Dispute between Mapesbury Communications and T-Mobile about mobile termination rates

This is the non-confidential version.
Confidential information and data have been redacted.
Redactions are indicated by "[✂]"

Draft determination and consultation

Publication date: 13 February 2009

Closing Date for Responses: 27 February 2009

Contents

Section 1

Summary

1.1 This dispute concerns the termination rate payable by T-Mobile (UK) Ltd (T-Mobile) to Mapesbury Communications Ltd (MCom) for calls originated on T-Mobile's network and terminated on MCom's network. These payments are known as mobile termination rates (MTR).

1.2 On 10 October 2008, we received a joint submission outlining a dispute between T-Mobile and MCom about the MTR charged to T-Mobile for the termination of calls on the MCom network. The joint submission requested that Ofcom handle, consider and determine the MTR payable by T-Mobile for the termination of calls on the MCom network.

1.3 MCom is currently building areas of contiguous GSM mobile phone coverage with a view to providing a mobile service in certain urban areas of the UK which have a high proportion of ethnic community residents. T-Mobile's main business activities include public mobile communications network operation and the provision of mobile network communications to the public.

1.4 MCom and T-Mobile do not interconnect directly. Each party has entered into a Standard Interconnection Agreement with BT under which BT provides transit services between the operators. In this respect, where a call originates on T-Mobile's network and is terminated on MCom's network, BT purchases termination from MCom and charges T-Mobile an amount equal to the MCom MTR plus an additional transit charge. The current MTR for the termination of calls on MCom's network agreed between MCom and BT is equal to 7.24 pence per minute (ppm).

1.5 Our powers and duties to resolve certain disputes are set out at sections 185-191 of the Communications Act 2003 ("the 2003 Act"). In accordance with Section 186(4) of the 2003 Act, on 21 November 2008 we decided that it was appropriate to resolve this dispute, informed the parties to the dispute of our decision and published a Competition Bulletin entry setting out the scope of the dispute[1].

1.6 In resolving this dispute, we have considered our general statutory duties and Community obligations under section 3 and 4 of the 2003 Act. In the context of this dispute, we have had particular regard to our primary duty under section 3(1)(b) of the 2003 Act to further the interests of consumers in relevant markets, where appropriate, by promoting competition.

1.7 We considered the 6 principles of pricing and cost recovery established by Ofcom as an appropriate basis for the framework to set a MTR which is reasonable as between the parties and satisfies our general statutory duties and Community obligations. We decided that it was appropriate to directly link MCom's MTR to a regulated rate. We considered which rate would be appropriate in this matter and decided, in the interests of cost minimisation, that it should be the lowest.

1.8 In summary, based on the submissions of the parties and the evidence gathered in this dispute, for the reasons set out in this draft determination and explanatory statement, our provisional conclusion is that:

[1] See: http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_01000/.

i) As from [the date of the final determination], the MTR charged by MCom for the termination of calls originated on the T-Mobile network and terminated on the MCom network may not exceed [4.4ppm (2006/07 prices), converted into nominal terms[2]]. This being the same as the (lowest) regulated MTR specified in the Competition Commission (CC) determination for 2009/10; and

ii) In order to ensure the appropriate rate is applied as between MCom and T-Mobile in the absence of direct interconnection, as from [the date of the final determination], MCom shall make a payment to T-Mobile of an amount equal to the termination charge it receives from a transit operator less [4.4ppm (2006/07 prices), converted into nominal terms] for each minute of calls originated on the T-Mobile network and terminated on the MCom network.

1.9 The background to this dispute is set out in section 2. The history of this dispute is set out in section 3. Section 4 sets out the statutory obligations and principles which apply in resolving the dispute and the analysis and reasoning underpinning the draft determination is set out in section 5. Ofcom's draft determination is set out in section 6.

1.10 Stakeholders, in particular the parties to this dispute, are invited to comment on our proposed resolution of this dispute by **27 February 2009**. The process for submitting comments is set out at Annex 2 below.

[2] An adjustment is required in order to convert this option to nominal terms to account for three years of relevant inflation. See further at paragraphs 5.106 to 5.107.

Section 2

Background

Mobile voice call termination

2.1 This dispute concerns the termination rate payable by T-Mobile (UK) Ltd (T-Mobile) to Mapesbury Communications Ltd (MCom) for calls originated on T-Mobile's network and terminated on MCom's network. These payments are known as mobile termination rates (MTR).

2.2 Not all originating networks and terminating networks have direct interconnection between themselves and, therefore, certain calls may be routed via a transit operator interposed between the originating network and the terminating network. In such case, the total charge payable to the transit operator by the originating network for transit and termination is an amount equal to the MTR plus a transit charge. The MTR is paid by the transit operator to the terminating network in those circumstances.

2.3 This dispute concerns the termination rate payable by T-Mobile for calls originated on T-Mobile's network and terminated on MCom's network.

2.4 The parties to this dispute do not currently have a direct interconnection agreement. They use BT as a transit operator to convey traffic between their switches such that the MCom MTR payable by T-Mobile is that agreed between MCom and BT. According to the information provided by the parties in the joint submission, when T-Mobile opened the number range in March 2007, MCom's MTRs contained in BT carrier price list were 6 / 4.5 / 4ppm (day/evening/weekend). MCom subsequently agreed a higher MTR of 7.24ppm with BT (across each time period), to be implemented on 2 September 2008. Having notice of this change in MCom's MTR, T-Mobile wrote to MCom on 30 May 2008 to challenge MCom's MTR directly with MCom. T-Mobile proposed that a reasonable MTR would be 1.2ppm (either across each time period, or average across time periods according to traffic distribution).

MCom's service

2.5 MCom's local mobile network uses the so-called DECT (Digital Enhanced Cordless Telecommunications) guard band spectrum which was awarded to MCom, alongside 11 others, following Ofcom's auction in May 2006. The Licence awarded to MCom following the auction permits it to utilise the frequencies 1781.7 - 1785MHz paired with 1876.7 – 1880 MHz.

2.6 Under its1800 GSM Guardband licence, MCom has built concentrated areas of coverage, based on areas where its core target market live and work. Due to the limited power 1800 Guardband permits, and to maximise in-building coverage MCom have built a network of GSM base stations (BTSs) using pico cell BTSs 400m or so apart sited on rooftops of residential homes, public telephone boxes (operated by Spectrum Telecoms), poles or advertising hoardings. The pico cells are, in general placed in line of site of each other so connectivity between them and back to the nodes is provided by daisy chaining 5.8GHz connections. Node pico cells are connected to the MCom core network and switching centre via Symmetric Digital Subscriber Line or 10MB Ethernet fixed connections.

2.7 All MCom mobile services are reliant on its own network coverage. MCom does not have, and is not using, any national roaming facilities for the provision of its mobile service outside the area of coverage of MCom's network. This means that there are geographic limits to the MCom service as that service will cease outside of the range of its network. The extent of MCom's current network coverage is discussed at paragraphs 2.8 - 2.10 below.

2.8 MCom is currently rolling out its network to certain urban areas of London where consumers for mobile subscriptions are typically from different ethnic communities whose interests, in MCom's view, are not currently being served by the UK mobile network operators (MNOs). MCom has submitted that the mobile market remains inefficient with regard to both costs incurred by consumers in using a mobile subscription for the purposes of making international calls and for the services offered by the existing mobile network operators to the different ethnic communities within the UK. MCom uses international roaming to connect international calls.

2.9 MCom is building areas of contiguous GSM mobile phone coverage with a view to providing a mobile service in certain urban areas of the UK which have a high proportion of ethnic community residents. MCom intends to provide low rate international calls and low rate local calls and texts from a geographically restricted service. MCom describes itself as a new entrant mobile operator, under the brand of UK01, and aims to become the provider of first choice for mobile services to certain communities for whom making mobile telephony calls to international destinations is a driver, but who still expect to receive competitive national mobile services with no reduction in quality of service.

2.10 MCom has recently become active in the London Borough of Newham. In its second phase of roll out, MCom plans to extend its coverage to the following boroughs of London: Dagenham & Barking; Redbridge, Tower Hamlets and Waltham Forest.

2.11 In light of the localised nature of the MCom's network, MCom expects that its customers are likely to continue to buy mobile services from the five UK incumbent MNOs providing national coverage, especially in the initial stage of the development of MCom's service. Nevertheless, MCom has entered into mobile number portability and commercial bilateral short messaging service (SMS) agreements with the MNOs.

2.12 Whilst MCom intends to offer a small range of mobile telephone handsets, it primarily offers its own SIM card for use in an existing mobile telephone handset.

MCom's competitors

2.13 Given the nature of the MCom service as a mobile service to particular customers who describe their telephone usage as being a mixture of mobile and international calls, MCom considers its competitors to be the MNOs but also the international calling card operators. MCom considers that its entry into these markets will have a positive impact on competition in both of these markets.

Description of T-Mobile

2.14 T-Mobile is the UK subsidiary of T-Mobile International AG, which in turn is owned by Deutsche Telecom.

2.15 T-Mobile's main business activities include public mobile communications network operation and the provision of mobile network communications to the public.

Section 3

The dispute

3.1 On 10 October 2008, T-Mobile and MCom jointly referred a submission to us to handle, consider and determine a dispute (the joint submission).

3.2 As set out at paragraph 2.4 above, between March 2007 and September 2008, MCom's MTRs contained in BT carrier price list were 6 / 4.5 / 4ppm (day/evening/weekend). MCom subsequently agreed a higher MTR of 7.24ppm with BT (across each time period), to be implemented on 2 September 2008. Upon receiving notice of this change in MCom's MTR, T-Mobile sought to negotiate a lower MTR. Those negotiations have not led to agreement and as a result, the parties have raised the issue with Ofcom through the joint submission.

3.3 The joint submission set out the chronology of events and the attempts of the parties to resolve the matters in dispute through negotiation. The parties' submissions were supported by documentation, such as minutes of meetings and email correspondence provided in the joint submission or in response to subsequent information requests. Both parties agree that, despite efforts to resolve the dispute through negotiation, the points of difference were those of principle regarding the proper inputs and calculation of a MTR. On this basis, the parties agreed to submit a dispute to Ofcom on a joint basis.

3.4 Following receipt of the joint submission, we requested further information from both MCom and T-Mobile in order to fully understand the scope of the dispute. At the same time, we invited the parties' comments on how each of our duties (in particular under sections 3 and 4 of the 2003 Act) is relevant. We also conducted a site visit of certain aspects of the MCom network on 9 December 2008.

3.5 Having considered the joint submission and subsequent information obtained by the parties, we were satisfied that the dispute is a dispute between communications providers relating to network access, and that the matters in dispute would not be resolved through further negotiation between the parties. On 21 November 2008, we decided that it was appropriate for us to handle this dispute for resolution. We informed the parties of this decision and published details of the dispute on our website.

Scope of the dispute

3.6 The scope of the dispute was to determine the termination rate payable by T-Mobile for voice calls originating on T-Mobile's network and terminating on MCom's network.

3.7 In line with our standard procedures in disputes, we invited comments from stakeholders on the scope of the dispute as originally published. No comments were received.

3.8 This draft determination only applies to the scope of this dispute.

Stakeholders interested in the outcome of the dispute

3.9 Upon opening this dispute for resolution, we invited interested stakeholders to express an interest in the outcome of this matter. The following nine stakeholders expressed an interest in the outcome of this dispute:

Cable & Wireless

FleXtel Limited

Hay Systems Ltd

IV Response Limited

Magrathea Telecommunications

OnePhone UK Ltd

Stour Marine Limited

Telefónica O2 UK Limited

✂

3.10 These parties now have an opportunity to respond to this draft determination.

Further information provided by the parties

3.11 After opening its investigation, on 8 December 2008, we sent T-Mobile a notice under section 191 of the 2003 Act requiring it to provide documents and information in connection with this dispute (this request was sent in draft on 2 December 2008). T-Mobile responded to Ofcom's notice on 12 December 2008. We requested information of MCom on 27 November 2008. We received this information on 4 November 2008. We held a meeting with MCom on 5 November 2008 and a telephone discussion on 28 November 2008.

The submissions of the parties

3.12 This section outlines in detail the arguments put forward by the parties in the joint submission and in the course of our investigation.

T-Mobile's arguments

The regulatory framework

3.13 T-Mobile referred this dispute to us under sections 185(1) and/or 185(2) of the 2003 Act on the basis that the parties are each communications providers and are in dispute regarding the terms and conditions of network access in respect of the MCom network.

How a mobile termination rate ought to be calculated

3.14 T-Mobile submitted that the MCom MTR is unreasonable since it appears unrelated to a proper assessment of the likely costs of termination on a DECT Guard Band network by an efficient operator.

3.15 T-Mobile suggested also that a DECT Guard band operator is likely to have much lower costs than the established 2G/3G GSM network operators. The basis of this assessment is addressed in paragraphs 3.24 et seq. below.

3.16 T-Mobile contended that any departure from Ofcom's previous approach to the assessment and modelling of termination costs would be inconsistent and would require substantive justification. T-Mobile referred to the Competition Appeal Tribunal's ("CAT") judgment in *T-Mobile (UK Limited) and others v Office of Communications*[3] ("the TRD Judgment) where it stated:

> "…consistency of approach is an important factor for Ofcom to bear in mind […] Ofcom needs to consider whether its proposed action is consistent with its previous approach to issues such as cost modelling and its assessment of particular issues"[4].

3.17 T-Mobile submitted that permitting a higher termination rate for MCom would breach Ofcom's duty not to discriminate between communications services or networks. The basis of this contention was that any assessment of an appropriate MTR that fails to take into account the costs of termination would be discriminatory and in breach of the fourth Community requirement.

3.18 T-Mobile has also outlined its view that to permit an MCom MTR substantially above the levels proposed by T-Mobile would fail to account for a number of Ofcom's wider duties. T-Mobile asserted that if DECT guard band operators were allowed to recover substantially more than other mobile network operators, this would distort competition and discourage further investment and innovation, while undermining regulatory certainty. T-Mobile added that at its widest, were the current MCom MTR to prevail, this would be in breach of its duty to further the interests of citizens and consumers.

Relevant market analysis

3.19 T-Mobile referred to the European Commission's recommendation on Market Definition and Ofcom's previous analysis of Market 16[5]. T-Mobile observed that Ofcom's previous analysis ("the Calls to Mobile Statement")[6] concluded that there are separate relevant markets for mobile call termination on each MNO's network, regardless of the technology used for termination; and, that all MNOs have 100 per cent share of the market for termination on their own network.

3.20 T-Mobile submitted that it follows that each network, including MCom, prima facie enjoys significant market power (SMP) in respect of call termination on its network.

---

[3] [2008] CAT 12, 20 May 2008, available at http://www.catribunal.org.uk/files/Judgment_TRDs_200508.pdf

[4] See number 2 at (paragraph 189).

[5] As provided for in the Framework Directive (Directive 2002/21/EC), the European Commission (the "Commission") has adopted a Recommendation on relevant products and services markets ("the Recommendation") which identifies markets within the electronic communications sector, the characteristics of which may be such as to justify the imposition of regulatory obligations. The Recommendation's Market 16 is the market for voice call termination on individual mobile networks: "Recommendation on relevant product and service markets within the electronic communications sector susceptible to ex ante regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communication networks and services": http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2003:190:0013:0018:EN:PDF.

