



Draft Determination to resolve a dispute between Stour Marine and O2 about termination rates

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Draft Determination
21 May 2010

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Section 1

Summary

- 1.1 This draft Determination sets out our proposals for resolving a dispute between Stour Marine Limited (“Stour Marine”) and Telefónica O2 UK Limited (“O2”). In this document we refer to this dispute as the “Dispute” and to Stour Marine and O2 collectively as the “Parties”.
- 1.2 On 6 December 2009 we received a submission from Stour Marine asking us to consider and determine what the termination rate should be for voice calls that originate on O2’s network and that terminate on Stour Marine’s network.¹ Stour Marine is the holder of mobile number ranges, allocated by Ofcom in 2007 in accordance with the UK’s National Telephone Numbering Plan².
- 1.3 No termination rate has been agreed between the Parties for voice calls that are made by O2 customers to Stour Marine customers. This means that, currently, it is not possible for O2 customers to make calls to Stour Marine customers (O2 has not opened Stour Marine’s number ranges on its network). Stour Marine customers can call O2 customers; the agreed mobile termination rate (“MTR”) is 4.4 pence per minute (“ppm”) in nominal terms (the “lowest regulated MTR”).³
- 1.4 In this draft Determination we propose to determine the appropriate termination rate as between the Parties for voice calls that originate on O2’s network and that terminate on Stour Marine’s network. Once the termination rate is set following our final Determination, O2 is obliged to open Stour Marine’s number ranges on its network so that O2 customers will be able to call Stour Marine customers, and vice versa.
- 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 12 February 2010, we decided that it was appropriate to accept this Dispute for resolution and informed the Parties of our decision. We subsequently published a Competition and Consumer Enforcement Bulletin entry setting out the scope of the Dispute.⁴

Scope of the Dispute

- 1.6 The scope of the Dispute is as follows:

“to determine the termination rate payable by O2 for voice calls originating on O2’s network and terminating on Stour Marine’s network.”

¹ Stour Marine’s service, which is described in section 2, allows both voice and data traffic to be sent over its network. For the purposes of resolving the Dispute however, in accordance with the scope, we are concerned only with the voice service. This is reflected in our analysis set out in section 4.

² <http://www.ofcom.org.uk/telecoms/loi/numbers/numplan080410.pdf>.

³ 4.4ppm is the lowest current regulated MTR for 2G/3G mobile network operators in 2010/11. It was set by the Competition Commission (upheld by the Competition Appeal Tribunal) at 4ppm in 2006/07 prices, which is 4.4ppm in nominal terms.

⁴ See: http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_01041/.

Provisional conclusions

- 1.7 In considering the subject matter in dispute, we consider that it is appropriate to focus on the services being provided rather than the inputs used to deliver the services, particularly in examining the effects on competition and consumers of the potential options available for setting a termination rate in this case.
- 1.8 The development of new technology means that mobile network operators (“MNOs”) now have increasing choice as to the means by which they deliver mobile services, having regard to the costs associated with such service delivery. Lower costs are a desirable consequence of using new technology to provide services, and it is desirable that operators are exposed to incentives to adopt new technology so as to deliver services more efficiently.
- 1.9 As regulation stands, an incumbent MNO⁵ which elected to provide MCT services using new technology at lower cost would continue to receive the relevant regulated MTR. If such an MNO chose to provide some of its mobile services in a restricted geographic area and/or chose to use a new lower cost technology, it would still receive the relevant regulated MTR.
- 1.10 Based on our objectives when resolving disputes, the submissions of the Parties and interested parties, and the evidence gathered in this Dispute, for the reasons set out in this draft Determination, our provisional conclusion is as follows:
- (i) Stour Marine is a mobile communications provider (“MCP”) that is active in the same retail market as the MNOs, including O2;
 - (ii) Stour Marine offers wholesale mobile voice call termination in the same way as the incumbent MNOs, including O2;
 - (iii) our preferred option is that the termination rate applicable to calls originating on O2’s network and terminating on mobile number ranges on Stour Marine’s network should be set in accordance with the rate requested by Stour Marine which for the charge control year running from 1 April 2010 to 31 March 2011 is 4.4ppm in nominal terms; and
 - (iv) the parties shall enter into a transaction such that O2 is obliged to open Stour Marine’s number ranges on its network so that O2 customers will be able to call Stour Marine customers, and vice versa.
- 1.11 Our assessment of Stour Marine’s costs of providing termination contained in this draft Determination (which at this stage we estimate at between 0.4 pence per minute (“ppm”) and 2.1ppm) is based on a number of assumptions, but represents our best estimate based on the information that is currently available to us. We consider that it is helpful to compare this estimate with other benchmarks. The lowest regulated MTR is 4.4 ppm. Our most recent estimate of the cost of termination for incumbent national MNOs, such as O2, is approximately 1.9ppm. Although this estimate is from the latest MCT modelling work which is subject to consultation, and hence not finalised, we nevertheless consider that it is appropriate for us to have regard to this figure.
- 1.12 We have considered alternative options to Stour Marine receiving the lowest regulated MTR. These are:

