the users contract

3.17 There are devices available in the UK market which allow customers to use dual SIM cards in the same handset and, thus, switch between networks. However, to place some pressure on MNOs with high termination charges, the subscriber would need to leave his phone connected to the SIM registered with the cheapest provider of voice call termination charges and only switch to his “home” network to make cheap outbound calls. This is laborious and time-consuming. In addition, it relies on the called party having the incentive to change network every time he needs to make a call and to switch back again at the end of the call, so that the next inbound call will use the network with lower termination charges. It is doubtful that such an incentive currently exists given the CPP arrangement and customer behaviour under that arrangement. Hence, it is more likely that subscribers currently exploit the multiple SIM card opportunity purely to take advantage of differences in the prices of outgoing calls.

### **Wireless LANs**

3.18 Operators running Wireless Local Area Networks (eg WiFi) could conceivably compete with MNOs to terminate calls using VoIP, thus putting pressure on the level of mobile voice termination charges. However, Ofcom believes that, at present, there are significant technical obstacles that would have to be overcome before such a service could become viable for mobile users. For example WiFi operators cannot currently offer the same coverage as the MNOs’ networks because of the limited range of reception allowed by their equipment. A further limitation is that, for WiFi to have an impact on the market for mobile voice call termination, the called party would need to be responsive to the price of inbound calls, and be prepared to incur some cost to reduce the cost to the person calling the mobile phone (for example by acquiring a multiple mode handset compatible with WiFi access). At present, the evidence available to Ofcom (which is presented in the Charge Control Consultation) suggests that mobile subscribers do not take into consideration to any great extent the price of inbound calls when making their purchasing decisions. Ofcom believes that these obstacles would prevent WiFi operators from being able to supply voice call termination in competition with MNOs.

### **Call-back**

3.19 Call-back refers to a situation where the direction of a call is ‘reversed’ and the calling party is called back by the called party, either in an ad hoc manner or through a commercial scheme. Call-back could render an increase in termination charges unprofitable only if the profitability of outgoing calls is lower than that of incoming calls, and call-back is carried out in sufficient volume.

- 3.20 Ofcom has no evidence of any commercial operators currently offering call-back on calls to mobiles within the UK and found no evidence that the practice of ad-hoc call-back is having a constraining effect on voice call termination charges.
- 3.21 It is possible that MNOs could introduce a call-back service to offer an alternative to callers to their subscribers. Ofcom believes that this form of call-back could not be relied upon in the immediate future to act as a viable constraint on mobile voice termination charges. This is partly because MNOs have no incentive to introduce a service of a price and a quality such that it could act as an effective substitute for their own monopoly service. Call back services can also be expected to be inherently more costly to perform than conventional direct calling.

### **Call- divert**

- 3.22 Mobile users could subscribe to a personal numbering service (PNS) which would allow them to use a single number and have their calls directed to any number they specify (e.g. their fixed line). However, calls to PNS are generally more expensive than calls to mobile numbers as a consequence of the additional technology used and because the provider of the PNS service needs to ensure that it can cover the cost of diverting calls to any destination specified by the subscriber, including to a mobile phone. This service may be attractive to those subscribers who are sensitive to the price for others to call them on their mobile phone (and who may be willing to subsidize the cost through their own subscription to the PNS service). However, the MNOs will typically have already separated these subscribers from the generality of subscribers by offering them specially targeted tariffs.
- 3.23 An alternative to PNS is for the called party to use a single terminal that is both a cordless phone and a GSM phone. This allows subscribers to make and receive calls using their "fixed line" (via the cordless element of the phone), when within the range of the cordless base station and the GSM element, when outside of it. Thus, while the called party is within the range of the cordless base station, there is a substitute for the termination service.
- 3.24 Although such phones are starting to become available (BT, for example, has announced that it plans to launch its "Bluephone" this year), the range of the cordless base station is limited and cannot offer a full alternative to mobile termination. Furthermore, consumer research (see the Charge Control consultation) suggest that few purchasers of mobile phone services factor in, when selecting a service, the cost to others of contacting them. More important reasons for selecting a hybrid cordless/mobile phone are likely to be the convenience of using just one device and a desire to reduce the cost of making outgoing calls. If that is the case, it is unlikely that the proliferation of such devices will place any pressure on mobile call termination charges.