[6] Mobile call termination Statement, 27 March 2007: http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

Benchmarking

3.21 T-Mobile submitted that the use of benchmarking would be inappropriate in circumstances where MCom and T-Mobile operate different technologies, and are at completely different stages in their market positions. T-Mobile considered that there were the significant differences in cost between the two parties' networks and the relevant inputs to determining an appropriate MTR.

3.22 In the alternative, T-Mobile argued that in any event, even if benchmarking were appropriate, MCom's rates should properly have been set below the regulated rates of other networks, since these rates are for the national provision of 2G and 3G services (including a current regulatory coverage obligation on 3G services and an historic obligation on 2G services), whereas MCom's rates apply to an extremely localised service over 2G only, using substantially lower cost network assets.

3.23 T-Mobile considered that it follows that a more detailed assessment of MCom's actual costs is required than a benchmarking exercise permits, even though this assessment need not be comprehensive. However, according to T-Mobile, consistent with its duties and the CAT's guidance as set out in the TRD Judgment, Ofcom must assess the costs associated with termination on the MCom network in determining a reasonable MTR.

Appropriate basis of assessment of MCom's mobile termination rate

3.24 T-Mobile argued that the current MCom MTR is too high and does not reflect the efficient termination of calls on the DECT guard band network. T-Mobile submitted that the costs of termination of the MCom network must be considered consistently with Ofcom's current methodology for the determination of the efficient costs of termination on other networks.

3.25 T-Mobile's preferred outcome to the resolution of this dispute is the application of the cost model used in the Calls to Mobile Statement (used by Ofcom to derive regulated MTRs for T-Mobile and other MNOs) on the basis of their assumption of MCom's costs. T-Mobile based its calculation on an assessment based on the following inputs, which currently form part of the T-Mobile regulated MTR:

Network costs

3.26 T-Mobile estimated that MCom's network rollout addresses a small number of targeted localised areas only. T-Mobile further contended that MCom has not invested, nor intends to invest, in a national network on the scale of the established UK GSM network operators. Significantly MCom has no coverage obligation.

3.27 T-Mobile drew a distinction between the level of coverage that its own network achieves compared to that of the MCom network. T-Mobile stated that its two national networks are currently used to provide coverage on 2G to around 98% of the UK population and 3G to around 80% of the UK population. This compares with T-Mobile's estimate that the DECT guard band network cover only around 1% of the UK population (assumes targeted coverage, e.g. target demographic / corporate campus).

3.28 T-Mobile asserted that the costs of network rollout at a local level for a DECT guard band network are not comparable to those of the mainstream MNOs using full power 2G/3G networks, even adjusting those comparisons for relevant scale/coverage etc.

T-Mobile outlined that the relevant network costs include: site costs; equipment costs; backhaul; buildings; and RAN planning.

Spectrum licence costs associated with termination

3.29 T-Mobile observed that MCom has invested in a licence for DECT guard band spectrum. However, T-Mobile compared the cost of its spectrum licences that it currently uses to provide coverage: for 2G networks: Administered Incentive Pricing (AIP) of £16.3m per annum and the 3G network licence cost of £4.003bn with the average cost per licence of the DECT guard band of £316,000. T-Mobile observed that this licence was acquired at relatively little cost, and does not currently attract AIP.

Administrative costs associated with termination.

3.30 There are no particular circumstances known to T-Mobile that suggest that an administrative cost comparable to T-Mobile's would be inappropriate in the case of MCom.

Network externality surcharge.

3.31 T-Mobile and the other MNOs are currently granted the inclusion of a network externality surcharge within their regulated MTR. This surcharge aims to rectify the externality that occurs because of the social benefit that occurs when individuals have a mobile phone and other people are able to contact them. Ofcom has explained that the main purpose of their network externality in the UK surcharge is now not to increase the penetration of mobile phones, but rather to help subsidise mobile phones for current subscribers who are unwilling to pay enough to renew their subscription.

3.32 T-Mobile understands that MCom are not aiming at increasing the number of mobile subscribers in the UK, but rather are aiming to provide a "parallel" service to existing mobile subscribers of alternative national operators, using a SIM to be inserted in a subscriber's existing handset. Accordingly target customers will already have some form of subscription with a mobile network and would then alternatively use their MCom SIM in their existing handset when they are in particular location within which MCom provides coverage. If this is the case, according to T-Mobile, there would be no social benefit in the form of a network effect that occurs when MCom increase their subscription base, as these customers are already contactable through their existing providers. T-Mobile therefore does not think the inclusion of a network externality surcharge is appropriate.

Summary of the appropriate basis of assessment of MCom's mobile termination rate

3.33 Using the above assessment of the likely cost of termination on the MCom network, T-Mobile's assessment of MCom's reasonable MTR is 1.2 ppm. The calculation of this rate is outlined at Table 1 below (and discussed in further detail in Annex 1).

Table 1: T-Mobile's detailed termination rate assessment

Termination rate breakdown (all in ppm)	T-Mobile	Guard band
Network costs	3.08	0.5
Spectrum costs	1.45	0.00011455
Network externality	0.3	0
Admin costs	0.3	0.3
	5.13	0.80011455
	50% uplift:	1.200171825
	T-Mobile offer	**1.2**

Manner of implementation

3.34 T-Mobile proposed that an adjusted mobile termination rate of MCom could be implemented via a change to the listed price on the BT carrier price list (in which case it would apply to all incoming calls to the MCom network) or bilaterally between the parties only, through BT targeted transit or direct interconnection.

MCom's arguments

MCom's submissions on its cost base

3.35 MCom submitted that the rate offered by T-Mobile was speculative and is one which would prevent MCom from entering the mobile market in the UK. MCom also considered the timing of the submission of the dispute to be significant to MCom as it comes at a time when MCom is on the verge of effecting MNP with all of the incumbent operators and thus on the verge of launching a commercial service.

3.36 MCom submitted that its agreed MTR with BT was the result of rational and pragmatic cost modelling. MCom recognised that cost should be a factor in determining a reasonable MTR, but argued that cost is not the only factor to be considered. In particular MCom outlined its status as a new entrant seeking to roll out a network through the use of previously non-commercialised spectrum.

3.37 MCom contended that its termination rate is closely aligned to its anticipated network costs, which have been calculated on the basis of both the capital cost and site operating expense for the core network and for the deployment of the radio sites.

3.38 MCom discounted T-Mobile's assertion that T-Mobile does not have countervailing buyer power to negate MCom's alleged SMP in respect of voice termination. MCom asserted that T-Mobile has the ability to unilaterally remove MCom's numbers from its switches and continues to threaten to do so, the effect of which would be to prevent some 24% of the nation's mobile subscribers from calling MCom's numbers.

3.39 MCom suggested that benchmarking is inappropriate given that MCom and T-Mobile operate different technologies and are at different stages in the market positions with MCom being a new entrant and T-Mobile an established national operator.

MCom's submissions on its impact on competition

3.40 MCom considered that it is well placed to improve the efficiency of the market by providing a service which affords consumers, particularly those from different ethnic communities within the UK, considerable savings on the price of international calls to specific countries, without charging customers higher prices for other, traditional mobile services including national calls (see paragraphs 2.6 2.13 for a description of its current operations). MCom claims this increased efficiency will increase competition for mobile subscriptions in the UK and potentially benefit not only MCom customers but all consumers of mobile telephone subscriptions and thus further the interests of citizens in relation to communications matters.

3.41 MCom submitted to us that, by rolling out a network utilising its frequency, it is leading the way in providing low power mobile services which in turn it hopes will lead to others doing likewise and thus encourage further innovation and investment in the market for mobile services in the UK.

Section 4

Ofcom's dispute resolution powers, statutory obligations and regulatory principles

4.1 The starting point for the resolution of any dispute is for us to consider our dispute resolution powers, statutory obligations and regulatory principles. This section sets out those obligations and principles which are then taken into account in the resolution of this dispute in section 5.

4.2 Sections 185 to 191 of the 2003 Act set out our dispute resolution powers. They apply to disputes relating to the provision of network access and to other disputes relating to the rights and obligations conferred or imposed by or under Part 2 of the 2003 Act. Section 186 of the 2003 Act requires us to resolve a dispute referred which meets the requirements of section 185 once it has decided in accordance with section 186(2) to handle the dispute. Our powers to impose remedies to resolve disputes are set out in section 190 of the 2003 Act.

4.3 Our dispute resolution powers in the 2003 Act derive from the European Common Regulatory Framework, in particular, the Framework Directive and the Access Directive.[7] In accordance with Article 5(4) of the Access Directive, Ofcom is required to resolve disputes in relation to access and interconnection in accordance with the policy objectives of Article 8 of the Framework Directive.

4.4 Article 5(4) of the Access Directive is implemented through the dispute resolution procedures set out in section 185 to 191 of the 2003 Act and Article 8 of the Framework Directive has been implemented in section 4 of the 2003 Act. Under section 4(2) of the 2003 Act, we are required to act in accordance with the six Community requirements when exercising our functions under the 2003 Act in relation to disputes referred to it under section 185. The six Community requirements set out in section 4(3) – (10) give effect, amongst other things, to the requirements of Article 8 of the Framework Directive and are to be read in accordance with them.

4.5 In summary, the Community requirements are requirements:

- to promote competition in communications markets.
- to ensure that Ofcom contributes to the development of the European internal market;
- to promote the interests of all European Union citizens;
- to act in a manner which, so far as practicable, is technology-neutral;

[7] Directive 2002/21/EC of the European Parliament and of the Council of 7 March 2002 on a common regulatory framework for electronic communications networks and services (Framework Directive): http://eur-lex.europa.eu/pri/en/oj/dat/2002/l_108/l_10820020424en00330050.pdf; Directive 2002/19/EC of the European Parliament and of the Council of 7 March 2002 on access to, and interconnection of, electronic communications networks and associated facilities (Access Directive): http://eur-lex.europa.eu/pri/en/oj/dat/2002/l_108/l_10820020424en00070020.pdf

- to encourage, to the extent Ofcom considers it appropriate, the provision of network access and service interoperability for the purposes of securing efficiency and sustainable competition in communications markets and the maximum benefit for the customers of communications network and services providers; and

- to encourage such compliance with certain international standards as is necessary for facilitating service interoperability and securing freedom of choice for the customers of communications providers.

4.6 In the context of this dispute, the following aspects of the policy objectives of Article 8 of the Framework Directive are of particular note:

- the promotion of competition is to be achieved by, *inter alia,* ensuring that users devise maximum benefit in terms of choice, price and quality and that there is no distortion or restriction of competition; and

- the contribution to the development of the internal market is to be achieved by, *inter alia*, ensuring that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services.

4.7 Section 3 of the 2003 Act sets out our general statutory duties which must be taken into account in carrying out our dispute resolution function under Chapter 3 of Part 2 of the 2003 Act.

4.8 Section 3(1) of the 2003 Act sets out our principal duties to be taken into account in carrying out our functions:

> "(a) to further the interests of citizens in relation to communications matters; and
>
> (b) to further the interests of consumers in relevant markets, where appropriate, by promoting competition."

4.9 The things which, by virtue of its principal obligations, we are required to secure in the carrying out of our functions include, according to section 3(2) of the 2003 Act:

> "(a) the optimal use for wireless telegraphy of the electro-magnetic spectrum;
>
> (b) the availability throughout the United Kingdom of a wide range of electronic communications services;
>
> (c) the availability throughout the United Kingdom of a wide range of television and radio services which (taken as a whole) are both of high quality and calculated to appeal to a variety of tastes and interests;
>
> (d) the maintenance of a sufficient plurality of providers of different television and radio services;
>
> (e) the application, in the case of all television and radio services, of standards that provide adequate protection to members of the public from the inclusion of offensive and harmful material in such services; and

(f) the application, in the case of all television and radio services, of standards that provide adequate protection to members of the public and all other persons from both –

(i) unfair treatment in programmes included in such services; and

(ii) unwarranted infringements of privacy resulting from activities carried on for the purposes of such services."

4.10 Section 3(3) of the 2003 Act provides that in performing our principal duties, we must have regard, in all cases, to:

"(a) the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed; and

(b) any other principles appearing to Ofcom to represent the best regulatory practice."

4.11 Section 3(4) of the 2003 Act sets out a number of principles which we must have regard to in performing our principal duties where it appears to Ofcom that they are relevant, including the desirability of promoting competition in the relevant markets and the desirability of encouraging investment and innovation in the relevant markets.

4.12 In performing the principal duty of furthering the interests of consumers specifically, section 3(5) of the 2003 Act provides that Ofcom must have regard, in particular, to the interests of those consumers in respect of choice, price, quality of service and value for money.

4.13 Where it appears to us that any of our general duties under section 3 of the 2003 Act conflict in a particular case, we must secure that the conflict is resolved in the manner we consider best in the circumstances.[8] Similarly, we must secure that any conflict between the Community requirements set out in section 4 of the 2003 Act is resolved in the manner we consider best in the circumstances.[9] Where it appears that a general duty under section 3 of the 2003 Act conflicts with one or more duties under section 4 of the 2003 Act, priority is given to the duties set out in section 4 of the 2003 Act.[10] .

4.14 We also exercise our regulatory functions according to the following regulatory principles:[11]

- We will regulate with a clearly articulated and publicly reviewed annual plan, with stated policy objectives;
- We will intervene where there is a specific statutory duty to work towards a public policy goal which markets alone cannot achieve;
- We will operate with a bias against intervention, but with a willingness to intervene firmly, promptly and effectively where required;

[8] Section 3(7) of the 2003 Act.
[9] Section 4(11) of the 2003 Act.
[10] Section 3(6) of the 2003 Act.
[11] http://www.ofcom.org.uk/consult/condocs/plan/annual_plan/regulatory_principles.pdf

- We will strive to ensure its interventions will be evidence-based, proportionate, consistent, accountable and transparent in both deliberation and outcome;

- We will always seek the least intrusive regulatory mechanisms to achieve its policy objectives;

- We will research markets constantly and will aim to remain at the forefront of technological understanding; and

- We will consult widely with all relevant stakeholders and assess the impact of regulatory action before imposing regulation upon a market.

Section 5

Ofcom's analysis and proposed decision

5.1 Having taken account of representations from the parties and our duties as set out in the 2003 Act, we consider that the six principles of pricing and cost recovery established by Ofcom provide the appropriate basis for the framework to set a MTR which is reasonable as between the parties and satisfies our duties set out above. From that basis, we have also considered the extent to which any other factors may be relevant to the outcome of the dispute which would more adequately ensure our regulatory objectives. We have then considered the extent to which our proposed outcome is consistent with our statutory duties.

The six principles of pricing

5.2 The six principles of pricing were developed by Oftel in the context of number portability, endorsed by the Monopolies and Mergers Commission[12] and have subsequently been used by Ofcom in analysing various pricing issues[13], including setting charges for CPS[14], the 2006 WLR charge setting exercise[15] and the resolution of a dispute between BT and Telewest about geographic call termination reciprocity agreement[16].