⁵ By incumbent MNO we mean Vodafone, O2, T-Mobile, Orange and/or H3G.

- (i) setting the rate at 0.6ppm as suggested by O2. The 0.6ppm figure is based on O2's view of Stour Marine's costs of termination with an uplift to reflect the "mobile element" of its service; or
 - (ii) setting a rate that is based on Stour Marine's costs of termination. At this stage, we have estimated Stour Marine's costs as lying between 0.4ppm and 2.1ppm (as noted above).
- 1.13 Both of these options, in essence, involve a cost based rate based on potentially differing views of the relevant costs.
- 1.14 The consequence of choosing either of these options would be to put Stour Marine in a worse position than national MNOs. Whereas national MNOs would be entitled to receive the relevant regulated MTR of 4.4ppm when providing MCT services in the areas served by Stour Marine, Stour Marine itself would instead receive a lower rate essentially based on an estimate of its specific costs of providing the same services in these areas. We consider that treating Stour Marine differently from the incumbent MNOs would confer an advantage on those operators and would disadvantage Stour Marine (and other operators in a similar position who may be contemplating entry, if a similar approach were to be applied to them). Put another way, if a lower MTR were set for Stour Marine in the specific areas in which it operates, this would likely operate to distort competition in favour of national MNOs and against sub-national entrants like Stour Marine.
- 1.15 In addition, clearly there are difficulties, particularly in the context of a dispute resolution process, associated with robustly calculating the level of any costs based on the specific characteristics of Stour Marine's service. Furthermore, there are ongoing practicality issues associated with either of the alternative options if the characteristics of Stour Marine's service, its coverage and technology choices or its costs were to alter over time. Setting strictly cost-based termination rates based on the incurred costs of every operator would not be future proof as any of these changes could potentially render the termination rate that was set inappropriate.
- 1.16 We believe that our provisional conclusions represent a fair balance between the interests of the Parties and is consistent with our regulatory objectives.
- 1.17 The introduction and background to the Dispute is set out in **section 2**; the history of the Dispute is set out in **section 3**; our analysis and reasoning underpinning our proposals for resolving the Dispute is set out in **section 4**; and our provisional conclusions are set out in **section 5**. Our draft Determination is set out in **Annex 1**.

Section 2

Introduction and background

Dispute Resolution

Ofcom's duty to handle disputes

- 2.1 Section 185(1)(a) of the 2003 Act provides (in conjunction with section 185(3)) that in the case of a dispute relating to the provision of network access between different communications providers, any one or more of the parties to such a dispute may refer it to Ofcom.
- 2.2 Section 186 of the 2003 Act provides that where a dispute is referred to Ofcom in accordance with section 185, Ofcom must decide whether or not it is appropriate to handle it. Section 186(3) further provides that Ofcom must decide that it is appropriate for it to handle a dispute unless there are alternative means available for resolving the dispute, a resolution of the dispute by those means would be consistent with the Community requirements set out in section 4 of the 2003 Act, and those alternative means would be likely to result in a prompt and satisfactory resolution of the dispute.
- 2.3 In summary therefore, where a dispute which falls within section 185(1)(a) of the 2003 Act is referred to Ofcom, and Ofcom cannot identify alternative means which meet the criteria set out above, it has a duty to decide that it is appropriate to handle that dispute.
- 2.4 Section 188 of the 2003 Act provides that where Ofcom has decided that it is appropriate for it to handle a dispute, Ofcom must make a determination resolving the dispute within four months, except in exceptional circumstances.