### **Future prospects for competitive mobile termination of voice calls**

- 3.25 Ofcom is inviting interested parties to consider carefully all possible options for removing the underlying causes of enduring SMP in these markets, and to propose specific actions which MNOs or Ofcom, or some other party, could undertake to deliver fundamental change.

### **Question 4: Are there other options, not considered elsewhere in this consultation document, for removing the underlying causes of SMP?**

## Section 4

# Regulatory options if SMP persists

- 4.1 If structural change to remove the underlying causes of SMP is not forthcoming, Ofcom will need to decide what form regulation of markets with SMP needs to take to prevent abuse of dominant positions.

## Regulation today

- 4.2 The June 2004 Statement imposed remedies for SMP on the 2G MNOs as follows;
- Obligations to provide network access (ie 2G call termination) on fair and reasonable terms, where reasonably requested
  - Prohibition of undue discrimination in relation to matters connected with such network access
  - Obligations to supply to Ofcom copies of any new or amended access contracts
  - Obligations to give advance notification of price changes, and
  - Obligations to comply with the terms of a condition controlling termination charges.
- 4.3 The only requirements imposed on H3G by the June 2004 Statement was an obligation to publish and notify charges and to notify to Ofcom volumes of call termination (2G terminations and total terminations). (Inquam was required to give advance notification of price changes.)
- 4.4 No ex ante conditions were imposed in respect of wholesale termination of voice calls on 3G networks (except for the condition imposed on H3G referred to in paragraph 4.3) as, at the time of the June 2004 Statement, Ofcom considered that, amongst other things, any adverse effects on consumers associated with high charges for 3G voice call termination were likely to be small given the very limited size of the subscriber base of the only MNO then offering 3G services. The volume of voice calls which are terminated on 3G networks is expected to increase during the next few years and Ofcom will need to decide what regulation is appropriate.

## Possible remedies to ensure that charges for voice call termination are reasonably cost reflective

- 4.5 Ofcom currently believes that MNOs face an incentive to set their charges for voice call termination at the profit maximising (monopoly) level. Excessive profits generated in the uncompetitive wholesale termination markets may be used to provide commercial advantage in the more competitive retail mobile market, and any 2G MNO which unilaterally chose not to subsidise its retail prices in this way would be placed at a competitive disadvantage. The detrimental effects of high termination charges were explored in section 2 above.
- 4.6 There are several conventional approaches to dealing with the likelihood that unregulated charges will be set above the competitive level.

### **Reliance on competition law**

4.7 A reliance on competition law alone, perhaps supported by an ex ante condition requiring price transparency, would reduce the level of regulatory intervention to a minimum, but swift intervention, if ever required, would be difficult. Any claim of abuse of a dominant position would need to be substantiated by a finding of dominance, an analysis of costs and a critique of the anti competitive effect caused by excessive charges, and this could cause significant delay in addressing the abuse. As Ofcom pointed out in the TSR, competition law is better suited to deal with exclusionary practices than with excessive pricing abuses, and there have been limited competition law cases dealing with excessive pricing. Also, it may not allow for the clarity, certainty and precision of intervention that is necessary to give all parties, including MNOs and FNOs, the confidence to plan their businesses and make significant investments. For these reasons it has not generally been Ofcom's practice elsewhere to rely on competition law alone where there is a risk that excessive charges may be levied.

### **Fair and reasonable, or cost oriented, charges**

4.8 An ex ante condition requiring the supply of 2G voice call termination on fair and reasonable or cost oriented terms would enable claims of excessive pricing to be addressed more swiftly than would be possible under competition law, as the investigation would be limited to an analysis of whether charges were fair and reasonable or cost oriented. However, this approach is likely to generate a high degree of uncertainty about what is the fair and reasonable or cost-oriented level. Where Ofcom has a clear understanding of costs, this approach, while light in touch, may be considered perverse, particularly where there is a high probability of disputes. Even under the less prescriptive of these two variants, that charges should be "fair and reasonable", a wholesale purchaser of mobile voice call termination services may at some point 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, during which charges may increase.