5.3 The six principles of pricing are:

i) *Cost causation*: costs should be recovered from those whose actions cause the costs to be incurred;

ii) *Cost minimisation*: the mechanism for cost recovery should ensure that there are strong incentives to minimise costs;

[12] Telephone Number Portability: A Report on a reference under s13 of the Telecommunications Act 1984 (MMC, 1995): http://www.competition-commission.org.uk/rep_pub/reports/1995/374telephone.htm#full

[13] See for example: 'Determination under Section 190 of the Communications Act and Direction under Regulation 6(6) of the Telecommunications (Interconnection) regulations 1997 for resolving a dispute between Orange Personal Communications Services Ltd. ('Orange') and British Telecommunications plc ('BT') concerning the cost sharing arrangements for Customer Sited Interconnect ('CSI') links connection and rental charges', 19 November 2003: http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_663/. See also 'Direction concerning ADSL Broadband Access Migration Services, 13 May 2004: http://www.ofcom.org.uk/consult/condocs/bam/statement/; and a Determination to resolve a dispute between Tiscali, Thus and BT concerning ADSL Broadband Access Migration Services', 9 August 2004: http://www.ofcom.org.uk/consult/condocs/bam/statement/. Determination to resolve a dispute between Opal Telecom and British Telecommunications PLC (Openreach) about LLU bulk migration charges, 2 June 2006: http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_889/determin/determination.pdf.

[14] Final Determination on costs and charges for the provision of permanent carrier pre selection - 2 September 2002: http://www.ofcom.org.uk/static/archive/oftel/publications/carrier/2002/pcps0902.htm

[15] *Wholesale Line Rental: Reviewing and setting charge ceilings for WLR services*, http://www.ofcom.org.uk/consult/condocs/wlrcharge/statement/statement.pdf

[16] Final determination published on 16 June 2006: http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_890/determination.pdf

iii) *Effective competition*: the mechanism for cost recovery should not undermine or weaken the pressures for effective competition;

iv) *Reciprocity*: where services are provided reciprocally, charges should also be reciprocal; and

v) *Distribution of benefits*: costs should be recovered from the beneficiaries especially where there are externalities;

vi) *Practicability*: the mechanism for cost recovery needs to be practicable and relatively easy to implement.

5.4 The application of any one of these principles to the relevant circumstances can sometimes point in a different direction to other principles. But the set of principles provides a framework to identify such trade-offs and to facilitate the use of judgement to strike an appropriate balance in reaching conclusions.

Other factors to be considered

5.5 We have also given consideration to the general guidance provided by the CAT in the TRD Judgment to determine a rate which is reasonable between the parties, in taking into account our statutory duties. We have therefore considered the following in reaching our draft determination:

i) an analysis of each side's argument for a particular rate;

ii) an assessment of costs; and

iii) the relevance of any benchmarks.

5.6 Our approach, as set out below, provides an analysis of the arguments of MCom and T-Mobile for an MTR of 7.2ppm and 1.2ppm respectively. We also conducted an assessment of the relevant costs and considered whether there are any relevant benchmarks which apply in this case.

<u>Assessment of Costs</u>

5.7 In assessing cost in this case, we have conducted an assessment of MCom's costs and of the likely efficient level of termination costs for a service provider with limited geographical network such as MCom's (see Annex 1).

5.8 The first part of this analysis took MCom's business plan as a starting point. This sets out MCom's projected operating and capital expenditure. However, to estimate MCom's termination costs over the period of the business plan, we altered some of the calculations MCom used in its estimation to more accurately reflect how Ofcom believes the cost components should be allocated to termination (see Annex 1).

5.9 In MCom's business plan, capital expenditure is depreciated on a straight line basis. This has the effect of making unit costs look relatively high in the early years of operation when volumes are low. As a consequence, using the accounting-based approach of straight-line depreciation, the resulting termination cost estimates ranged from 6.8ppm for year one to 2.9ppm for year five (both in 2008 prices).

5.10 In assessing the costs of termination for the regulated charges of the 5 incumbent MNOs, Ofcom used economic depreciation[17], which provides a more stable termination cost per call minute over the lifetime of a network. This technique is difficult to apply to MCom's business plan, which covers a shorter period of time than the lifetime of the network. Therefore, for simplicity, to provide a rough proxy for the unit cost implied by MCom's business plan under the economic depreciation methodology, we derived the constant ppm rate over the five-year period of MCom's business plan (which, given the forecast volumes, is projected to recover the same amount of cost over the 5 years as the straight-line depreciation figures). This yields a cost figure of 3.4ppm. This is, however, sensitive to the assumptions underlying MCom's business plan. For example, if the volume forecasts used were optimistic (or pessimistic), actual unit costs could be significantly higher (or lower).

5.11 For a number of reasons, the cost figures based on MCom's business plan might not accurately represent the efficient cost of termination. First, MCom's business plan represents its view of projected expenditure before it has launched commercial services. Inevitably, such projections are subject to significant margin for error. Second, we cannot infer from this analysis whether there is a lower cost way of terminating calls on a small local network such as MCom's. Third, a full-blown economic depreciation calculation would also take account of years beyond the 5 years of MCom's business plan, in which its volumes and asset utilisation may be significantly higher (the "volume effect"). This would tend to reduce the unit cost by deferring cost recovery from years of lower utilisation to future years of higher utilisation. However, a full-blown economic depreciation calculation would also take into account expected reductions over time in modern equivalent asset prices and operating costs, which would tend to increase the unit cost in earlier years by bringing forward cost recovery (the "MEA effect"). These two effects are likely to operate in different directions and the net effect is uncertain. But, since MCom's business plan covers only the initial 5 years of its operation, it is possible that the overstatement caused by the volume effect might be more significant than the MEA effect.

5.12 In the second part of our cost analysis we considered the cost evidence provided by T-Mobile. T-Mobile based its calculation of the cost of termination on MCom's network on a comparison with the components of its own termination rate, arriving at an estimate of 1.2ppm. Our evaluation of this methodology is outlined in Annex 1.

5.13 Based on our cost analysis, we concluded that it is likely that T-Mobile's estimate significantly underestimates the network component of MCom's termination costs. Since a small localised service such as MCom's will be unable to achieve the economies of scale or scope of a national operator, the efficient non-network costs for such a service may also be higher than that estimated by T-Mobile.

5.14 For the third stage of our cost analysis, we used the model of mobile termination costs which Ofcom has developed to set charge controls for the five incumbent MNOs ("the MCT model"). Our analysis involved disaggregation of Ofcom's MCT model by different types of geographical area, such as urban, suburban and rural ("geotypes"). This showed us the variation in the modeled costs of 2G termination, as between different geotypes, compared to the national average cost used in the

[17] The timing of cost recovery under economic depreciation generally varies from that under accounting depreciation: typically, accounting methods take the actual price paid for equipment (or its replacement cost) and divides this by the expected equipment life to reach a depreciation charge for the year. Economic depreciation seeks to smooth the path of an assets cost recovery over time by linking it to the use or extraction of value from that asset.

derivation of the charge caps on the 5 incumbent MNOs. The purpose of this analysis was to inform our assessment of the efficient cost of call termination in urban areas, such as those in which MCom currently proposes to operate.

5.15 The analysis has a number of limitations in estimating the efficient costs of an operator such as MCom. The MCT model estimates the network costs of termination for an efficient MNO, and thus assumes access to identical technology as well as the economies of scale and scope obtained by MNOs. It is not clear to what extent these parameters or the general cost allocation assumptions, such as the mix between incoming and outgoing calls as well as the mix between data and voice calls which were designed to approximate the use of MNO's networks, apply to MCom's service. Additionally, the efficient non-network termination costs for a localised service may not be equal to those for a national service.

5.16 There are possible reasons why the result of this analysis, 2.9ppm,[18] could under- or overstate MCom's efficient termination cost. For example, the differences between the technology used by MCom and that used by the incumbent MNOs could give MCom a cost advantage or disadvantage. However, we consider it more likely that 2.9ppm provides a lower bound estimate of MCom's efficient termination cost. This is because 2.9ppm is an estimate of the cost of termination in urban areas specifically, given the efficient operation of an established national operator. Thus, the economies of scale and scope which national operators are able to achieve are implicit in this estimation, and it does not include the likely higher costs for start-up or small operators.

5.17 Each of the three sources of cost evidence considered in our analysis – MCom's business plan, T-Mobile's cost estimates, and the MCT cost model – has significant limitations in providing a robust cost estimate. Notwithstanding these limitations, on the basis of our cost analysis, we consider that the best evidence available suggests that the efficient cost of termination on MCom's service is between 2.9ppm and 3.4ppm. We recognise, however, that there is the potential for a significant margin for error.

Benchmarks

5.18 As regards benchmarking, at paragraph 186 of the TRD Judgment the CAT stated that:

> "*Benchmarking is a useful tool and Ofcom should consider the value of comparisons put forward by the parties and what they show about the reasonableness of the charges or other terms and conditions being proposed*."[19]

5.19 The parties have provided their submissions on the usefulness or otherwise of other termination rates to be used as a benchmark.

5.20 As described at paragraphs 3.21 to 3.23, T-Mobile argued that benchmarking is inappropriate when comparing two companies that utilise different technologies and are at different stages of development. T-Mobile further contended that if

[18] This figure is made up of the MCT estimate of the efficient network unit costs of termination within urban areas of the UK, 2.4ppm and the non-network cost allowance of 0.3ppm (both in 2006/7 prices), and the result has been inflated to 2008 prices (see Annex 1).
[19] Ibid.

benchmarking were appropriate, MCom's MTR ought to be set below the regulated rates given its localised service and lower cost network assets.

5.21 MCom submitted that benchmarking would be inappropriate given that MCom and T-Mobile operate different technologies and are at completely different stages in their market positions (MCom being a new entrant, whereas T-Mobile is an established operator with substantial market share).

5.22 In order to resolve this dispute, we have nevertheless considered the relevance of benchmarks for the disputed termination charges. There are many different benchmarks for a MTR, both on a national basis and international basis.

i) National Benchmarks

5.23 We have considered whether a fixed termination rate would be a relevant benchmark. In this regard, we note that the MCom service offers mobility and uses a mobile technology which means its traffic-sensitive costs are likely to be higher than those of a fixed network. Whilst some of MCom's services may be seen, and intended, as alternatives to fixed line services, this is also true of some services offered by the established MNOs. As a result, we do not consider a fixed termination rate to be a benchmark that would apply in this case due to the fundamental differences in the nature of the services offered.

5.24 We then considered the extent to which regulated MTRs may be a relevant benchmark in this case. On 27 March 2007, Ofcom published the Calls to Mobile Statement concluding a market review into mobile call termination charges which found that each of the 5 incumbent MNOs, namely Vodafone, Orange, T-Mobile, O2 and Hutchison 3G, had significant market power in the market for wholesale mobile voice call termination provided to other Communications Providers by the relevant MNO in the United Kingdom.

5.25 Within the Calls to Mobile Statement, we used a cost model to derive the cost to a network operator of providing voice termination services, using the cost standard of Long Run Incremental Cost plus mark-up to contribute to common costs recovery ("LRIC+"). We continue to hold the view that a LRIC+ methodology constitutes the most appropriate means of determining the efficient levels for charges on mobile voice call termination services. The primary objective of the model is to assess the network costs to a single network operator of delivering voice services over 2G and/or 3G mobile networks.

5.26 We therefore imposed SMP conditions on each of the 5 incumbent MNOs, including charge controls on the supply of MCT by each of the MNOs as from 1 April 2007. Those charge controls provided for an annual target average charge (TAC) of 9.1ppm for Hutchison 3G, 5.7ppm for O2 and Vodafone, and 6.2ppm for Orange and T-Mobile during the first year of operation of the controls. Annual TACs for subsequent years were to be reduced according to a glide path such that, by 2010/11, they would be equal to 5.9ppm for Hutchison 3G and 5.1ppm for each of O2, Vodafone, Orange and T-Mobile.[20]

5.27 In the Calls to Mobile Statement Ofcom concluded that the 2G/3G MNOs should be required to reduce their charges in subsequent years in line with a smooth glide path of four equal percentage reductions, the steps to be calculated with reference to the

[20] These charges for 2010/1 are expressed in real terms, 2006/7 prices.

applicable TAC for the final year of the charge control (2010/11), taking the headline level of the charge controls currently in force.

5.28 The Calls to Mobile Statement concluded that the appropriate MTR for Hutchison 3G should be a substantial charge reduction in 2007/8 followed in subsequent years by a smooth 'glide path', such that charges in 2010/11 align with the cost-based target for that year. The conclusions of the Mobile Termination Statement for the 5 incumbent MNOs are shown in Figure 1.

Figure 1: Table of charge control conclusions following adjustment for notice period in the Mobile Termination Statement

	Average regulated charges in 2006/7	**First year (2007/8) target charge (nominal)**	**Second year (2008/9) percentage reduction (i.e. X in RPI-X)**	**Third and fourth year (2009/10 and 2010/11) percentage reduction (i.e. X in RPI-X)**	**Final charge in 2010/11 (real 06/07 prices)**
Vodafone and O2	5.6	5.7	3.2%	2.5%	5.1
T-Mobile and Orange	6.3	6.2	5.8%	5.3%	5.1
H3G	Not regulated	9.1	15.1%	11.8%	5.9

Source: The Mobile Termination Statement 2007, Figure 9.6

5.29 MCom's service is, within its area of coverage, a fully mobile service allowing its customers to make and receive calls while on the move in the same way as do the services offered by the five incumbent MNOs. In addition, the underlying technology of the MCom service is a cellular wireless technology like that of the other mobile services. MCom has obtained a spectrum licence, has been provided with a mobile number range, has undergone a mobile number portability process with the other MNOs and is regulated as a mobile network operator. In addition, the service is marketed to the consumer as a mobile service and calls are made and received on a mobile handset. We therefore consider that the regulated rates set by Ofcom for mobile termination are relevant benchmarks to be taken into account in deciding this dispute.

5.30 We note in this regard that the Calls to Mobile Statement is currently the subject of appeal proceedings before the CAT brought by Hutchison 3G and BT in May 2007.[21] We recognise therefore that caution must be applied when testing the regulated rates since, in the event that the current appeal proceedings are successful, the target average charges (TACs) may differ from those which Ofcom has determined.

[21] Case 1083/3/3/07 and Case 1085/3/3/07.

The Competition Commission's price control determination

5.31 As part of the appeal proceedings concerning the Calls to Mobile Statement, the CAT referred the price control matters related to the appeals to the Competition Commission (CC) in accordance with section 193 of the 2003 Act.

5.32 On 22 January 2009, the CC issued its price control determination ("the CC Determination") in which it set out its own determination of the price controls for the four years from 1 April 2007[22]. The CC determined that the TACs in 2010/11 should be 4.0ppm for O2, Orange, T-Mobile and Vodafone, and 4.4ppm for H3G in 2006/07 prices and for the preceding years as shown in Table 2.