Ofcom's powers when determining a dispute

- 2.5 Ofcom's powers in relation to making a dispute determination are limited to those set out in section 190 of the 2003 Act. Except in relation to a dispute relating to the management of the radio spectrum, Ofcom's main power is to do one or more of the following:
 - (i) make a declaration setting out the rights and obligations of the parties to the dispute;
 - (ii) give a direction fixing the terms or conditions of transactions between the parties to the dispute;
 - (iii) give a direction imposing an obligation to enter into a transaction between themselves on the terms and conditions fixed by Ofcom; and
 - (iv) give a direction requiring the payment of sums by way of adjustment of an underpayment or overpayment, in respect of charges for which amounts have been paid by one party to the dispute, to the other.
- 2.6 A determination made by Ofcom to resolve a dispute binds all the parties to that dispute (section 190(8) of the 2003 Act).

Ofcom's objectives when determining this dispute

- 2.7 The CAT in the *TRD* judgment noted that the outcome in a dispute needs to be fair and reasonable as between the parties, taking account of all the circumstances of the case in light of Ofcom's regulatory objectives.
- 2.8 The dispute resolution provisions set out in sections 185-191 of the 2003 Act are functions of Ofcom. The wider regulatory objectives set for Ofcom in resolving disputes are therefore reflected in sections 3 and 4 of the 2003 Act. Section 3 sets out our general duties and section 4 our Community obligations. The Community obligations give effect, among other things, to the requirements of Article 8 of the Framework Directive⁶. In the context of the Dispute, we have had particular regard to our primary duty under section 3(1) of the 2003 Act to further the interests of citizens in relation to communications matters and to further the interests of consumers in relevant markets, where appropriate, by promoting competition. In terms of the Community requirements under section 4 of the 2003 Act, we have had particular regard in the context of this Dispute to the requirements to promote competition in communications markets and to encourage, to the extent that Ofcom considers it appropriate, the provision of network access and service interoperability for the purpose of securing efficiency and sustainable competition in communications markets and the maximum benefit for the customers of communications networks and service providers.
- 2.9 Section 3(3) of the 2003 Act provides that in performing its duties under section 3(1), Ofcom must have regard to the principles under which regulatory activities should be transparent, accountable, proportionate⁷, consistent and targeted only at cases in which action is needed, and any other principles that appear to us to represent best regulatory practice.
- 2.10 In the present case, we consider that such other relevant principles, based on general administrative law, require that our provisional conclusion is objectively justifiable and does not discriminate between communications services or networks. (Article 8(3)(c) of the Framework Directive also provides that national regulatory authorities must ensure that, in similar circumstances, there is no discrimination in the treatment of undertakings providing electronic communications networks and services.)
- 2.11 Further, we consider that the six principles of pricing and cost recovery (cost causation, cost minimisation, effective competition, reciprocity, distribution of benefits and practicability), are an appropriate basis for assessing different options to set a termination rate which is fair and reasonable as between the parties and which satisfies our objectives in resolving the Dispute.

Dispute referred to Ofcom by Stour Marine

- 2.12 We received a submission from Stour Marine on 6 December 2009 which asked us to consider and determine the termination rate for voice calls that originate on O2's network and terminate on Stour Marine's network. In accordance with our duty to

⁶ Directive 2002/21/EC. Note that the Framework Directive has now been revised and forms part of the EU 2009 regulatory framework for electronic communications; it (and the other relevant Directives) have to be transposed into national law by Member States by 25 May 2011.

⁷ Also see Article 8(1) of the Framework Directive. Article 8(2) of the Framework Directive provides that national regulatory authorities shall promote competition by, among other things, ensuring that there is no distortion or restriction of competition and encouraging efficient investment in infrastructure, and promoting innovation.

handle disputes under section 186 of the 2003 Act, we accepted the dispute for resolution on 12 February 2010.