4.9 However, where Ofcom is not yet able to judge the appropriate level of a charge control, for example because the effects of certain influential factors cannot yet be determined, or where there is a general acceptance of current charges and a low probability of dispute, a condition requiring that charges should be cost oriented or fair and reasonable may serve as a useful safeguard.

### **Wholesale charges to be fixed relative to retail charges**

4.10 An alternative regulatory remedy, which would also address some industry concerns about potential disparity between retail mobile call and wholesale mobile call termination charges, would be to link the wholesale charges to the prices charged in the retail market. The price charged for retail mobile calls contains an implicit charge for mobile termination. Therefore, linking the charges in the wholesale and retail market could result in parity between the wholesale charges and the implicit charge for mobile termination charged in the retail market. The degree to which parity is achieved will depend on the retail rate against which wholesale tariffs are set. For example, these could be set with reference to an average tariff or a lowest available tariff for a particular call type, such as mobile to mobile calls on the same network (on-net calls).

- 4.11 This could be thought of as a less intrusive regulatory remedy than the imposition of a charge control, as the level of the wholesale charges would be determined by the MNOs' retail pricing decisions rather than by Ofcom imposing price controls. However, this regulatory alternative would be expected to result in the regulation of call termination impacting on choices which the mobile operators make in the retail market. In addition, given the wide-range of different retail tariffs offered by the MNOs this regulatory approach could impact upon the transparency and certainty of the level of wholesale charges.
- 4.12 Spillover from the regulation of call termination into the retail market will occur as mobile operators would be expected to set future retail call prices (e.g. on-net call prices) knowing that this price will also determine the rate they can charge for mobile call termination. Therefore, one would expect the price set to be a mix of the optimal prices in these two markets. The retail charges for some on-net calls are currently below the cost reflective wholesale charge for termination. Given that one might expect operators to seek to set prices which allow them to recover the costs of providing wholesale call termination, the linking of these two prices this could result in an increase in the level of retail charges.
- 4.13 The overall effect on consumers of this spillover into the retail market is unclear. Ofcom has undertaken analysis of the possible impact on retail prices of linking the charge for termination of fixed-to-mobile calls to the retail price for on-net calls. This analysis suggests that this linkage would result in a rebalancing of tariffs at the retail level with on-net call charges increasing whilst some other retail charges fall. With existing retail calling patterns, on-net calls make up a significant proportion of subscribers' originated calls. Therefore, the net effect of this rebalancing upon consumers is unclear, and could even be negative.
- 4.14 Therefore, on one hand, linking the price of wholesale mobile call termination to prices changed in the retail market could be considered a light-touch regulatory alternative to the imposition of a charge control. However, on the other hand, it could also be considered to be an intrusive regulatory approach as it would be expected to result in spillover effects with the regulation of wholesale call termination affecting prices set in retail markets. Furthermore, it is possible that this spillover effect could be detrimental to consumers overall. Ofcom is inviting views on the merits and disadvantages of this regulatory alternative and the likely impact this may have upon both retail and wholesale markets.

**Question 5: Do you believe, on balance, that a retail-minus approach to setting wholesale prices could be advantageous?**

**Charge controls**

- 4.15 The advantage of a charge control, is that it provides a high degree of certainty, which is particularly advantageous in a market which has been characterised by allegations that charges are not fair and reasonable or not cost oriented, and where there would otherwise be a high risk of claims that charges are excessive. Charge controls are, nevertheless, intrusive and may mask market forces, as yet not understood, which would otherwise constrain charges.

## **The asymmetric nature of regulation today**

4.16 Regulation is currently limited to wholesale mobile voice call termination on 2G networks, and, more specifically, charge controls are limited to wholesale mobile voice call termination on 2G networks by the 2G MNOs only. H3G does not operate a 2G network of its own and, where it cannot offer voice call termination using its own 3G network, it uses another MNO's 2G network to offer voice call termination services; charges for such voice call termination are not controlled by regulation. There is no regulation of voice call termination by any MNO on 3G networks, except that 3 is obliged to notify to Ofcom the volume of minutes of all calls (ie both 2G and 3G) by charging period, terminated during each quarter.