Table 2: CC price determination revised charges (ppm in real terms, 2006/7 prices)

	2007/08	2008/09	2009/10	2010/11
Vodafone & O2 (900/1800 MHz operators)	5.2	4.7	4.4	4.0
T-Mobile & Orange (1800-MHz-only operators)	5.7	5.0	4.5	4.0
H3G (3G only operator)	8.9	6.8	5.5	4.4

Source: Table 16.1 of the CC's Determination.

5.33 We recognise that the CC Determination may be the subject of review by the CAT on judicial review grounds and will not be finalised until the end of the litigation process. However, in considering relevant benchmarks, we consider that, for the purposes of determining the appropriate benchmark rate, the CC Determination represents the best estimate of the level of a regulated rate. Ofcom is required by statute to resolve the dispute within four months, a period during which it appears unlikely that the process is likely to be resolved definitively and we therefore consider it appropriate in considering whether regulated rates are appropriate benchmarks to use the outcome of the CC Determination in resolving this dispute.

5.34 In light of our conclusion that a regulated MTR could be a relevant benchmark in this case, we have therefore considered which rate of the three regulated TACs – the 900/1800 MHz operators; 1800-MHz-only operators; or, a 3G only operator – is the most appropriate benchmark.

5.35 In its determination the CC allowed for differences for a later entrant, H3G, in terms of both costs (reflected in the difference in TACs in 2010/11) and a separate glide path. Whilst MCom is clearly a more recent entrant still, we believe that the CC's reasoning is consistent with the lower of the three rates being the most relevant benchmark in this case. This is principally because the current efficient cost of termination on MCom's network is likely to be below that of all five incumbent MNOs (see Annex 1).

5.36 The differences between the three glidepaths reflected primarily differences in the level of charges at the start of the control and the desire to allow "sufficient time for

[22] http://www.catribunal.org.uk/files/CC_Determination_1083_H3G_1085_BT_220109.pdf.

operators and customers to adjust to new levels and structures of mobile charges and take these changes into account in their business plans and planned capital expenditure "[23]. MCom has only recently commenced commercial operations, and so a charge at the level of the lower of the three rates does not create a risk of undue disruption.

5.37 Therefore, we believe that the most relevant benchmark is the lowest of the regulated rates, i.e. the TAC for the 900/1800 MHz operators (applying to Vodafone and O2). We assess whether this rate is in fact an appropriate rate to be applied in this case in the light of Ofcom's six principles of pricing, in paragraphs 5.45 onwards. Given the date when we expect to resolve this dispute, the most relevant TAC is that for 2009/10.

5.38 We have not identified any other national benchmarks which might apply in this case.

ii) International Benchmarks

5.39 We have also considered whether any international benchmarks may be of relevance, in particular MTRs applied in other jurisdictions.

5.40 As discussed above, the parties submitted to us that no benchmarks were appropriate to the determination of this matter.

5.41 We conducted some research as to whether there are any relevant MNO operators in other jurisdictions utilising guard band spectrum in the same manner as MCom. As far as we are aware, there were no immediate comparisons available.

5.42 We also considered whether there were any operators which utilised low power spectrum other than guard band spectrum. Whilst we were aware of isolated instances[24], it was not clear that their applications were of a similar nature such that their termination rates were a useful comparison of the MCom service.

5.43 We have maintained awareness of other MTR regimes and MTRs in other jurisdictions through our work on the mobile sector assessment project.[25] There appear no immediate international comparisons which might be appropriate for this dispute. In the absence of a comparable mobile network in a country with characteristics similar to the UK, we do not consider that there are any relevant international benchmarks.

5.44 In light of the above, we have concluded that the most relevant benchmark in the present case is the regulated TAC for 2009/10 in the CC's determination which applies to Vodafone & O2. We have therefore considered this as one of the options for resolving the dispute.

Application of the 6 principles of pricing to this dispute

5.45 The following section applies the six principles of pricing to the four options that we have considered for setting MCom's termination rate in this dispute:

1. the current MCom termination rate as agreed with BT, equal to 7.2ppm;

---

[23] Op. cit para 13.4b

[24] See, for example: http://www.springmobil.se/english/default.asp;

[25] See further at: Mobile citizens, mobile consumers Adapting regulation for a mobile, wireless world, 28 August 2008: http://www.ofcom.org.uk/consult/condocs/msa08/msa.pdf

2. T-Mobile's estimation of MCom's termination cost, equal to 1.2ppm;

3. our best available estimate of MCom's efficient termination cost, between 2.9ppm – 3.4ppm[26]; and

4. the benchmark of the CC's determination for 900/1800MHz operators in 2009/10 of 4.4ppm (2006/07 prices).

5.46 Options 1 and 2 are based on the parties' arguments which were discussed in section 3. In recognition of the limited coverage of MCom's service in comparison to that of T-Mobile, we considered whether the MCom termination charge should be set lower than that of the 5 incumbent MNO's, in order to the reflect the fact that calls to MCom's network will only connect when their call recipients are in the relevant area. It could be argued that the appropriate level at which to set such a rate could be usefully informed by our best estimate of costs. Therefore, option 3 is based on consideration of MCom's termination costs. Option 4 is based on our view of the most appropriate benchmark. We will assess all four options against the 6 principles of pricing.

Cost causation

5.47 The cost causation principle states that costs should be recovered from those whose actions cause them to be incurred at the margin. Since it is generally efficient for charges to reflect costs, it is usual to give most weight to this principle unless there are good reasons for not doing so in a particular case. Additionally, the TRD Judgment stated that Ofcom should consider whether an analysis, however broad brush, of the relationship of prices to costs is necessary.[27]

5.48 In Ofcom's "Determination to resolve a dispute between BT and Telewest about a geographic call termination reciprocity agreement" (June 2006), Ofcom stated:

> *"In this context, BT, as the originating operator (calling party), is causing the costs of termination on Telewest's network to be incurred, and thus should be the party responsible for bearing the costs"*

5.49 Charges for termination which reflect the efficient level of costs incurred when a call is terminated on MCom's network are likely to be consistent with this view of cost causation.

5.50 As set out at paragraph 5.17 above, we consider that the current termination rate, 7.2ppm, is likely to exceed MCom's efficient costs, whereas the estimate put forward by T-Mobile, 1.2ppm, is likely to understate them. A rate based solely on our estimate of costs, most consistent with the cost causation criterion, would lie between 2.9ppm and 3.4ppm (in 2008 prices). However, as noted above, the lower and upper bounds of the range of cost estimates are likely to be sensitive to the assumptions of the MCT model and MCom's business plan respectively and so should not be thought of as robust or precise.

5.51 Although the forth option, benchmarking to a regulated termination rate of 4.4ppm (2006/07 prices), is also likely to exceed MCom's efficient termination costs, it is likely to be closer than the current rate or the rate suggested by T-Mobile. This rate

[26] As set out in paragraph [5.26] above.
[27] See number 2 at paragraph 184.

also bears a "broad brush" relationship to costs as it is itself based on the output of Ofcom's MCT model. However, it reflects the estimated costs of an efficient operator with national coverage, rater than those of a smaller local operator such as MCom.

5.52 Due to the time pressures of the dispute resolution process and the unique nature of MCom's service, we have not been able to conduct a detailed or robust analysis of MCom's costs, nor of the likely efficient total cost of mobile termination for a localised service such as MCom's. Furthermore, we have a duty to balance cost considerations with other factors when resolving a termination rate dispute. Therefore, we have considered it prudent not to rely on this assessment of cost in isolation, and we have therefore considered a number of other relevant factors as described below in reaching our draft determination.

Cost minimisation

5.53 In the context of this dispute, the principle of cost minimisation implies that the termination rate set should facilitate productive efficiency by providing an incentive for costs to be minimised.

5.54 We believe that, because we are unable to ascertain the exact level of MCom's costs, there is a risk of a trade-off between static and dynamic efficiency in determining a solution to this dispute.[28] Setting a rate higher than efficient costs could risk encouraging entry by operators whose costs are higher than those of (efficient) existing operators (which would reduce static efficiency). On the other hand, setting a rate that is lower than efficient costs could risk discouraging entry by operators whose costs are efficient (which would reduce dynamic efficiency). In addition, if there are entry barriers, entry may not occur even if charges are above efficient costs.

5.55 Furthermore, if a new entrant (or established firm) is able to charge the industry regulated rate regardless of the technology and business strategy it chooses to adopt, it will benefit if it is able to lower its costs below those of its competitors. This allows participants in regulated markets to retain an incentive to carry out the investment, innovation and market research, and adopt new technology, that could result in long-term industry cost reductions and product improvements. The importance of retaining these incentives was highlighted in the TRD Judgment:

> "*It is important therefore not to allow benchmarking against actual or proposed price controls to be used in a way which deprives the undertakings of the benefits of cost reductions and other efficiency savings which such controls were intended to encourage*."[29]

5.56 Therefore, it could be argued that setting a new entrant's (or existing firm's) charges equal to their costs, even when their costs are lower than that of other operators, might deter investment, innovation and creativity in serving consumers. Consequently, even if we were able to remove the risk that our analysis had underestimated MCom's termination costs, it might be undesirable from a cost minimisation perspective to set MCom's charges equal to its costs.

---

[28] Static efficiency refers to maximising output with a given amount of resources, while dynamic efficiency allows consideration of the potential for increasing resources over the long term through innovation and investment. A competitive market is more likely to encourage investment and innovation, thus there is a relationship between increases in competitive pressure and increases in dynamic efficiency.

[29] See number 11 at paragraph 186.

5.57 As outlined earlier, we believe that MCom's current termination rate, 7.2ppm, is significantly above the efficient cost of termination on MCom's network. Therefore, this rate might not provide a sufficient price signal to ensure that new entrants only enter the market if they are able to provide termination services at equal or lower cost than existing firms.

5.58 Since T-Mobile's cost estimate, 1.2ppm, is likely to be below the efficient cost of termination on MCom's network, this rate would not provide a sufficient price signal to encourage firms who are able to provide termination services at lower cost than existing firms to enter the market. Additionally, this rate would not allow firms such as MCom to benefit from cost reductions it might able to achieve relative to its competitors due to adopting a different technology or business strategy.

5.59 The fourth option set out above, is to set MCom's termination charge equal to the CC's determination for 900/1800MHz operators in 2009/10, 4.4ppm (2006/07 prices). This would provide MCom with an incentive to minimise termination costs and allow it to retain any relative benefit resulting from its choice to adopt cheaper technology and to differentiate its service.

Effective competition

5.60 Consistency with this principle requires that the mobile termination rate set does not undermine the pressure for effective competition. Our analysis addressed a number of competition considerations.

New entry

5.61 MCom's local mobile network uses DECT guard band spectrum which was awarded to MCom, alongside 11 others, following Ofcom's auction in May 2006. In its submission, MCom states that:

> its *'…status as a new entrant seeking to roll out a network through the use of previously non-commercialised spectrum is of particular relevance to the UK mobile market'*.

5.62 Our attitude to competitive entry through the auction of DECT guard band spectrum reflects the principles of Ofcom's "*Awards Programme Approach*"[30]. Our general approach is to allow the market to determine how spectrum is used, taking account of the benefits of competition and the development of innovative services.

5.63 In general, we consider that there is scope for benefits to consumers from further competition in mobile services (recognising the extent of competition that already exists). The entry of MCom is one possible example of such further competition.

5.64 In its submission, MCom argues that:

> '*the mobile market remains inefficient with regard to both costs incurred by consumers in using a mobile subscription for the purposes of making international calls and for the services offered by the existing mobile network operators to the different ethnic communities within the UK.'*

[30] http://www.ofcom.org.uk/radiocomms/spectrumawards/awardsapproach/

5.65 We have not investigated this claim in detail, nor reached a conclusion on it. But, if it is the case, the introduction of MCom's service could increase the services offered to, and decrease the prices paid by, its target customers and, through increasing competition, could impact the prices paid for international calls from pre-paid phones more generally.

5.66 In the section on cost minimisation, we discussed how the level of the determined rate will affect the prospects for entry. In general, a rate sufficient to allow efficient entry will also promote effective competition. However, as rates are raised above this level, the risk of also allowing inefficient entry increases. In this section we consider whether this could result in a distortion to competition.

Potential distortion of competition through non- cost reflective charges

5.67 T-Mobile argues that the current MCom MTR does not reflect the efficient costs of termination of calls for a DECT guard band network operator and thus would potentially distort competition in the retail market.

5.68 In carrying out our analysis, we have considered the potential competition effects of setting a termination rate for MCom that is significantly different to its efficient costs. In retail mobile markets, operators typically compete by offering relatively low subscription prices which may be financed by termination rates which are above cost.[31] If an operator is able to charge a termination rate significantly higher than its costs of termination and in doing so earns larger profits on termination than its competitors, it could profitably undercut them on prices in the retail market. This could distort competition, to the extent that the ability to offer lower retail prices reflects a termination charge above cost rather than competition on the merits (such as more efficient costs for providing a similar service). Therefore we are mindful of the fact that, in general, setting a termination rate as close as possible to the efficient costs of termination would minimise the potential for distortion of competition.

5.69 In the context of this dispute, we considered two main sources of competitive distortions that could arise if MCom's termination rate were set significantly above its efficient costs. First, we considered the possibility of distortion in the retail mobile market between MCom and incumbent MNOs (and other mobile service competitors). Second, we considered whether there could be a distortion to competition between MCom and international calling card operators.

Competition with MNOs

5.70 We considered whether setting MCom's termination rate above its efficient costs would give rise to any distortions of competition in the retail mobile market between MCom and other mobile service providers through the potential for "cherry picking". In general, cherry picking occurs when new entrant operators choose to compete against incumbents, who are constrained to offer uniform national tariffs, only in (generally urban) areas which can be served at relatively low cost. By cherry-picking these areas, they can undercut incumbents' national tariffs, which are likely to reflect national average costs, without necessarily being more efficient.

5.71 In this case, the possibility of "cherry picking" arises because T-Mobile's and other MNOs' average termination cost are higher than MCom's due to the fact that their

[31] The interaction between the two sides of the market for mobile calls will generally lead any excess termination profits to be competed away in the retail mobile market through, for example, lowering prices to attract more mobile customers. This phenomenon is referred to as the waterbed effect.

national networks includes rural areas, which are more costly to serve than the urban area covered by MCom (see Annex 1). As T-Mobile receives a uniform termination rate in all areas, this is set on the basis of national average cost. So in low cost areas the revenue from termination exceeds the cost incurred in those areas, but this is offset by the shortfall of revenue from termination compared to the cost in high cost areas. The potential concern is that, if MCom were to receive the same national average rate, it would be able to “cherry pick” by operating only in low cost areas and using the resulting profits earned on termination to finance lower retail subscription prices or outgoing call charges. But “cherry picking” is only a concern in circumstances where it could have anti-competitive results – in other words, if the ability of one firm to “cherry pick” could lead to a significant distortion of competition such as because of limits on the ability of incumbents to respond and compete effectively with entrants.