- 2.13 The remainder of this section gives an overview of the voice call termination regulation, which is the subject of the Dispute, and references relevant regulation and previous disputes resolved by Ofcom. It then goes on to introduce the Parties to the Dispute and describes in particular Stour Marine's network infrastructure and service.

Charging for voice call termination

Calling party pays arrangements

- 2.14 For most calls to fixed or mobile networks, the UK operates what is known as a "calling party pays" ("CPP") regime.⁸ Under the CPP regime, callers pay for the entire cost of a retail call. Wholesale charges reflect this structure, with the termination rate paid to the network of the party receiving the call (an arrangement known as "calling party's network pays" ("CPNP")).
- 2.15 In proposing to determine termination rates in the Dispute we are therefore considering the level of the wholesale payment that O2 should make to Stour Marine when an O2 customer calls a Stour Marine customer, as per the CPNP arrangement.

Transit arrangements

- 2.16 Not all originating communication providers ("OCPs") and terminating communication providers ("TCPs") pass calls between their networks directly. Where there is no direct interconnection, calls may be routed via third parties known as "transit providers". The transit provider handles calls that pass between the OCP and TCP in return for a fee (the "transit charge").
- 2.17 This means that, generally, if a call is routed via a transit provider,
- (i) the TCP will charge the transit provider the TCP's termination rate; and
 - (ii) the transit provider will then charge the OCP an amount equal to the TCP's termination rate, plus any transit charge.

Existing termination rates between the Parties

- 2.18 Stour Marine and O2 do not interconnect directly. Calls from the Stour Marine network (to all networks) transit the C&W network. From the information provided to us by Stour Marine, we understand that C&W charges Stour Marine a transit fee of [redacted] "for all transit calls in either direction through the C&W network".⁹
- 2.19 Currently, calls can only be made in one direction between the Parties, which is from Stour Marine to O2. The termination rate that is in place for these calls is 4.4ppm (in nominal terms), reflecting the termination rate charge control imposed on O2.

⁸ The exceptions to this principle apply to certain number ranges and certain circumstances (e.g. calls to 0800 numbers from fixed lines or special low charge non-geographic call types) that are not relevant to the facts of this Dispute. For further information on the CPP regime, see, for example, paragraph 3.32 of our 2010 MCT Consultation.

⁹ Stour Marine response to question 2 of the information request (defined in section 3 below).

Additional regulatory background

The 2007 Mobile call termination statement

- 2.20 The current regulatory regime for MCT, including the applicable termination rates, was set in the *Mobile call termination statement* of 27 March 2007 (“the 2007 MCT Statement”).¹⁰
- 2.21 In summary, the 2007 MCT Statement found that T-Mobile, O2, Vodafone, Orange and H3G (the “national MNOs”) possessed significant market power (“SMP”) in the market for termination of voice calls on their respective networks. As a result, we imposed regulatory obligations, including wholesale charge controls, on O2 and each of the other national MNOs (“the MCT Charge Controls”).¹¹ The MCT Charge Controls were applied to O2, Vodafone, Orange, T-Mobile and H3G for a four- year period to the end of March 2011.
- 2.22 In May 2007, both BT and H3G appealed the 2007 MCT Statement to the CAT (“the MCT Appeals”).
- 2.23 The CAT’s judgments on the MCT Appeals were published on 20 May 2008 (non-price control matters)¹² and 2 April 2009 (price control matters)¹³. The CAT upheld our finding of SMP for H3G, dismissing the non-price control matters arising in H3G’s appeal. That judgment was appealed by H3G to the Court of Appeal (“CoA”), which handed down its judgment in July 2009, dismissing H3G’s appeal and upholding Ofcom’s finding of SMP for H3G.¹⁴

The CC determination

- 2.24 In March 2008, the CAT referred various price control matters to the Competition Commission (“CC”). The CC made its determination of the price control matters on 16 January 2009 (the “CC determination”)¹⁵, which was upheld by the CAT in its final judgment of 2 April 2009.
- 2.25 The CC determination specified that MTRs should be reduced to the ppm charges expressed in real 2006/07 prices as set out below (the original MCT Charge Controls set in the 2007 MCT Statement are shown in brackets).