### **Regulation of 2G termination undermined by the absence of 3G regulation**

4.17 Operators originating voice calls to mobiles are currently unable to determine whether a call will be terminated on a 2G or 3G network. Furthermore, Ofcom understands that the billing systems of the MNOs are currently unable to distinguish between calls which are terminated on 2G or 3G networks and, for this reason, MNOs charge the same rate for terminating calls on either 2G or 3G networks. As was explained in paragraph 2.22 above, where the MNO is subject to a 2G charge control, the termination rate is a blended average, weighted by volumes of 2G and 3G terminations, of a 2G rate which is compliant with the charge control and an unregulated implicit rate for termination on 3G networks. Logically, this arrangement would allow MNOs to set a blended rate of their choice, unfettered by regulation, by adjusting the unregulated implicit rate for 3G termination within the blending formula. The volume of calls terminated on 3G networks is expected to increase over the next few years, and the complete absence of any ex ante regulation of 3G voice call termination presents a risk that regulation of 2G termination may be undermined. Ofcom is inviting stakeholders to comment on this concern.

**Question 6: Do you agree that asymmetric regulation of voice call termination, which is applied only to termination on 2G networks, will cease to be effective as the proportion of calls terminated on 3G networks grows?**

### **Regulatory distortion arising from asymmetric regulation of 2G and 3G termination**

4.18 Where MNOs have discretion to choose whether to terminate any given voice call on a dual mode 2G/3G phone on their 2G or their 3G network, regulation may inadvertently create artificial incentives for MNOs to use one or other network more than it would otherwise do, resulting in an inefficient use of resources. This could arise either where, as at present, only one form of termination (2G) is regulated or where both are regulated but one of the charge controls is perceived to be more advantageous to the terminating MNO than the other, which may be inevitable.

4.19 Ofcom understands that, at present, MNOs with two networks (2G and 3G) have limited scope to choose whether to terminate voice calls on one or the other network. Networks are unable to switch dual mode phones on a call by call basis (for example to receive voice calls on 2G and data calls on 3G) and can only programme these phones always to prefer one or other mode when coverage is available. As customers would be unable to receive advanced services dependent on 3G bandwidth if programmed to standby in 2G mode (and set-up times to make advanced 3G calls would be extended), Ofcom

understands that all MNOs generally programme all dual mode phones to standby in 3G mode whenever adequate 3G coverage is detected. Therefore all voice calls to dual mode phones in a 3G coverage area must be terminated using the MNO's 3G network. Clearly, in all other cases, where there is only 2G coverage, the MNO will have no choice but to terminate the call using its 2G network. The absence of any flexibility suggests that the risk, that regulation may create distortions, is low. However, this situation may of course change, particularly if regulation creates an incentive to develop technology which will enable MNOs to decide on a call by call basis which network should be used to terminate the call. On this issue too, Ofcom would welcome the views of stakeholders.

**Question 7: Do you believe that asymmetric regulation of mobile voice call termination, which applies only to termination on 2G networks, will create material incentives to terminate calls on 3G networks? If so, how easily could MNOs develop the technology necessary to follow these incentives?**

### **Regulation of H3G**

4.20 H3G is not presently subject to any price regulation of its mobile voice call termination. This reflects the conclusions that Ofcom reached as to the remedies that would be appropriate and proportionate in relation to H3G in the June 2004 statement. Assuming for present purposes that H3G has SMP, the review will need to consider afresh the issue of remedies.

4.21 The proportion of calls which H3G terminates on a 2G network rather than on its own 3G network can be expected to fall as H3G builds out its 3G network. The extent to which H3G will continue to use 2G networks to terminate voice calls, is not clear. However, if Ofcom was to impose some form of charge control in respect of voice call termination on each of the 3G networks, but did not impose any such controls in respect of voice calls terminated by H3G on a 2G network, H3G might then face some artificial incentives similar to those referred to in paragraph 4.19 above. However in this instance these would be incentives to use 2G networks rather than its own 3G network to terminate voice traffic.