5.72 T-Mobile and other incumbent MNOs are free to offer geographically restricted call services and to price outgoing calls as they choose. It is technically possible for an MNO to charge different, lower call prices for calls within a limited geographic area. In addition, the marginal profit which an incumbent MNO would earn from terminating an additional call made within the MCom coverage area is equal to the difference between its own regulated termination rate and its own, lower than average costs of termination in that area. Therefore, should they choose to, the MNOs have the ability to put themselves in a similar position to MCom, by offering a geographically restricted service. Even short of matching MCom’s service, the incumbent MNOs have the ability to respond to competition from MCom, such as through using price discrimination – for example, offering packages with low international call rates to specific countries – or through targeting their marketing activities, to attract a similar customer base as MCom intends to serve.

5.73 The ability of the MNOs to match or otherwise respond to MCom’s service, if they and MCom receive a similar termination rate, substantially reduces the potential concern about cherry picking.[32] In addition, incumbent MNOs may have advantages over new entrants, including large installed customer bases relative to MCom. Overall, we consider that the risk of an anti-competitive distortion of competition through cherry picking in such circumstances would be low.

5.74 Indeed, this reasoning suggests that MCom could be disadvantaged relative to T-Mobile and the other MNOs in serving its targeted customer base, were we to set MCom’s termination rate according to option 3, i.e. our best estimate of MCom’s efficient termination cost, which is below the MTRs of the incumbent MNOs. This is because, if the incumbent MNOs matched or otherwise responded to MCom’s service in (lower cost) urban areas, they would be receiving a higher termination rate than MCom. It might enable them to profitably offer retail prices that MCom would be unable to match, not because of inferior performance but because of the disparity in termination rates. Overall, we consider that the risk of a distortion of competition against MCom under option 3 is at least as high as the risk of a distortion of competition in favour of MCom and against the incumbent MNOs under option 4.

5.75 Additionally, we consider it highly likely that, as a new entrant in an effectively competitive market, MCom will pass on any cost savings it is able to achieve to its customers in the form of lower prices. Therefore, in this case, we consider that the

[32] The ability to match is an important feature that distinguishes the circumstances in this dispute from some other considerations of the effects on competition of above-cost termination charges, such as in relation to H3G.

potential for customer benefit outweighs the risk of detriment to competition from "cherry picking".

Competition with calling card operators

5.76 As MCom intends to provide low rate international calls and low rate local calls and texts from a geographically restricted service, it will primarily target existing users of international calling cards, such as the ethnic minority communities residing in the areas where MCom is rolling out its network. Therefore, in our assessment against the 'effective competition' principle, we also considered possible competitive concerns between MCom's proposed service and calling card operators.

5.77 If MCom receives a termination rate in excess of its efficient costs, it could use such termination profits to offer lower prices in competition with calling card operators. Calling card operators would not be in a position to match this use of termination profits. However, they are likely to benefit from lower traffic-sensitive costs on fixed networks compared to mobile networks. Furthermore, a potential advantage of mobile services – the attraction to consumers of mobility – is limited in the case of MCom, given its current operations. Overall, the extent of the risk of anti-competitive distortion against calling card operators is unproven.

5.78 Furthermore, because their barriers to entry are low, we expect that, even if some calling card operators left the market, we expect any attempt by MCom to raise prices would provoke entry or re-entry by calling card operators. That is, to the extent that calling cards are substitutes for MCom's service, they will act as a constraint on MCom's retail prices. On balance, whilst we recognise that MCom might compete directly with calling card operators, we consider the risk of consumer detriment of any distortion of competition caused by allowing MCom a termination rate above its efficient costs to be relatively low.

Summary of competitive effects of the four options

5.79 Effective competition requires that the rate should be sufficient to allow efficient entry but should not lead to a distortion of competition. The current rate of 7.2ppm is both likely to be above MCom's efficient costs and the future regulated MTRs of the incumbent MNOs. As such it would likely allow inefficient as well as efficient entry and runs a risk of some distortion of competition in mobile markets.

5.80 We are also concerned about the distortion of competition that could result if we were to set MCom's termination rate at 1.2ppm, which is likely to be a significant underestimation of its efficient costs. This outcome could cause detriment to consumers by forcing MCom to charge higher retail prices than it otherwise would have or deter MCom's entry into the market altogether. Setting MCom's termination rate at the rate suggested by T-Mobile would not therefore be consistent with the promotion of effective competition.

5.81 Option 3 - our best estimate of MCom's efficient costs - gives rise to a risk of a distortion of competition against MCom. Option 4 - the benchmark of the CC's determination for 900/1800MHz operators in 2009/10 – runs a risk of a distortion of competition in favour of MCom and against the incumbent MNOs (and other mobile service providers) and/or against calling card operators. However, we consider that risk to be low, given respectively the ability of the MNOs to match or otherwise respond to MCom's service and calling card operators' likely costs and ability to re-enter. On balance, we consider that option 4 gives rise to the lowest risk of a distortion of competition.

Reciprocity

5.82 The principle of reciprocity requires that where services are provided reciprocally, charges should also be reciprocal. For the reasons set out by Ofcom in the 2006 Telewest decision, when charges are based on each operator's own costs rather than on reciprocity, higher cost operators are effectively subsidised by lower cost providers. This is because the costs of the inefficient network would be passed to the subscribers of the lower cost network when they call subscribers of the former.

5.83 While both parties to this dispute supply a mobile service, there is a marked difference in geographic reach between the two networks. If MCom's service is considered to be materially different from T-Mobile's service, it could be argued that the relevance of the reciprocity principle might be limited, relative to the other principles, in solving this dispute.

5.84 However, we consider there to be a number of reasons why reciprocal call termination rates would be desirable in this case. First, in our discussions with MCom we were informed that its service is intended to target a customer base that has a tendency to receive most of its phone calls in the localised urban areas where they live. Should any of the MNOs serve this relatively static customer base, they will benefit from the differential between their call termination rates and the efficient costs of termination in urban areas. As noted above, were we to set MCom's termination rate at its current efficient termination cost, it would be disadvantaged relative to T-Mobile and the other MNOs in serving its targeted customer base.

5.85 Secondly, MCom's lower estimated efficient costs result from a certain component of its current business strategy, namely operating only in urban areas. The MNO's MTRs are set to reflect the 'average efficient operator' and are not impacted by their various commercial strategies, even if these strategies should lead to cost differentials between operators.

5.86 In general, it seems desirable for the termination rate to be independent of the operator's business strategy. If MCom's termination rate is based, as under option 3, on the efficient costs of running its service according to its current business strategy, it would need to negotiate a change in terms (or enter into a dispute) as a consequence of altering its business strategy in a way that increased its efficient termination costs. For example, MCom might wish in the future to expand its network into higher cost non-urban areas or expand effective coverage by negotiating a roaming agreement. This could cause MCom to lose profits, through a lag between any change in its strategy and the change in its termination rate, potentially deterring MCom from making efficient investment decisions and/or expanding its business.

5.87 We are aware that, historically, there have not always been reciprocal termination charges for mobile termination. On the other hand, we stated in the Mobile Call Termination Statement[33] that, without fettering our discretion, in the event of imposing price controls for new entrants, we are of the view that it is desirable for new entrants' MCT charges to be aligned with those of incumbent suppliers. We further noted in the statement that we would anticipate further convergence in MNOs' mobile termination rates.

[33] See number 6, at page 158.

Distribution of benefits

5.88 If, as asserted by T-Mobile and indicated by our cost analysis, MCom's costs are lower than its current termination charges as well as T-Mobile's costs, there is a question of how the benefits from these lower costs should be distributed. In arriving at our proposed determination, we considered the likely impact of adjusting MCom's MTR in accordance with our four options on the distribution of benefits between T-Mobile, MCom and their respective customers:

- Option 4, which would provide MCom with the benchmark termination rate (4.4ppm, 2006/07 prices), will distribute all the benefits to MCom of any cost differential between its termination cost and the termination cost of its competitors, who receive the same rate.

- Option 1, which would provide the highest termination rate for MCom of the four options (7.2ppm), will distribute all the benefits of MCom's lower termination cost to MCom and its customers. However, as this rate is above the MNO's termination rates, it will also lead to some redistribution of profits to MCom from the operators purchasing termination from MCom, which includes its competitors.

- MCom, as a new entrant in an effectively competitive market, is likely to use higher termination profits to offer lower retail prices to its customers. Therefore, the higher termination rate options (4.4ppm (2006/07 prices) and 7.2ppm) will ultimately distribute the benefits from MCom's lower cost structure to MCom's customers.

- Option 3, which would provide MCom with a termination rate equal to our best estimate of its efficient termination cost, would distribute all of the benefits of MCom's lower cost structure to T-Mobile and the other operators purchasing termination from MCom (assuming our cost estimate was correct).

- Option 2, which would provide MCom with the lowest termination rate of the four options (1.2ppm), would also distribute all of the benefits of MCom's lower cost structure to T-Mobile and the other operators purchasing termination. However, as this rate is below MCom's termination cost, it will also lead to some redistribution of profits from MCom to such operators, which include its competitors.

- To the extent that T-Mobile and the other operators will pass the lower termination rates they pay to MCom under options 2, 3 and 4 onto their customers, in the form of lower retail prices for calls to MCom, these options will distribute the benefits from MCom's lower cost structure to callers to MCom. It is also possible that T-Mobile and other operators would pass these benefits on to their customers in ways other than reducing the cost of calls to MCom customers. To the extent that T-Mobile and the other operators will not pass on lower termination rates into lower prices, they will benefit rather than consumers.

In summary, higher termination rates for MCom are likely to benefit MCom's customers, but may result in higher prices for callers to MCom. Using the benchmark (the rate in the CC's determination for O2 and Vodafone, i.e. option 4) would allow MCom's customers to benefit from its lower costs and would avoid callers to MCom paying more than to call other mobile networks (to the extent that originating operators reflect relative termination rates in their retail prices for calls). Lower, cost-based termination rates (option 3) could alter this distribution of benefits, increasing them to callers to MCom (to the extent that originating operators reflect lower MCom termination rates in lower retail call prices) and reducing the benefits to MCom's own customers.

Practicability

5.89 Consistency with the final pricing principle requires that the termination rate determined is practicable and relatively easy to implement. In arriving at our proposed determination, we considered the practicality of implementing the four options for MCom's termination rate:

- Retaining MCom's current termination rate, 7.2ppm, would be practicable to determine and the easiest of all the options to implement as it would simply involve retaining the status quo.
- Setting MCom's termination rate to the cost estimated by T-Mobile, 1.2ppm, would be practicable to determine and reasonably simple to implement. However, it would require changes to current arrangements and some initial implementation issues, due to the indirect interconnection between T-Mobile and MCom.
- Setting MCom's termination rate to the benchmark of one of the regulated rates determined by the CC would be practicable to determine and reasonably simple to implement. However, given that the appeal process regarding the five incumbent MNOs' MTRs is currently incomplete, a possible change to this rate could add complexity to the implementation of this option. This option would also require changes to current arrangements and cause some initial implementation issues, due to the fact that there is no direct interconnection between MCom and T-Mobile.
- Mainly due to the practical difficulties in deriving a robust estimate of MCom's efficient cost, setting MCom's termination rate equal to its costs is the least practicable to determine and most difficult option to implement. Additionally, as explained above, this option is not robust to changes in MCom's strategy, as the basis for the cost calculation would fall away should MCom expand its business into non-urban markets. We consider a solution that necessitates re-determining and/or re-negotiating a termination rate every time an operator changes it business strategy to have significant practical disadvantages.

Summary of the application of Ofcom's pricing principles

5.90 The outcome of our analysis, which applied the six pricing principles to four options for setting MCom's termination rate in this dispute, is summarised below.

Option 1: The current MCom termination rate as agreed with BT, 7.2ppm

5.91 MCom's current charge, as agreed with BT, is likely to significantly exceed MCom's efficient costs (and so is not supported by the principle of cost causation). As this rate is higher than those of MCom's competitors, it entails the highest risk of inefficient entry and distortion of competition in favour of MCom (and is therefore contrary to the principles of cost minimisation, effective competition and reciprocity). However, it would be practical to implement (practicability).

5.92 This rate would result in distribution of all the benefits of MCom's lower termination cost to MCom and its customers, as well some redistribution of profits to MCom from purchaser of termination from MCom, including its competitors (distribution of benefits).

Option 2: T-Mobile's estimation of MCom's termination cost, 1.2ppm.

5.93 It is likely that T-mobile's suggested rate significantly underestimates the network component of MCom's efficient termination costs (and so is not supported by the principle of cost causation). This rate is also lower than all MCom's competitors MTRs (contrary to the principle of reciprocity). The implementation of a rate below the efficient cost of termination on MCom's network would not provide a sufficient price signal to encourage firms who are able to provide termination services at lower cost than existing firms to enter the market (contrary to the principles of cost minimisation and effective competition).

5.94 Setting MCom's rate at such a low level would distribute all of the benefits of MCom's lower cost structure to T-Mobile and the other operators purchasing termination and could cause detriment to consumers by forcing MCom to charge higher retail prices or deterring MCom's entry into the market altogether (distribution of benefits, effective competition).

Option 3: Our best available estimate of MCom's efficient termination cost, between 2.9ppm – 3.4ppm.

5.95 This option would reflect the more limited geographical coverage of the termination service for callers to MCom (compared to the incumbent MNOs) in a lower termination charge. In theory it would send the most cost reflective price signals and is the most consistent with Ofcom's cost causation principle.

5.96 However, each of the three sources of cost evidence considered in our analysis – MCom's business plan, T-Mobile's cost estimates, and the MCT cost model – has significant limitations in providing a robust cost estimate. Therefore, the theoretical support for this option from the principle of cost causation is less strong in practice and faces significant concerns about practicability.

5.97 Furthermore, setting a new entrant's (or existing firm's) charges equal to their costs, even when their costs are lower than that of other operators, might deter investment, innovation and creativity in serving consumers (which would be counter to cost minimisation).

5.98 Setting MCom's termination rate equal to cost would (assuming our cost estimate to be correct) distribute all of the benefits of MCom's lower cost structure to T-Mobile and other operators, and callers to MCom to the extent that such operators passed on lower termination rates into lower retail prices.

5.99 As there is significant room for error in our cost analysis and this potential for error could be in either direction, setting MCom's termination rate equal to our estimate of costs has uncertain consequences for competition (effective competition). Even if we could be sure that our estimate of MCom's efficient termination costs is accurate, setting MCom's MTR lower than those of all the incumbent MNOs would allow such competitors an advantage when serving the same customer base, for which they would incur similar termination costs as MCom but receive a higher termination charge (raising concerns about effective competition and reciprocity). Additionally, this option is not robust to changes in MComs' business strategy (practicability, reciprocity, effective competition).

Option 4: The 2009/10 Vodafone and O2 MTR as determined by the CC, 4.4ppm (2006/07 prices)

5.100 Although this rate seems to be closer to MCom's efficient termination costs than the current rate agreed with BT or the rate suggested by T-Mobile, it is likely to exceed these costs (cost causation).

5.101 This option would distribute all the benefits of MCom's lower termination cost to MCom and its customers (distribution of benefits). As a result it would reward MCom by allowing it to retain any relative benefit resulting from its lower costs (cost minimisation).

5.102 A lower termination rate than under this option might allow callers to MCom to benefit as well from MCom's lower costs, to the extent that originating operators reflected a lower termination rate in a lower retail price for calls to MCom. But, under this option, the termination rate would not cause callers to MCom to pay more than for calls to other mobile networks.