Table 1: CC determination of MTRs for 2010/11 (in 2006/07 prices)

	2007/08	2008/09	2009/10	2010/11
Vodafone & O2	5.2 (5.5)	4.7 (5.4)	4.4 (5.2)	4.0 (5.1)
T-Mobile & Orange	5.7 (6.0)	5.0 (5.7)	4.5 (5.4)	4.0 (5.1)
H3G	8.9 (8.9)	6.8 (7.5)	5.5 (6.7)	4.3 (5.9)

¹⁰ http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/

¹¹ The MCT Charge Controls only apply where the relevant MNO sets the applicable termination rate. For the purposes of assessing compliance with the MCT Charge Controls, the termination rate that a MNO receives for ported in calls is not relevant.

¹² See *Hutchison 3G UK Limited v. Ofcom* [2008] CAT 11.

¹³ See *Hutchison 3G UK Limited and British Telecommunications plc v. Ofcom* [2009] CAT 11.

¹⁴ www.hmcourts-service.gov.uk; case c1/2009/1203.

¹⁵ http://www.competition-commission.org.uk/appeals/communications_act/mobile_phones_determination.pdf.

- 2.26 The CAT's judgment of 2 April 2009 remitted the 2007 MCT Statement back to Ofcom to revise the MCT Charge Controls in accordance with the findings of the CC. Accordingly, we published revised SMP service conditions ("the amended MCT Charge Controls")¹⁶ on the same day. The amended MCT Charge Controls came into effect on 3 April 2009.
- 2.27 The CAT's final judgment on the MCT Appeals was appealed by T-Mobile, Vodafone, Orange, O2 and Ofcom to the CoA on the grounds that the CAT did not have the power to direct Ofcom to declare the charges for years 2007/8 and 2008/9, which was the period that had elapsed during the course of the appeal proceedings. The appeal was heard in March 2010 and the judgment was handed down on 20 April 2010. The CoA upheld the appeal and ordered that Ofcom's revised SMP service conditions statement of 2 April 2009 should be quashed insofar as it applied to the period prior to 3 April 2009. The revised rates determined by the CC therefore only apply between 3 April 2009 and 31 March 2011.

The 2010 Mobile call termination consultation

- 2.28 On 1 April 2010, Ofcom issued the 2010 MCT Consultation considering what rules, if any, should apply after that time. The 2010 MCT Consultation sets out our proposals in this respect for the period from 1 April 2011 to 31 March 2015.
- 2.29 We propose to set regulatory obligations on all MCPs terminating voice calls to their mobile number ranges based on our assessment that they have SMP in MCT. We propose to impose wholesale charge controls on national MCPs and an obligation on other MCPs to provide MCT on fair and reasonable terms.

Previous disputes regarding mobile call termination

- 2.30 Since the 2007 MCT statement, we have determined MTRs between communications providers in the context of two disputes, which each of Stour Marine, O2 and T-Mobile (as an interested party) refer to in their submissions in this Dispute.
- 2.31 The first was a dispute between Mapesbury Communications Limited ("MCom")¹⁷ and T-Mobile (the "MCom determination"). The second was a dispute between C&W and T-Mobile (the "C&W determination"). In both cases, the parties were not able to agree the termination rate to be charged for the termination of calls that originate on T-Mobile's network and terminate on the MCom and C&W networks, respectively.
- 2.32 We briefly summarise the facts and outcomes of the two disputes below.

The MCom determination

- 2.33 The MCom determination concerned the termination rate payable by T-Mobile to MCom for calls that originate on T-Mobile's network and terminate on MCom's network. 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 2006.¹⁸

¹⁶See

http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/CTMAmendment2009final.pdf for further details.

¹⁷ http://www.ofcom.org.uk/consult/condocs/mapesbury_tmoble/statement/mcom_deter.pdf.