### **Voice call termination charges and costs**

#### **Charges**

4.22 Charges for voice call termination on 2G networks by the 2G MNOs are controlled by conditions imposed in the June 2004 Statement. So far, none of the four 2G MNOs has published a distinct charge for 3G voice call termination and the volume of such terminations is still so low that an implicit charge within the blending formula would be almost imperceptible when set against charging variations by time of day. H3G has, of course, already used its freedom to apply a uniform set of charges for 2G and 3G voice call termination. The average charge levied by H3G is in excess of the average charges levied by the 2G MNOs.

#### **Costs**

4.23 Ofcom has conducted an analysis of the costs of terminating calls on 2G networks and has updated the LRIC model used to determine the level of the charge control imposed in June 2004. Full details of this analysis can be found at Annex E to the Charge Control Consultation. Ofcom will update this analysis further before taking any decision about regulation which might be imposed

when the charge controls being proposed in the Charge Control Consultation expire.

- 4.24 Ofcom has contracted with Analysys Consulting to construct a 3G cost model to complement the LRIC cost model used to inform the decision to impose charge controls on 2G voice call termination. Ofcom expects the 3G model to be completed during the first half of 2006.

#### **Interactions between 2G and 3G costs**

- 4.25 As is explained in the Charge Control Consultation, the extent to which voice call termination traffic migrates from 2G networks to 3G networks may have a bearing on the unit costs of voice call termination on the different networks. Such migration could make some 2G assets redundant, which would cause unit costs to rise if it was thought appropriate to recover the cost of those stranded assets from remaining volumes of 2G termination.
- 4.26 The charge control imposed in June 2004 considered, for the purpose of the exercise, a scenario under which there was no migration of termination traffic to 3G networks. The one year extension of the charge control, which is being proposed in the Charge Control Consultation, considered a range of assumptions about traffic volumes and asset utilisation, but essentially follows the approach taken in June 2004. The actual extent of traffic migration over the longer term cannot be forecast with precision at this stage and it is also unclear to what extent existing 2G assets will cease to be needed for voice call termination at some point during the full extent of their asset life.
- 4.27 The implications of different assumptions about traffic migration and asset utilisation can of course be modelled and a conclusion reached which is reasonable across a range of likely scenarios.
- 4.28 There is, however, a further problem in that it is not clear to what extent originators of voice calls (and, indirectly, end users) should be required to pay more for voice call termination because MNOs have chosen to launch alternative 3G networks.
- 4.29 There may be an argument that the competitive charge for voice call termination on 3G networks should be no higher than the cost based charge for 2G voice call termination for as long as 2G networks and spectrum are not exhausted. This is on the basis that there is no reason why consumers should pay a higher charge for 3G termination when neither they nor the originating operator can determine when a 3G termination should be provided instead of 2G, and 3G voice call termination offers no advantages to the caller. It is also sometimes said that 3G network costs should in the long run be lower than 2G network costs, as 3G is a more efficient technology.
- 4.30 It is not clear what the implications of an approach along these lines might be for the treatment of the costs of spectrum used for 2G and 3G services. The treatment of the spectrum costs is a further complex issue, to which various approaches might be possible. It will be important to identify and take into account all relevant considerations, including consistency with other regulation, any incentive effects for the efficient use of resources, and the effects (if any) on the ability of MNOs to fund the rollout of their networks and services.



4.31 The issues identified in paragraphs 4.28-4.30 need to be considered both in relation to the 2G MNOs and in relation to H3G, which has no 2G network of its own. It might or might not be reasonable to require H3G to limit its charges for voice call termination to a level determined by an analysis of the costs of 2G networks, if H3G's costs are higher despite the greater efficiency of the technology. This may or may not have implications for the appropriate treatment of costs incurred by the 2G MNOs.

**Question 8: Would it be reasonable to require that charges for mobile voice call termination (2G or 3G) are no higher than the cost based charge for the more efficient form of termination? What are the risks and advantages of this approach?**

### **A holistic approach to mobile voice call termination**

4.32 The close cost and technical interactions between voice call termination on 2G and 3G networks may suggest that, ultimately, if control of charges continues to be desirable, it may be necessary to take a wider view of voice call termination encompassing both 2G and 3G costs, particularly in view of the absence of choice for originating operators and the application of blended charges by MNOs. This will not be possible until 3G costs, and migration patterns and other interactions between the 2G and 3G networks, are better understood. The decision on when to take a wider view of mobile voice call termination costs will be important. It will be important to take a number of considerations into account, including the potential for significant increases in voice call termination charges and whether or not there might be an effect on the resources available to develop 3G services. Ofcom will welcome extended comments on this difficult but central question.