5.103 A termination rate above efficient costs could create a potential risk of distorting competition in favour of MCom. However, as discussed, incumbent MNOs have the ability to match or otherwise respond to MCom's service and calling card operators might have lower network costs and should be able to re-enter. Therefore, we consider the risk of a distortion of competition in favour of MCom against either incumbent MNOs or calling card operators to be low.

5.104 This option reduces the risk of distortion of competition against MCom, as it does not allow competing operators a higher termination rate than MCom for serving the same (lower cost) customer base (effective competition). It would also avoid disincentives to MCom to alter its business strategy, differentiate its service and expand its business (reciprocity).

The preferred option

5.105 We consider that determining a rate between MCom and T-Mobile for termination on MCom's network equal to the benchmark of the CC's determination for 900/1800MHz operators in 2009/10 of 4.4ppm (2006/07 prices) would be reasonable and fair as between the parties. On balance, we believe that the interests of consumers are better served overall by this option compared to others (such as option 3, our best available estimate of MCom's efficient termination cost).

- It furthers the interests of consumers through the promotion of competition and the availability of a wide range of electronic communications services by facilitating MCom's ability to compete in both (i) the mobile voice call markets and (ii) the international calling card markets.

- It allows MCom's customers to benefit from its likely lower costs of termination. As regards callers to MCom, the termination rate would not cause them to pay more than for calls to other mobile networks.

- It reduces the risk that either party is placed at a competitive disadvantage. There is potential for the choice of termination rate to distort competition either in favour of MCom (through a rate above its efficient costs) or against MCom (through a rate below those of the incumbent MNOs). On balance, we believe that the risk of distorting competition in favour of MCom under our preferred option is smaller than the risk of distorting competition against MCom, which would arise under the options with lower termination rates.

5.106 Ofcom therefore proposes to resolve the dispute by determining the MTR applicable between MCom and T-Mobile to be an amount of 4.4ppm (2006/07 prices), converted into nominal terms.

5.107 The preferred option is currently stated in 2006/07 prices. An adjustment is required in order to convert this option to nominal terms to account for three years of relevant inflation. The methodology for this conversion will follow the methodology used in Ofcom's implementation of the CC's MTC determination (subject to any changes through the current CAT processes).[34]

5.108 The method of determining this issue was not decided in the CC determination. Therefore, we are unsure as to whether this issue will be determined prior to our final determination. We propose to adopt any final methodology adopted by the CAT in the final determination but, if this is not possible, we will set out a proposed methodology for brief consultation by interested parties prior to the final determination.

Assessment of the preferred option against Ofcom's statutory duties and Community requirements

5.109 We have carefully considered the powers, obligations and duties detailed in section 4 in deciding on the appropriate means of resolving this dispute. In particular, we have considered the relevance of our primary duties and of the Community requirements to this dispute.

5.110 We consider that the following duties are of relevance to this dispute:

(i) the duty to further the interests of citizens (i.e., all members of the public in the United Kingdom) in relation to communication matters (section 3(1)(a));

(ii) the duty to further the interests of consumers in the relevant markets, where appropriate by promoting competition (section 3(1)(b));

(iii) the duty to secure the availability throughout the United Kingdom of a wide range of electronic communications services (section 3(2)(b));

(iv) the duty to have regard to the desirability of promoting competition in relevant markets (section 3(4)(b));

(v) the duty to have regard to the different interests of persons in the different parts of the United Kingdom, of the different ethnic communities within the United Kingdom and of persons living in rural and in urban areas (section 3(4)(l));

(vi) the duty to have regard, in particular, to the interests of consumers in respect of choice, price, quality of service and value for money (section 3(5));

(vii) the duty to promote competition (section 4(3), setting out the first Community requirement).

(viii) the duty to secure that Ofcom's activities contribute to the development of the European internal market (section 4(4));

[34] See 16.47(c) at http://www.catribunal.org.uk/files/CC_Determination_1083_H3G_1085_BT_220109.pdf

(ix) the duty to promote the interests of all persons who are citizens of the European Union (section 4(5));

(x) the duty to ensure technology neutrality (section 4(6)).

5.111 We consider that the duties set out at (ii), (iii), (iv), (vi), (vii) and (x) are of particular relevance for resolving this dispute since both the parties have recognised that the resolution of this dispute would have an impact on competition and, therefore, on the offer of electronic communications services to consumers in terms of choice, price, quality of service and value for money. The preferred option allows MCom and its customers to benefit from its lower costs. Callers to mobile would pay no more than for calls to other mobile networks (to the extent that originating operators set retail prices for calls to MCom in a similar way as for calls to other mobile networks).

5.112 In developing our approach, we have also taken into account the extent to which our approach is competitively neutral to ensure a level playing field for the provision of services whilst ensuring that our approach actively promotes competition through the development of new and innovative services. MCom's local mobile network uses DECT guard band spectrum which was awarded to MCom, alongside 11 others, following Ofcom's auction in May 2006. We have an interest in ensuring that the determination in this matter does not deter the use of the recently auctioned guard band spectrum through efficient and innovative entry into the market.

5.113 MCom described itself as a new entrant mobile operator, with a service offering for the purposes of making international calls and a mobile service to the different ethnic communities within the UK. As discussed above in greater detail, we considered that the new entry such as by MCom could potentially have a positive impact on competition and consumers in the mobile market.

5.114 We considered that setting a termination a rate at too low a level could deter efficient entry (and thus eliminate the potential consumer benefits from increased competition), particularly in the presence of incomplete cost information. Therefore in determining a solution for this dispute it might be necessary to concede a small risk of allowing inefficient entry in order to avoid deterring efficient entry.

5.115 As discussed above in greater detail, our preferred option gives rise to a low risk of distorting competition in favour of MCom against either incumbent MNOs (through "cherry-picking") or calling card operators. This option also reduces the risk of a distortion of competition against MCom, unlike options involving lower termination rates.

5.116 We have also sought to adopt a technology neutral approach which does not favour the use of any particular technology (whether that used in T-Mobile's network or MCom's network). In doing so, we have ensured, to the greatest extent possible, that our approach does not favour the technology of either MCom or T-Mobile. We have approached the resolution of this dispute from the perspective of consumers with respect to the services being offered rather than the underlying technologies.

5.117 We consider the duties set out at (i), (v) and (ix) are also of significant relevance for resolving this dispute since the end-users of MCom's service will be persons residing in certain areas of London which have a high proportion of ethnic community residents. Further, MCom submitted that its service will benefit not only those different ethnic communities within the UK but also all consumers of mobile telephone subscriptions, furthering the interests of citizens in relation to communications matters. Whilst the duties set out in the preceding paragraph may ensure that those interests are protected, we have nevertheless considered the extent to which its determination will secure the objectives of its duties in relation to the promotion of the interests of civilians, particularly those from ethnic minorities in the present case. We consider that our approach will enhance the ability of individuals within areas with high ethnic minority populations to access communications services of particular interest to them, namely lower price international phone calls from mobile handsets. This is of particular interest to ethnic minority populations since they are more likely than the broader population to make regular use of international calls.

5.118 We further consider that the duty set out at (viii) above will also be fulfilled in this case since our approach firstly may encourage new entry into markets in the United Kingdom which, potentially could allow operators from other Member States to enter the UK market. In addition, our approach may encourage the making of international calls where rates for such services are reduced, thus promoting the European internal market. This position also fulfils the duty set out at (ix) above in that it may facilitate the making of voice calls by citizens of the European Union between themselves through the use of lower rate international calling.

5.119 In addition, we consider that the duties set out in section 4(7) and (8)of the 2003 Act is also relevant, namely the duty to encourage the provision of network access and service interoperability for the purposes of securing efficiency and sustainable competition in communications markets and the maximum benefit for the customers of communications network and services providers. We consider this duty to be of relevance for resolving this dispute since this dispute concerns the service of call termination, which is essential for encouraging interoperability between different networks, so that the customers of one network can call, and receive calls from, the customers of other networks. Further, given that the service of call termination facilitates the development of communications between customers of different network, we consider it relevant also for the purpose of development of the European internal market.

5.120 We also consider that our duties set out in sections 3(2)(a), 3(4)(d), 3(4)(f) and 4(6)of the 2003 Act may be relevant to the resolution of this dispute, namely those to:

(i) secure the optimal use for wireless telegraphy of the electromagnetic spectrum (section 3(2)(a));

(ii) have regard to the desirability of encouraging investment and innovation in relevant markets (section 3(4)(d)); and

(iii) have regard to the different needs and interest, so far as the use of the electromagnetic spectrum for wireless telegraphy is concerned, of all persons who may wish to make use of it (section 3(4)(f)).

5.121 We consider these duties to be of relevance for resolving this dispute since MCom is in the process of investing in the development of a network to offer mobile services by using the DECT guard band spectrum licence granted by Ofcom in May 2006. Our approach ensures that operators holding a DECT guard band spectrum licence will not suffer from disincentives to enter the market by rolling out networks thus ensuring that their interests are supported. As a result, those holding licences will be encouraged to make use of those licences ensuring optimal use of the spectrum. This in turn will encourage investment and innovation as operators roll out network in competition with existing networks.

5.122 Finally, we consider our duties set out in section 3(3) of the 2003 Act to be relevant, namely to have regard to the principles under which regulatory activities should be transparent, accountable, proportionate, consistent and targeted only at cases in which action is needed, as well as any other principles appearing to us to represent the best regulatory practice. In developing our approach, we have considered all relevant previous decisions made by Ofcom, the CAT and other relevant bodies in order to ensure that the proposed approach is consistent with previous regulatory practice.

5.123 Ofcom considers that this document clearly sets out the parties' arguments and Ofcom's reasoning that leads to this proposed conclusion, and notes that the parties will have an opportunity to comment on Ofcom's proposals, and that this supports Ofcom's duty to ensure that its regulatory activities are transparent, accountable, proportionate, consistent and targeted. Our resolution is targeted in that it seeks to resolve the dispute as between the parties only (indeed Ofcom's powers in dispute resolution may not go beyond this).

5.124 We do not consider that the duties set out in the following sections are of relevance to the resolution of this dispute since they relate to matters which are not covered by this dispute:

(i) sections 3(2)(c) to (f);

(ii) sections 3(4)(a), (c), (e), (g) to (k) and (m); and

(iii) section 4(9).

How to implement the proposed outcome

5.125 Ofcom's powers in order to resolve disputes are set out under section 190 of the 2003 Act and include a power to make a declaration setting out the rights and obligations of the parties to the dispute and to direct the parties to enter into a transaction between themselves on such terms and conditions as Ofcom may fix.

5.126 As has been previously noted, MCom and T-Mobile do not interconnect directly. Each of them have entered into a Standard Interconnection Agreement with BT pursuant to which calls are conveyed between the MCom and T-Mobile networks by use of BT's transit service. In the course of our investigation, it has become apparent that the parties do not have an interest in direct interconnection since this would unnecessarily incur costs.

5.127 Ofcom's powers to resolve disputes are limited to imposing obligations on the parties to the disputes only. Ofcom therefore considers it appropriate to make a declaration setting out that MCom is not entitled to charge a price of more than 4.4ppm (2006/07 prices) for the termination of calls on its network which are originated on T-Mobile's network.

5.128 In the past, in relation to price controls, we have opted to reduce termination charges through a glide path where we thought a sudden decrease in a mobile operator's termination revenue would not be in the longer term interests of consumers (for example, if such a reduction presents a material risk to further investment in mobile services).[35] MCom may have some business plans in the expectation of receiving a higher termination rate. But we regard this as being of limited relevance as MCom

[35] See 9.185 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

has only very recently begun operations, and therefore should be able rapidly to adjust its plans. Consequently we do not consider it necessary to set a glide path in determining this matter. Additionally, because our evidence suggests that the proposed rate of 4.4ppm (2006/07 prices) is itself above the current (actual and likely efficient) cost of termination on MCom's network, we do not think that it is appropriate to postpone a reduction in MCom's termination rate to the level of its competitors.

5.129 However, given that the parties do not have direct interconnection and charges for termination are levied by MCom on BT, Ofcom does not consider that such a position is sufficient to resolve the dispute. Further, Ofcom does not consider that it could resolve the dispute by determining the MTR applicable between BT and MCom, since BT is not a party to the dispute. Indeed, such an approach would go beyond the scope of the dispute as it would mean that the MTR determined by Ofcom would apply not only in respect of calls originated on T-Mobile's network but also on any other network using BT as a transit provider, including BT itself.

5.130 Ofcom has therefore considered how to ensure that the resolution of this dispute is limited to a resolution between the parties in circumstances where they do not directly interconnect. In reaching its proposed determination, Ofcom has considered the following factors:

(i) the parties are interested in neither direct interconnection nor "targeted" transit;

(ii) since the parties use BT as "transit" provider, MCom cannot distinguish between the traffic terminated on its network originating on T-Mobile's network and the traffic originating on other networks; and

(iii) Ofcom cannot impose any obligations on BT through this dispute since it is not a party to the dispute.

5.131 In the light of these considerations, we propose to use Ofcom's powers under Section 190(2)(c) of the 2003 Act to give a direction imposing on MCom an obligation to make a repayment to T-Mobile of a pence per minute amount equal to the termination charge it receives from BT (i.e. the amount stated in the Carrier Price List from time to time) less the relevant regulated rate. Ofcom considers that this approach will ensure that the amounts payable to T-Mobile will ensure that the effective amount which it pays for termination on MCom's network will not exceed the regulated rate.

5.132 In determining the dispute, we will also need to decide the date from which the final determination should apply. We consider it appropriate in this case for the determination to apply as from the date on which it is made. MCom's service has been operational for a very short space of time and very little traffic has passed between MCom and T-Mobile. If Ofcom were to determine the MTR as from a date in the past, this would therefore have little meaning in absolute terms.

Proposed resolution

5.133 Based on the analysis set out at in this section, our proposed resolution is:

a) To make a declaration that MCom shall not charge an amount in excess of 4.4ppm (2006/07 prices), converted into nominal terms, for voice calls originated on T-Mobile's network and terminated on MCom's network;

b) To impose an obligation on MCom to make a payment to T-Mobile of an amount equal to the price for termination on MCom's network contained in the Carrier Price List less 4.4ppm (2006/07 prices), converted into nominal terms, in respect of each minute of traffic originated on T-Mobile's network and terminated on MCom's network; and

c) That this resolution shall apply from the date of the final determination.

5.134 Ofcom proposes to adopt the draft determination that accompanies this explanatory statement by the statutory deadline for resolving this dispute which is 20 March 2009.

Next steps

5.135 Stakeholders are invited to comment on Ofcom's proposed resolution of this dispute by **close of business on 27 February 2009.**

5.136 Annex 2 below explains how stakeholders can submit comments on Ofcom's proposed resolution of this dispute. Ofcom's consultation principles are set out at Annex 3 below, while Ofcom's standard coversheet for consultation responses is included at Annex 4 below.