¹⁸ The DECT Guardband spectrum occupies the following frequencies:

- 2.34 Under its DECT guard band licence, MCom has built concentrated areas of coverage, based on areas where its target market live and work. Due to the limited power the DECT guard band licences permit, and to maximise in-building coverage, MCom has built a network of GSM base transceiver 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.
- 2.35 All MCom mobile services are reliant on MCom's own network coverage. At the time of the dispute, MCom did not have, and was 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 the range of its network.
- 2.36 At the time of the dispute, MCom's strategy was to provide low rate international calls and low rate local calls and texts from a geographically restricted service. MCom described itself as a new entrant mobile operator with the aim of becoming 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.
- 2.37 In this case, we considered that the analytical framework for setting the appropriate termination rate should include a consideration of the six principles of pricing and cost recovery, plus the general guidance on how Ofcom should resolve disputes that was issued by the CAT in the *TRD* judgment.
- 2.38 We identified four options for setting a termination rate. These options were, in summary:
- (i) the current MCom termination rate as agreed with BT, which was 7.2ppm;
 - (ii) T-Mobile's estimate of MCom's termination cost, which was 1.2ppm;
 - (iii) our best estimate of MCom's efficient termination cost, which was between 2.9ppm and 3.4ppm; and
 - (iv) the 2009/2010 Vodafone and O2 target average charge (TAC) as determined in the CC determination, which was 4.4ppm in 2006/07 prices and 4.71ppm in 2009/10 prices.
- 2.39 We determined that the appropriate termination rate in the MCom case was the one stated in (iv) (i.e. the Vodafone and O2 TAC which was the lowest regulated MTR in 2009/10).
- 2.40 We considered that the lowest regulated MTR was reasonable and fair as between the parties for the following main reasons, as set out in paragraph 6.167 of the MCom determination:
- (i) It furthered the interests of consumers through the promotion of competition and the availability of a wide range of electronic communications services by allowing MCom to enter the market to compete in both (i) the mobile voice call and (ii) the international calling card markets;

1781.7–1785 MHz paired with 1876.7–1880 MHz (see http://www.ofcom.org.uk/radiocomms/spectrumawards/completedawards/award_1781/documents/)

- (ii) It allowed MCom to retain and pass onto its customers any relative benefit resulting from its choice to adopt cheaper technology and to differentiate its service;
- (iii) The termination rate would not cause callers to MCom to pay more than they would for calling other mobile services in the areas in which MCom operates (with the precise outcome for callers depending on the way in which originating operators set retail prices);
- (iv) Based on our analysis of costs, we considered that this rate should allow MCom to earn a profit on termination relative to its efficient costs. MCom's efficient costs of termination are unlikely to be higher than this rate and the measure of cost we are using already includes a reasonable return on investment. The efficient costs may be lower, but, we were not certain about the size of any such gap, given the limitations in the available evidence. Since this approach provided MCom with the efficient termination rate for a service with national coverage, it was robust to changes in MCom's business strategy and to subsequent phases of network rollout. The approach did not change T-Mobile's termination rate, nor the feature that it was then geographically averaged and so likely to be above cost in urban areas and below cost in rural areas. Therefore, T-Mobile's termination revenues would continue to be sufficient to fund their termination costs (even if there were a differential waterbed effect as between urban and rural areas); and
- (v) We did not believe that there was likely to be a resulting detrimental distortion to competition against T-Mobile (or other MNOs) from determining this rate, even to the extent that it allows MCom a margin above its efficient cost of termination. In particular, this is because T-Mobile and other MNOs, against whom MCom may be competing, would also receive the same (or higher) rate for terminating calls in the areas in which MCom operates. We believed that the risk of detriment from distorting competition under our preferred option was smaller than under the other options considered.

The C&W determination

- 2.41 The C&W determination concerned the termination rate payable by T-Mobile to C&W for calls that originate on T-Mobile's network and terminate on C&W's network. The service under consideration in this case was C&W's fixed to mobile convergence ("FMC") service, which uses so-called pico cells operating over C&W's DECT guard band spectrum.
- 2.42 The FMC service delivers voice telephony services, SMS and data services using 2G technology.
- 2.43 Essentially, C&W argued that the relevant service in this dispute was MCT, because the FMC service is provided using mobile handsets and telephone numbers allocated for use with mobile communications services.
- 2.44 Our approach in this case was similar to the analytical framework that we used in the MCom determination, i.e. consideration of the six principles of pricing and cost recovery, plus the general guidance on how Ofcom should resolve disputes in the *TRD* judgment.
- 2.45 We identified four options for setting a termination rate. These options were:
 - (i) the termination rate proposed by C&W, equal to 6.418ppm;