**Question 9: On what basis could a single charge control, to apply to both 2G and 3G voice call termination, be calculated?**

### **Other issues which may require consideration**

#### **Termination of mobile to mobile calls**

4.33 Ofcom understand that, at present, the wholesale billing systems of terminating MNOs are unable to distinguish between calls which were originated on fixed networks and those which were originated on other mobile networks, as many calls originated on other mobile networks are transited over BT's network. Therefore, MNOs make no distinction between these types of call when charging for termination; the present charge control would allow differential charging, provided that the average weighted target charge set under the control is met separately in respect of calls originated on fixed networks and those originated on other mobile networks. This situation may, of course, change as MNOs continue to construct direct interconnection with other MNOs. It may, therefore, be helpful to consider whether the same approach should always be taken to control of charges for terminating both kinds of call, or whether a lighter control, or no control, should be applied to charges for terminating calls originated on other mobile networks.

4.34 The potential for consumer detriment from high termination charges for mobile to mobile calls may be less than is the case with fixed to mobile calls. The distributional effects and impact on consumer choice, referred to in paragraph 2.16 above, may be less relevant in the context of mobile to mobile calls, and the net effect of regulating flows between the MNOs may be slight. It is,

therefore, conceivable that any future charge controls on 2G or 3G voice call termination could be restricted to termination of voice calls originated on fixed networks, where the potential for consumer detriment may be greater. In that case, charges for termination of mobile to mobile calls might be made subject only to a general obligation to ensure that these charges are fair and reasonable or, alternatively, all controls could be removed in favour of a reliance on competition law.

- 4.35 However, there may also be concerns that, in the absence of regulation, smaller mobile operators could be damaged by high unregulated mobile to mobile termination charges. Such high charges could allow larger networks a competitive advantage in the retail market. This could be particularly relevant to future new entrants. It may be arguable that high mobile to mobile termination rates could give larger operators a competitive advantage in the retail market.

**Question 10: Should mobile termination of mobile originated calls be subject to lighter regulation than mobile termination of fixed network originated calls? If so, what form might that regulation take?**

#### **Termination of data calls**

- 4.36 Termination of SMS and other data services is outside the definition of the market in the European Commission's recommendation on markets susceptible to ex ante regulation. It was not part of the previous market review and currently no regulation applies to SMS or other mobile data termination. Although BT has launched an SMS text messaging service, most SMS calls are still originated on mobile networks. This may suggest that the case for any regulatory intervention is weaker.
- 4.37 In principle, there may be an argument in favour of regulation for reasons similar to those which apply to voice call termination, at least where the data service is charged for on a CPP basis. Most SMS is still charged for on a CPP basis, but it is possible that data services generally will increasingly be charged for on an RPP basis. If the proportion of data calls increases greatly relative to voice calls, and if the emerging trend towards charging data users for downloading (ie receiving) content and data continues, the industry may conceivably see a natural evolution towards greater reliance on RPP principles. It is too early to judge the outcome, but the evidence may indicate that Ofcom should be cautious before considering any extension of regulation into termination of data services.

**Question 11: Is it appropriate for Ofcom to forebear from considering the imposition of regulation on termination of data services?**

- 4.38 Ofcom has endeavoured, in this section, to explore some of the possible advantages and disadvantages of a wide range of options for preventing abuse of dominant positions in mobile voice call termination, should SMP persist. At this time, Ofcom has no strong view as to the appropriate action which should be taken in such a situation. As has been highlighted in the preceding paragraphs, there are significant disadvantages inherent in many of the options presented, and Ofcom is keen to ensure that there is wide ranging debate before the range of possible options is narrowed. Ofcom is strongly encouraging all interested parties to engage in that debate.