Section 6

The Draft Determination

Determination under sections 188 and 190 of the Communications Act 2003 ("the 2003 Act") for resolving a dispute between Mapesbury Communications Ltd ("MCom") and T-Mobile (UK) Ltd ("T-Mobile") concerning the termination rate payable by T-Mobile for calls originated on T-Mobile's network and terminated on MCom's network.

WHEREAS

(A) section 188(2) of the 2003 Act provides that, where Ofcom has decided pursuant to section 186(2) of the 2003 Act that it is appropriate for it to handle a dispute, Ofcom must consider the dispute and make a determination for resolving it. The determination that Ofcom makes for resolving the dispute must be notified to the parties in accordance with section 188(7) of the 2003 Act, together with a full statement of the reasons on which the determination is based, and publish so much of its determination as (having regard, in particular, to the need to preserve commercial confidentiality) they consider appropriate to publish for bringing it to the attention of the members of the public, including to the extent that Ofcom considers pursuant to section 393(2)(a) of the 2003 Act that any such disclosure is made for the purpose of facilitating the carrying out by Ofcom of any of its functions;

(B) section 190 of the 2003 Act sets out the scope of Ofcom's powers in resolving a dispute which may, in accordance with section 190(2) of the 2003 Act, include:

a) making a declaration setting out the rights and obligations of the parties to the dispute;

b) giving a direction fixing the terms or conditions of transactions between the parties to the dispute;

c) giving a direction imposing an obligation, enforceable by the parties to the dispute, to enter into a transaction between themselves on the terms and conditions fixed by Ofcom; and

d) for the purpose of giving effect to a determination by Ofcom of the proper amount of a charge in respect of which amounts have been paid by one of the parties to the dispute to the other, giving a direction, enforceable by the party to whom sums are to be paid, requiring the payment of sums by way of adjustment of an underpayment or overpayment;

(C) on 10 October 2008 the parties to the dispute jointly submitted a dispute for resolution;

(D) on 21 November 2008, after requesting and obtaining further information from the parties to fully understand the scope of the dispute, Ofcom decided that it was appropriate for it to handle the dispute, and informed the parties of this decision;

(E) on 21 November 2008 Ofcom published details of the dispute on its website and invited comments from stakeholders on the scope of the dispute;

(F) on 21 November 2008 Ofcom set the scope of the dispute to be resolved as being to determine the termination rate payable by T-Mobile for voice calls originating on T-Mobile's network and terminating on MCom's network;

(G) a non-confidential draft determination was sent to the parties on 13 February 2009 January 2009 and published on Ofcom's website on the same date;

(H) in order to resolve this dispute, Ofcom has considered (among other things) the information provided by the parties and Ofcom has further acted in accordance with its general duties set out in section 3 of, and the six Community requirements set out in section 4 of the 2003 Act;

(I) a fuller explanation of the background to the dispute and Ofcom's reasons for making this determination are set out in the explanatory statement accompanying this determination; and

NOW, therefore, Ofcom makes, for the reasons set out in the accompanying explanatory statement, this determination for resolving this dispute:

Declaration of rights and obligations, etc

1 MCom is not entitled to charge an amount in excess of [4.4ppm (2006/07 prices)][36], in respect of voice calls originated on T-Mobile's network and terminated on MCom's network;]

2 MCom shall pay to T-Mobile an amount equal to the pence per minute charge for termination on MCom's network contained in the Carrier Price List less [4.4ppm (2006/07 prices)][1] in respect of each minute of traffic originated on T-Mobile's network and terminated on MCom's network.

Binding nature and effective date

3 This determination is binding on MCom and T-Mobile in accordance with section 190(8) of the 2003 Act;

4 This determination takes effect on the date of the final determination;

Interpretation

5 For the purpose of interpreting this Determination—

- **a)** headings and titles shall be disregarded; and
- **b)** the Interpretation Act 1978 shall apply as if this Determination were an Act of Parliament.

6 In this Determination:

- **a)** **'2003 Act'** means the Communications Act 2003 (c.21);
- **b)** **'Carrier Price List'** means the document entitled Carrier Price list published by British Telecommunications plc as amended from time to time;

[36] This rate will need to be converted to nominal terms accounting for the three years of relevant inflation as per 16.47(c) of the CC's MTC determination at http://www.catribunal.org.uk/files/CC_Determination_1083_H3G_1085_BT_220109.pdf

c) ‘**MCom**’ means Mapesbury Communications Ltd whose registered company number is 04553934, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

d) ‘**T-Mobile**’ means T-Mobile (UK) Ltd whose registered company number is 02382161, and any of its subsidiaries or holding companies, or any subsidiary of such holding companies, all as defined by section 736 of the Companies Act 1985, as amended by the Companies Act 1989;

e) **‘Ofcom’** means the Office of Communications.

Neil Buckley

Director of Investigations

A person duly authorised in accordance with paragraph 18 of the Schedule to the Office of Communications Act 2003

[   ] 2009

Annex 1

Cost Annex

Assessment of MCom's costs

A1.1 To gain a better understanding of the costs MCom incurs when a call is terminated on its network, we completed a high level assessment of termination cost based on MCom's business plan. We also assessed the evidence on MCom's costs submitted by T-Mobile. In addition to this, we considered what the efficient cost of termination in urban areas, such as those serviced by MCom, is likely to be by considering output from Ofcom's MCT model, disaggregated on a geographical basis. Below we describe the following:

a) The estimate of the costs of termination arrived at by MCom in its business plan;

b) A revised estimate of the cost of termination, using MCom's call volume and cost estimates in a manner that more closely matches Ofcom's cost allocation assumptions for termination;

c) Evaluation of the cost evidence submitted by T-Mobile; and

d) An adaptation of Ofcom's mobile call termination cost model ("MCT cost model") to produce unit costs for different "geotypes" within the model.

Estimated cost of termination on MCom's Network

A1.2 Table A1 contains two estimates of MCom's termination cost. The first is the estimate provided by MCom, the second is a revised estimate produced by varying the cost allocation assumptions to more closely reflect Ofcom's view of how expenses should be allocated in estimating termination costs.

Table A1: Estimated cost of termination (ppm)[37]

	Notes	Year 1	Year 2	Year 3	Year 4	Year 5	Constant rate[1]
MCom Opex estimate		✂	✂	✂	✂	✂	✂
Revised Opex estimate	2	✂	✂	✂	✂	✂	✂
MCom depreciation estimate		✂	✂	✂	✂	✂	✂
Revised depreciation estimate	3	✂	✂	✂	✂	✂	✂
MCom cost of capital estimate		✂	✂	✂	✂	✂	✂
Revised cost of capital estimate	4,5	✂	✂	✂	✂	✂	✂
MCom Network costs estimate		✂	✂	✂	✂	✂	✂
Revised Network costs estimate	6	✂	✂	✂	✂	✂	✂
MCom non-network cost estimate		✂	✂	✂	✂	✂	✂
Revised non-network cost estimate	7	✂	✂	✂	✂	✂	✂
Spectrum cost estimate	8	✂	✂	✂	✂	✂	✂
Network externality surcharge	9	✂	✂	✂	✂	✂	✂
MCom cost estimate (ppm)		**12.4**	**6.8**	**5.9**	**5.4**	**4.9**	**5.8**
Revised cost estimate (ppm)		**6.8**	**3.8**	**3.4**	**3.1**	**2.9**	**3.4**

1. To provide a rough proxy for the unit cost implied by MCom's business plan under the economic depreciation methodology, we derived the constant ppm rate over the five-year period of MCom's business plan (which, given the forecast volumes, is projected to recover the same amount of cost over the 5 years as the straight-line depreciation figures in NPV terms).
2. MCom included site rental fee plus cost of free service, Communications back haul, Network Software and Hardware Maintenance and sim-card costs in its Infrastructure Opex estimation. However, as sim-card expenditure is a subscriber-driven cost we do not consider it to be relevant in the analysis of termination costs. Therefore the cost of SIM cards has been removed from this figure.
3. MCom has depreciated Network site capex and all other assets over 5 years. The CTM methodology provides for a variety of asset lives for over 60 assets. MCom's balance sheet is not disaggregated to this level. However, it is likely that the majority of MCom's asset types would fit into categories that the CTM methodology would depreciate over at least 10 years. Therefore, this figure has been re-calculated assuming 10 year asset lives instead of 5.
4. This figure has been recalculated to reflect the CTM allocation of 25% of network costs to voice termination[38] (MCom's methodology attributed 33%) and the CTM allowance of 11.5% for cost of capital (MCom's methodology allowed 14%)[39]
5. The cost of capital is also affected by the change in the deprecation rate from 5 to 10%, as this change results in higher book values for network assets.
6. The CTM allocates 25% of network costs to voice termination (MCom's methodology attributed 33%)
7. This has been altered to reflect the 12.5% allocation of total Administration costs to termination by the CTM model (MCom's methodology allocates 23%).[40]
8. This figure is very close to zero due to the low average price of spectrum sold at the 2006 auction. The allocation for the 2G spectrum cost in the incumbent 2G/3G MNO's costs of 2G termination is 0.16ppm.
9. The network externality charge was not added to either estimate.

---

[37] Cost and call volume estimates are based on MCom's business plan. All amounts are expressed in 2008 prices.
[38] See A14.69 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf
[39] See A18.71 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf
[40] See A15.105 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

A1.3 We emphasise that care is required with the interpretation of these figures. In particular, these results are underpinned by MCom's projection of demand for their service (which assumes that MCom customers will receive an average of ✂ calls per month, and an addition of ✂ customers per month for the first ✂ years of operation). Given that MCom has recently launched its service, we cannot determine the accuracy of these projections. Clearly, variation of these call volume estimates will result in different termination cost results.[41]

A1.4 In calculating the above cost estimates, we used a number of assumptions based on Ofcom's view of the termination costs of MNOs. It is unclear whether these assumptions are appropriate in estimating the cost of termination on MCom's network. For example, because MCom is not yet operational, it is unclear how well the general cost allocation assumptions, such as the mix between incoming and outgoing calls as well as the mix between data and voice calls, which were designed to approximate the use of MNO's networks, will apply to MCom's service.[42]

A1.5 On the basis of the above reservations, we suggest that it would be prudent not to rely on the above estimates as an exact measure of MCom's costs.

A1.6 Through our investigation of MCom's business strategy, including a site visit, we became aware that the planning, and pre-installation phases for MCom's network were highly detailed, significantly customised and might not be fully incorporated in the costs for setting up the network. The main sources of costs that we became aware of are:

1) **Preplanning and signal propagation testing:** MCom needed to gain an understanding of the propagation properties of the low power 1800 Guard band spectrum before any planning could be carried out. To do this MCom did bench testing and also tested their custom pico cells in the field, using 'cherry pickers' to mimic rooftop installations, in order to understand how the signal would interact with the high density housing found in Newham.

2) **Site location**: MCom could not decide on pico site location on the basis of optimum network configuration alone, as it also needed to consider where site instillation was possible. In order to cover the Newham area, over 200 locations needed to be identified and deployed. These included phone boxes, adverting hoardings and the roof-tops of residential housing. MCom needed to submit over 160 planning applications with Newham council, and leafleted almost every house in the area asking for permission to access the roof tops. This approach was necessary, but very labour intensive and customised. In comparison, a full power GSM operator probably covers an area the size of Newham with between 2 - 4 cell sites, and does not need to directly interact with general public to seek base station locations. In addition, multiple individual contracts and payments have had to be arranged with each home owner when a rooftop installation has been deployed.

[41] For example, if the projected number of calls terminating on MCom's network were halved the revised constant estimate would come out at ✂(assuming a decrease in call volume will not decrease total costs), while if the projected number of calls were to be increased by 50% the resulting revised constant estimate would fall to ✂ (assuming an increase in call volume will not increase total costs).

[42] See A15.108 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

3) **Pico cell specifications**: The pico cells needed to be customised from standard pico cells in two ways: firstly, they need to have a 5.4GHz transmitter added so they were able to 'daisy chain' back to the fixed nodes, and secondly they needed to be made very weather proof and have fixings added suitable for rooftop and telephone box installation. This required the assembly of custom metal fixing.

A1.7 Overall, the evidence we have gathered through our investigation of MCom's business strategy, site visit and cost analysis does not suggest that MCom has overstated its actual costs. However, we do not have sufficient information to comment on whether all of these costs have been/will be incurred efficiently.

Evaluation of cost evidence submitted by T-Mobile

A1.8 T-Mobile submitted the following estimate of MCom's costs.

Table A2: T-Mobile's detailed termination rate assessment

Termination rate breakdown (all in ppm)	**T-Mobile**	**Guard band**
Network costs	3.08	0.5
Spectrum costs	1.45	0.00011455
Network externality	0.3	0
Admin costs	0.3	0.3
	5.13	0.80011455
	50% uplift:	1.200171825
	T-Mobile offer	**1.2**

A1.9 T-Mobile based its calculation on a comparison with the components of its own termination rate. Our evaluation of this methodology is outlined below.

Network costs

A1.10 MCom's network rollout covers a small number of targeted urban areas. T-Mobile believe that MCom's network costs would be significantly lower than its own because it has not invested in a national network on the scale of the established UK GSM network operators.

A1.11 T-Mobile's submission outlines that the relevant network costs, including; site costs, equipment costs, backhaul, buildings and RAN planning would all be significantly lower for MCom than that of full power 2G/3G networks, even accounting for scale/coverage:

- **Site costs:** T-Mobile argues that a DECT guard band network does not rely heavily on the acquisition of expensive rooftop or greenfield plots. Rather, almost all RAN equipment can be mounted as street furniture and because of restrictions on mast height is not subject to planning permission (an expensive and time consuming process).
    - However, MCom informed us that they have in fact had to apply for planning permission approximately 140 times in order to employ their network in the Newham area alone. In addition MCom informed us they have had to, often

in partnership with others, build sites in such diverse locations as phone boxes, advertising hoarding or on the roofs of residential housing. Additionally there were no opportunities for co-location as is often the case with established GSM operators.

- **Equipment costs:** T-Mobile state that, as only localised short distance coverage is envisaged, using a single carrier, at low power, equipment costs are not the equivalent of those encountered by T-Mobile.
    - We have little data on the comparable costs of equipment. However MCom must deploy approximately 100 pico cell sites for every Macro cell site T-Mobile must deploy for the same area of coverage. Therefore, it is possible that these costs are comparable.
- **Backhaul:** In their submission T-Mobile argue that MCom's backhaul '…*can be provided using standard or relatively low capacity BT lines, since the volumes of traffic do not necessitate investment in expensive leased lines, Ethernet access, microwave links etc. while antenna location means that these are only required over short distances*.'
    - MCom requires Symmetric Digital Subscriber Line (SDSL) connectivity to link node cells back to their switch. Although these are lower cost then the BES / WES solutions a national network may use it is unclear how the CAPEX / OPEX costs compare to the microwave connectivity T-Mobile utilises extensively in their network.
- **Buildings**: T-Mobile states that no significant buildings or cabinets are required to be constructed, installed or maintained in order to house extensive network equipment. To the extent any such installations are necessary, these are significantly less expensive than those required by T-Mobile as part of its network infrastructure.
    - MCom informed us that the process of finding, commissioning and maintaining approximately 200 installation sites in the Newham area has been time consuming and expensive. Site locations include phone boxes, adverting hoardings and the roof-tops of residential housing. In the case of roof-top installation, individual contracts and payments have had to be arranged with each home owner, including ongoing site rental payments. Additionally, the cells deployed by MCom needed to be customised from standard pico cells in two ways: Firstly they need to have a 5.4GHZ transmitter added so they were able to 'daisy chain' back to the fixed nodes, and secondly they needed to be made weather proof and have fixings added suitable for rooftop and telephone box installation. This required customer metal fixing to be made and assembled.
- **RAN planning**: T-Mobile argues that, owing to its limited and localised rollout, MCom requires no significant investment in RAN planning on an initial or ongoing basis.
    - Significant work was required for MCom to ensure that its cells work together and cross over effectively. The site map MCom have shown us showed the significant complexity in MCom's planning process. Due to the unique nature of the MCom network, much of this work had to be done from first principles, involving on site testing of different network deployments in order to optimise design.