- (ii) T-Mobile's estimate of the cost of termination on a DECT guard band network, equal to 1.2ppm;
 - (iii) our best available estimate of C&W's termination cost, between 2.61-4.14ppm; and
 - (iv) the 2009/2010 Vodafone and O2 MTR as determined in the CC determination which was 4.4ppm (in 2006-07 prices, 4.71ppm in 2009/10 prices).
- 2.46 We determined that, as in the MCom determination, the appropriate termination rate in this case was (iv) (i.e. the lowest regulated MTR).
- 2.47 We considered that the lowest regulated MTR was fair and reasonable as between the parties for the following main reasons:
- (i) It furthered the interests of consumers through the promotion of competition and the availability of a wide range of electronic communications services by allowing C&W to enter the market to compete in the mobile voice call market;
 - (ii) It allowed C&W to retain and pass onto its customers any relative benefit resulting from its choice to adopt cheaper technology and to differentiate its service;
 - (iii) The termination rate would not cause callers to C&W to pay more than they would for calling other mobile services (with the precise outcome for callers depending on the way in which originating operators set retail prices);
 - (iv) We considered that this rate should allow C&W to earn a profit on termination relative to its efficient costs. We considered that C&W's efficient costs of termination were unlikely to be higher than this rate and the measure of cost we used already included a reasonable return on investment. We acknowledged that there was a risk that C&W's efficient costs might be lower than this rate, but we were not certain about the size of any such gap, given the limitations of the available evidence, and we considered that this was nonetheless unlikely to create distortions of competition;
 - (v) Since this approach provided C&W with the efficient termination rate for a service with national coverage, it was robust to changes in C&W's business strategy and to subsequent network rollout;
 - (vi) The approach did not change T-Mobile's termination rate, or the feature that it was averaged across all locations and customer types (and so likely to be above the average cost of providing termination for some customers and below the average cost for other customers). Therefore, T-Mobile's termination revenues would continue to be sufficient to fund their termination costs (even if there were a differential waterbed effect between some customer types); and
 - (vii) We did not believe that there was likely to be a resulting detrimental distortion to competition against T-Mobile (or other MNOs) from benchmarking C&W's average MTR against the lowest regulated MTR, even to the extent that it might allow C&W a margin above its efficient cost of termination. In particular, this was because T-Mobile and other MNOs, against whom C&W might compete, would also receive the same (or a higher) rate for terminating calls to business customers. We believed that the risk of detriment from distorting competition under our preferred option was smaller than under the other options considered.

The Parties to the Dispute

O2

- 2.48 O2 is part of the Telefónica O2 Europe group. It operates a nationwide mobile communications network, providing mobile services to consumers and businesses using circuit-switched voice call termination on both 2G and 3G nationally deployed networks. In the last financial year for which figures are available, O2's revenue was £5,568 million, and it served approximately 19.5 million consumers in the UK.¹⁹

Stour Marine

- 2.49 Stour Marine was established in 2006 to provide wireless access for voice and data services to the leisure marine and seasonal leisure holiday industry within the UK. In the last financial year, Stour Marine's turnover was [X]. The company employs [X] permanent members of staff, plus [X] contractors.
- 2.50 Stour Marine seeks to provide service to "niche" areas where cellular and fixed-line access is either limited or unavailable and where, it contends, it would not be financially viable for larger providers to operate or where the physical infrastructure typically used by larger providers could not be installed due to planning restrictions. We understand that the majority of Stour Marine's current business is associated with the provision of these services to four UK marinas.²⁰
- 2.51 Stour Marine has an interconnect agreement in place with Cable & Wireless ("C&W") to provide transit services and handle all voice traffic that originates or terminates on Stour Marine's network. Further detail about Stour Marine's service is set out below.