## Section 5

# Responding to this consultation

### How to respond

Ofcom invites written views and comments on the issues raised in this document, to be made by **5pm on 30 August 2005**.

Ofcom strongly prefers to receive responses as e-mail attachments, in Microsoft Word format, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 2), among other things to indicate whether or not there are confidentiality issues. The cover sheet can be downloaded from the 'Consultations' section of our website.

Please can you send your response to [michael.richardson@ofcom.org.uk](mailto:michael.richardson@ofcom.org.uk)

Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

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London SE1 9HA

Fax: 020 7783 4157

Note that we do not need a hard copy in addition to an electronic version. Also note that Ofcom will not routinely acknowledge receipt of responses.

It would be helpful if your response could include direct answers to the questions asked in this document, which are listed together at Annex 3. It would also help if you can explain why you hold your views, and how Ofcom's proposals would impact on you.

### Further information

If you have any want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Michael Richardson on 020 7783 4157.

### Confidentiality

Ofcom thinks it is important for everyone interested in an issue to see the views expressed by consultation respondents. We will therefore usually publish all responses on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk). We will do this on receipt of responses, unless respondents request otherwise on their response cover sheet.

All comments will be treated as non-confidential unless respondents specify that part or all of the response is confidential and should not be disclosed. Please place any

confidential parts of a response in a separate annex, so that non-confidential parts may be published along with the respondent's identity.

Ofcom reserves its power to disclose any information it receives where this is required to carry out its functions. Ofcom will exercise due regard to the confidentiality of information supplied.

Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use, to meet its legal requirements. Ofcom's approach on intellectual property rights is explained further on its website, at [www.ofcom.org.uk/about\\_ofcom/gov\\_accountability/disclaimer](http://www.ofcom.org.uk/about_ofcom/gov_accountability/disclaimer).

### **Next steps**

Following the end of the consultation period, Ofcom intends to publish a further national consultation on its preferred approach.

Please note that you can register to get automatic notifications of when Ofcom documents are published, at [http://www.ofcom.org.uk/static/subscribe/select\\_list.htm](http://www.ofcom.org.uk/static/subscribe/select_list.htm).

### **Ofcom's consultation processes**

Ofcom is keen to make responding to consultations easy, and have published some consultation principles (see Annex 1) which it seeks to follow, including on the length of consultations.

If you have any comments or suggestions on how Ofcom conducts its consultations, please call our consultation helpdesk on 020 7981 3003 or e-mail us at [consult@ofcom.org.uk](mailto:consult@ofcom.org.uk). We would particularly welcome thoughts on how Ofcom could more effectively seek the views of those groups or individuals, such as small businesses or particular types of residential consumers, whose views are less likely to be obtained in a formal consultation.

If you would like to discuss these issues, or Ofcom's consultation processes more generally, you can alternatively contact Tony Stoller, External Relations Director, who is Ofcom's consultation champion:

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## Annex 1

# Ofcom's consultation principles

**Ofcom have published the following seven principles that it will follow for each public written consultation:**

### Before the consultation

- 1 Where possible, we will hold informal talks with people and organisations before announcing a big consultation to find out whether we are thinking in the right direction. If we do not have enough time to do this, we will hold an open meeting to explain our proposals shortly after announcing the consultation.

### During the consultation

- 2 We will be clear about who we are consulting, why, on what questions and for how long.
- 3 We will make the consultation document as short and simple as possible with a summary of no more than two pages. We will try to make it as easy as possible to give us a written response. If the consultation is complicated, we may provide a shortened version for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.
- 4 We will normally allow ten weeks for responses to consultations on issues of general interest.
- 5 There will be a person within Ofcom who will be in charge of making sure we follow our own guidelines and reach out to the largest number of people and organisations interested in the outcome of our decisions. This individual (who we call the consultation champion) will also be the main person to contact with views on the way we run our consultations.
- 6 If we are not able to follow one of these principles, we will explain why. This may be because a particular issue is urgent. If we need to reduce the amount of time we have set aside for a consultation, we will let those concerned know beforehand that this is a 'red flag consultation' which needs their urgent attention.