A1.12 T-Mobile estimates that the equipment costs of a local DECT guard band network would be 0.25ppm but their submission does not disaggregate this estimate between the components of network costs. T-Mobile adds 0.25ppm for the BT single tandem charge (their estimate of MCom's backhaul cost) to get a final network cost estimate of 0.5.

A1.13 As indicated above, we believe that T-Mobile has understated the cost of some of the components of MCom's network that were discussed in its submission. Additionally, our cost analysis indicates that MCom's network costs are likely to be significantly higher than the 0.5ppm estimated by T-Mobile (see table A1 and figure A1). However, our analysis does indicate that MCom's network costs are likely to be lower than T-Mobile's (and the other MNOs).

Spectrum licence costs

A1.14 T-Mobile point out that MCom's GSM licence for DECT guard band spectrum was acquired at relatively little cost and does not currently attract administered incentive pricing (i.e. a methodology to set licence fees based on opportunity costs).

A1.15 T-Mobile's own termination cost estimate includes 1.45ppm for spectrum costs. T-Mobile estimates the spectrum component of MCom's termination rate to be 0.0001 – by multiplying its own spectrum ppm cost by the ratio of the cost of its spectrum licence (£4 billion) to the average rate paid for a DECT guard band licence in the 2006 auction (£316 000).

A1.16 Hence, T-Mobile's methodology applies the same call volume and allocation assumptions to MCom's spectrum costs as it applies to its own. Given the likely differences in call volumes between MCom and T-Mobile, it is not clear that it is appropriate to calculate MCom's spectrum costs under these assumptions.

A1.17 However, even if we allocate the entire spectrum cost (i.e. the average rate paid for a DECT guard band license in the 2006 auction) across MCom's projection of the number of calls that will be terminated on its network (and therefore do not allocate any of the costs to outgoing calls) over the 5 year period of its business plan, the resulting number is less than 0.001. Therefore we use an allocation of 0.0ppm for spectrum costs, in our estimation of MCom's ppm termination cost.

A1.18 We note that in its analysis of 3G spectrum costs, the CC argued that in a competitive market one would not expect the sum of network costs and spectrum costs to be different for services that are essentially homogeneous[43]. Therefore one possibility is to assume a ppm allocation for MCom's spectrum costs equal to the 2G spectrum cost included in the 2G/3G incumbent MNOs termination rates. However, due to the difference in network reach, we have only included an estimate of MCom's spectrum costs based on the market price of a DECT guard band license specifically.

Administrative costs

A1.19 T-Mobile states that it is not aware of any reason that an administrative cost comparable to T-Mobile's would be inappropriate in the case of MCom. Therefore T-Mobile's methodology allocates an administration cost equal to its own (0.3ppm) to its estimation of MCom's termination rate.

[43] See 2.3.3 at http://www.catribunal.org.uk/files/CC_Determination_1083_H3G_1085_BT_220109.pdf

A1.20 Due to the existence of economies of scope and scale in the provision of mobile services, it is unlikely that the efficient administration (or non-network) termination costs for a small localised service would be equal to those for a national service.

A1.21 Our analysis shows that the nature of MCom's service (localised in urban areas) is likely to allow it lower efficient network costs than an operator with national coverage. However, these characteristics also necessarily imply that MCom's service will be unable to achieve the economies of scale or economies of scope of a national operator. In other words, some of the network cost savings achieved by a service which operates only in lower cost areas may be balanced by higher efficient non-network costs. However, the magnitude of this difference is not clear.[44]

Network externality surcharge ("NES")

A1.22 T-Mobile state in their submission that MCom's target customers will already have a subscription with one of the established UK mobile operators offering national coverage and would use their MCom SIM card in their existing handset to utilise MCom's service. Therefore, T-Mobile argue that there would be no network externality when MCom increase their subscription base, and thus does not include a network externality surcharge in its estimation of MCom's termination costs.

A1.23 As the recent CC price determination recommends the removal of the NES from MNO termination rates, we have not considered this issue here. We have also not included a NES in our estimation of the cost of termination on MCom's network.

T-Mobile's final estimate

A1.24 The sum of all inputs as estimated by T-Mobile is 0.8001ppm. This estimation was multiplied by 1.5 '*to counter any inaccuracies in T-Mobile's estimation*', leading to a final estimate of 1.2ppm.

A1.25 Our analysis indicates that the cost of termination on MCom's network is likely to be significantly higher than 1.2ppm (see table A1 and figure A1).

Ofcom's mobile call termination cost model[45]

A1.26 As a cross-check on the cost estimates from the parties to the dispute, we adapted Ofcom's mobile call termination cost model to produce unit costs for different "geotypes"[46] within the model. While the specific levels should be treated with some caution, this analysis is useful in terms of estimating the magnitude of unit cost differences between specific geotypes.

A1.27 We started with the network asset deployment of a national 2G/3G operator using 1800MHz spectrum, as per T-Mobile or Orange. In doing so, this analysis fully captures the economies of scale of a national mobile network.

[44] The revised estimates presented in table A.1 above provides an estimate for MCom's non-network termination costs of ✂ppm. However, Ofcom has insufficient information to comment on whether these costs are efficiently incurred.

[45] The MCT model uses 2006/07 as its base year, therefore all numbers in this section are expressed in 2006/07 amounts and need to be inflated to 2008 numbers for comparison with the results from MCom's business plan.

[46] "Geotypes" is a term used to describe categories of UK areas with broadly similar population densities and/or other relevant characteristics.

A1.28 From this basis, we established unit costs of termination for each individual geotype by:

- extracting:
  - o the lifetime capital and operating costs of assets deployed within that geotype category (e.g. urban areas); and
  - o the lifetime service volumes for all services within that geotype category; and then

- Using the MCT cost model to calculate a long run path of unit costs for that geotype, based on "Original economic depreciation "[47]

A1.29 The overall level of termination unit costs for this is based on Ofcom's medium traffic scenario and excludes 3G costs and call volumes. This approach is consistent with MCom's service, which uses a 2G network.

A1.30 The results of this analysis should be treated with some caution. The level of detail that is necessary to model geotype-specific costs is greater than that required for an accurate estimate of MCT costs overall (for which Ofcom's model was developed). Importantly, while the model was calibrated to key data from MNOs (e.g. asset counts, Gross Book Values, aggregate operating expenses) at an aggregate level, no such calibration was ever conducted at the geotype-specific level.

A1.31 Nonetheless, the adapted MCT cost model suggests that the non-geographic component of unit costs of termination makes up just 1.1ppm of the average network unit costs of 3.7ppm[48]. The remainder of network unit costs can be attributed to specific geotypes. These geotype-specific unit costs vary considerably.

A1.32 Figure A1 below suggests that efficient network unit costs of termination within the most densely populated areas of the UK are in the region of 2.3-2.4 ppm.[49]

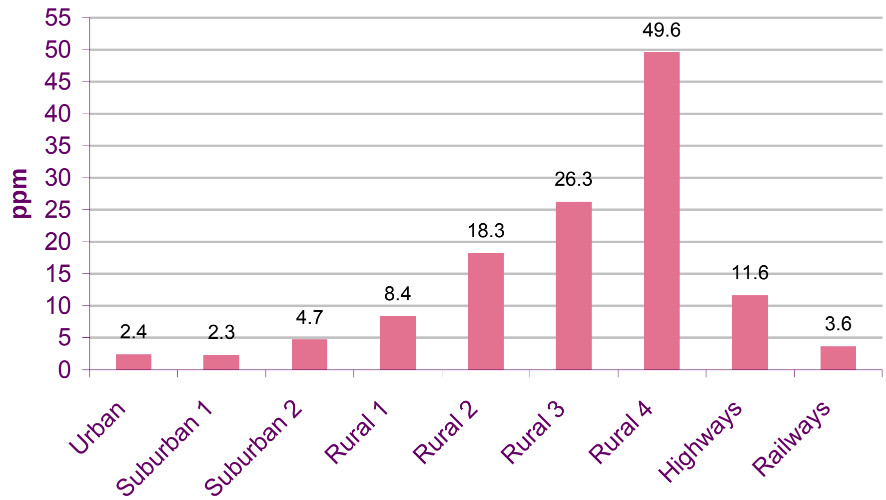
---

[47] See A5.194-202 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/

[48] These figures refer to network costs only. An additional allowance would also be made for non-network costs in order to be consistent with the MCT charge control. We used a mark-up for non-network costs of 0.3ppm for 2G/3G operators in the charge control. Therefore, the estimated efficient total termination cost for 2G/3G MNOs is 4.0ppm (in 2006/07 prices).

[49] Ofcom notes that these costs are estimated for an efficient MNO, and thus assume access to identical technology as well as the economies of scale and scope obtained by MNOs. It is not clear to what extent these costs are applicable to MCom, given the size of its network and the differences in technology employed.

Figure A1: Estimated efficient network cost of termination (ppm)



A1.33 The call termination costs by geotype graphed above include network costs only. If we want to comment on the total efficient costs of a provider who operates in urban areas only, we would need to add a suitable estimate for the non-network costs of such a service. As noted above, it is unlikely that the efficient non-network termination costs for a localised service would be equal to those for a national service. Therefore, given the limited information available to us, Ofcom is unable to determine with any certainty what this figure should be for a localised service such as MCom's.

Comparison of Ofcom's cost estimates[50]

A1.34 Adding the MNO non-network cost allowance of 0.3ppm (0.3ppm in 2006/07 prices) yields a cost estimate for 2G termination by MNOs in urban areas of 2.9ppm (2.7ppm in 2006/07 prices) which is 0.5ppm lower than our estimate of MCom's costs using MCom's business plan – 3.4ppm.

A1.35 We note that the network cost components of both figures are similar, while the non-network component of the estimate of termination costs using MCom's business plan ✂ is significantly higher than the MNO non-network cost allowance of 0.3ppm.

[50] The numbers in this section are expressed in 2008 prices.

Annex 2

Responding to this consultation

How to respond

A2.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by close of business on 27 February 2009**.

A2.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/mapesbury_tmobile , as this helps us to process the responses quickly and efficiently. We would also be grateful if you could complete a response cover sheet (see Annex 3), to indicate whether or not your response includes information that you believe to be confidential. This response coversheet is incorporated into the online web form.

A2.3 For larger consultation responses – particularly those with supporting charts, tables or other data – please email damien.kelly@ofcom.org.uk attaching your response as a Microsoft Word or pdf document, together with a consultation response coversheet.

A2.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.

Damien Kelly
Competition Policy Manager
Ofcom
Riverside House
2A Southwark Bridge Road
London SE1 9HA

Fax: 020 7781 3333

A2.5 We do not need a hard copy in addition to an electronic version. We will acknowledge receipt of responses submitted using the online web form but not otherwise.

Further information

A2.6 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Damien Kelly on 020 7981 3626.

Confidentiality

A2.7 We believe 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, ideally on receipt. If you think your response should be kept confidential, please specify what part of your response should be kept confidential, and why. Please also place such parts in a separate annex.

A2.8 If someone asks us to keep part or all of a response confidential, we will treat this request seriously and will try to respect this. But sometimes we will need to publish all responses, including those that are marked as confidential, in order to meet legal obligations.

A2.9 Please also note that copyright and all other intellectual property in responses will be assumed to be licensed to Ofcom to use. Ofcom's approach on intellectual property rights is explained further on its website at http://www.ofcom.org.uk/about/accoun/disclaimer/

Next steps

A2.10 Following the end of the consultation period, Ofcom intends to publish a statement by 20 March 2009.

A2.11 Please note that you can register to receive free mail Updates alerting you to the publications of relevant Ofcom documents. For more details please see: http://www.ofcom.org.uk/static/subscribe/select_list.htm

Ofcom's consultation processes

A2.12 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.

A2.13 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 . 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, who are less likely to give their opinions through a formal consultation.

A2.14 If you would like to discuss these issues or Ofcom's consultation processes more generally you can alternatively contact Vicki Nash, Director Scotland, who is Ofcom's consultation champion:

Vicki Nash
Ofcom
Sutherland House
149 St. Vincent Street
Glasgow G2 5NW

Tel: 0141 229 7401
Fax: 0141 229 7433

email: vicki.nash@ofcom.org.uk

Annex 2

Ofcom's consultation principles

A3.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

A3.2 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

A3.3 We will be clear about who we are consulting, why, on what questions and for how long.

A3.4 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 Plain English Guide for smaller organisations or individuals who would otherwise not be able to spare the time to share their views.

A3.5 We will consult for up to 10 weeks depending on the potential impact of our proposals.

A3.6 A person within Ofcom 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. Ofcom's 'Consultation Champion' will also be the main person to contact with views on the way we run our consultations.

A3.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

A3.8 We think it is important for everyone interested in an issue to see the views of others during a consultation. We would usually publish all the responses we have received on our website. In our statement, we will give reasons for our decisions and will give an account of how the views of those concerned helped shape those decisions.

Annex 4

Consultation response cover sheet

A4.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.

A4.2 We have produced a coversheet for responses (see below) and would be very grateful if you could send one with your response (this is incorporated into the online web form if you respond in this way). This will speed up our processing of responses, and help to maintain confidentiality where appropriate.

A4.3 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 coversheet in a way that allows Ofcom to publish their responses upon receipt, rather than waiting until the consultation period has ended.

A4.4 We strongly prefer to receive responses via the online web form which incorporates the coversheet. If you are responding via email, post or fax you can download an electronic copy of this coversheet in Word or RTF format from the Consultations section of our website at www.ofcom.org.uk/consult/.

A4.5 Please put any parts of your response you consider should be kept confidential in a separate annex to your response and include your reasons why this part of your response should not be published. 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

Please tick below what part of your response you consider is confidential, giving your reasons why

Nothing ☐ Name/contact details/job title ☐

Whole response ☐ Organisation ☐

Part of the response ☐ If there is no separate annex, which parts?

If you want part of your response, your name or your organisation not to be published, can Ofcom still publish a reference to the contents of your response (including, for any confidential parts, a general summary that does not disclose the specific information or enable you to be identified)?

DECLARATION

I confirm that the correspondence supplied with this cover sheet is a formal consultation response that Ofcom can publish. However, in supplying this response, I understand that Ofcom may need to publish all responses, including those which are marked as confidential, in order to meet legal obligations. 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)