### After the consultation

- 7 We will look at each response carefully and with an open mind. We will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

## Annex 2

# Consultation response cover sheet

- A2.1 In the interests of transparency, we will publish all consultation responses in full on our website, [www.ofcom.org.uk](http://www.ofcom.org.uk), unless a respondent specifies that all or part of their response is confidential. We will also refer to the contents of a response when explaining our decision, without disclosing the specific information that you wish to remain confidential.
- A2.2 We have produced a cover sheet for responses (see below) and would be very grateful if you could send one with your response. This will speed up our processing of responses, and help to maintain confidentiality by allowing you to state very clearly what you don't want to be published. We will keep your completed cover sheets confidential.
- A2.3 The quality of consultation can be enhanced by publishing responses before the consultation period closes. In particular, this can help those individuals and organisations with limited resources or familiarity with the issues to respond in a more informed way. Therefore Ofcom would encourage respondents to complete their cover sheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.
- A2.4 We strongly prefer to receive responses in the form of a Microsoft Word attachment to an email. Our website therefore includes an electronic copy of this cover sheet, which you can download from the 'Consultations' section of our website.
- A2.5 Please put any confidential parts of your response in a separate annex to your response, so that they are clearly identified. This can include information such as your personal background and experience. If you want your name, address, other contact details, or job title to remain confidential, please provide them in your cover sheet only so that we don't have to edit your response.

## Cover sheet for response to an Ofcom consultation

### BASIC DETAILS

Consultation title:

To (Ofcom contact):

Name of respondent:

Representing (self or organisation/s):

Address (if not received by email):

### CONFIDENTIALITY

What do you want Ofcom to keep confidential?

Nothing

Name/address/contact  
details/job title

Whole response

Organisation

Part of the response

If there is no separate annex, which parts?

Note that Ofcom may still refer to the contents of responses in general terms, without disclosing specific information that is confidential. Ofcom also reserves its powers to disclose any information it receives where this is required to carry out its functions. Ofcom will exercise due regard to the confidentiality of information supplied.

### DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response. It can be published in full on Ofcom's website, unless otherwise specified on this cover sheet, and I authorise Ofcom to make use of the information in this response to meet its legal requirements. If I have sent my response by email, Ofcom can disregard any standard e-mail text about not disclosing email contents and attachments.

Ofcom seeks to publish responses on receipt. If your response is non-confidential (in whole or in part), and you would prefer us to publish your response only once the consultation has ended, please tick here.

Name

Signed (if hard copy)

## Annex 3

# Summary of Consultation questions

**Question 1:** Could RPP principles be made to work to the advantage of consumers in the UK? If so, how?

**Question 2:** Is it realistic to believe that a competitive market for wholesale termination of voice calls could be made to operate successfully. How might such arrangements work?

**Question 3:** Is VoIP likely to have a significant impact on the market for mobile voice call termination during the period to 2010? What are the possible obstacles to this outcome and how might industry or Ofcom overcome these?

**Question 4:** Are there other options, not considered elsewhere in this consultation document, for removing the underlying causes of SMP?

**Question 5:** Do you believe, on balance, that a retail-minus approach to setting wholesale prices would be advantageous?

**Question 6:** Do you agree that asymmetric regulation of voice call termination, which is applied only to termination on 2G networks, will cease to be effective as the proportion of calls terminated on 3G networks grows?

**Question 7:** Do you believe that asymmetric regulation of mobile voice call termination, which applies only to termination on 2G networks, will create material incentives to terminate calls on 3G networks. If so, how easily could MNOs develop the technology necessary to follow these incentives?

**Question 8:** Would it be reasonable to require that charges for mobile voice call termination (2G or 3G) are no higher than the cost based charge for the more efficient form of termination? What are the risks and advantages of this approach? If that course of action was adopted, how should that be applied to an MNO with no 2G network of its own?

**Question 9:** On what basis could a single charge control, to apply to both 2G and 3G voice call termination, be calculated?

**Question 10:** Should mobile termination of mobile originated calls be subject to lighter regulation than mobile termination of fixed network originated calls? If so, what form might that regulation take?

**Question 11:** Is it appropriate for Ofcom to forebear from considering the imposition of regulation on termination of data services?