Stour Marine's service

- 2.52 Stour Marine offers voice and data services to consumers using wireless technology. It specifically targets areas where cellular access may be reduced or unavailable, such as leisure boat and leisure park areas. Stour Marine states that it is currently in negotiations to roll out service to rural and recreational areas on the main UK canal system, and waterways such as the Norfolk Broads.
- 2.53 When it applied to Ofcom to be allocated mobile numbers, Stour Marine's intention was to deploy a WiFi network²¹ to provide mobile services to its subscribers. We allocated mobile number ranges to Stour Marine in 2007.
- 2.54 Stour Marine has deployed WiFi equipment at a number of sites across the UK which are connected to a core network switching centre using secure transmission over the public internet. The core network interconnects to other networks through a transit operator, C&W. Each network site has a number of wireless radio transmission points to support simultaneous subscribers and the ability to use the service accessed from multiple radio-transmitters ("intra-site mobility") within the coverage

¹⁹ Taken from O2's Annual report and financial statements for the year ended 31 December 2009.

²⁰ We understand that Stour Marine currently provides services to Staniland, Eastwood, Medway and [X] Marinas. The biggest of these, [X], has facilities for up to 170 narrow boats.

²¹ WiFi network refers to a network built using equipment compliant with the 802.11 standards developed by the Institute of Electrical and Electronic Engineers. A WiFi enabled device such as a personal computer, or mobile phone can connect to the internet when within range of a wireless network connected to the Internet. The coverage of one or more (interconnected) access points called "hotspots" can comprise an area as small as a few rooms or as large as many square miles. Coverage in the larger area may depend on a group of access points with overlapping coverage.

area of the site. Stour Marine does not currently have roaming agreements with any other UK mobile operator, meaning that, beyond areas covered at these sites, Stour Marine subscribers must have a subscription to other networks to make and receive calls.

- 2.55 Software installed on a mobile device or a PC enables Stour Marine subscribers to make and receive voice calls over a data connection. The data connection can be provided by Stour Marine's WiFi network, another WiFi network (e.g. BT Openzone) or a 2G/3G data connection (e.g. an O2 3G data connection). When using a network other than Stour Marine's own WiFi network, the Stour Marine subscriber needs to be a customer of a third party data service to be able to make and receive calls from a Stour Marine mobile number.

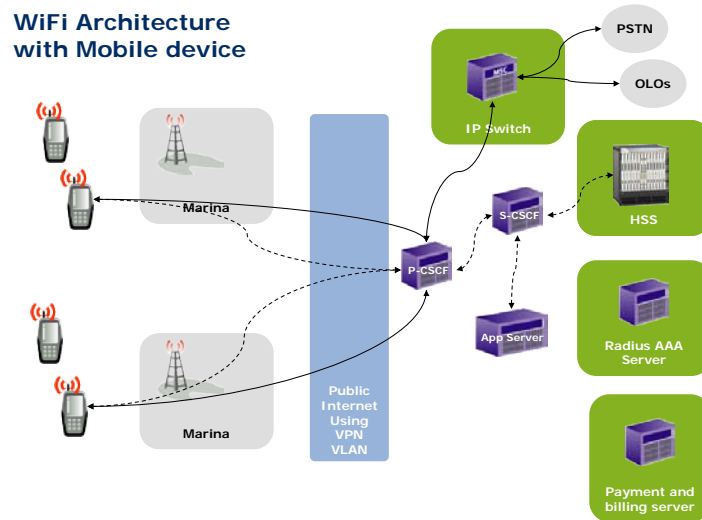
Stour Marine's WiFi network

- 2.56 Stour Marine has deployed WiFi equipment at six sites across the UK. Each site has a number of transmission points. The sites are connected to a core network switching centre using secure transmission over the public internet. The core network switching centre hosts a media gateway for routing and other subscriber related service platforms (e.g. billing systems). The core network interconnects to other networks through transit operators. Currently, Stour Marine has time division multiplexing interconnection with C&W and has agreed IP interconnection with four other transit operators.
- 2.57 The media gateway also connects to a Session Initiation Protocol ("SIP") application server. SIP is a protocol for managing call session establishment and control. For example, when a call is made to a Stour Marine mobile number, it will arrive at the media gateway and will be routed to the Stour Marine subscriber over their data connection. The SIP application server at the core network and the SIP client on the user device will manage the call set-up and control. The SIP-based call control and the voice packet routing are independent of the underlying technology (e.g. 3G or WiFi).
- 2.58 SM's intended network architecture concept is shown in Figure 1 below.

Stour Marine service coverage

- 2.59 When a subscriber is *outside* Stour Marine's WiFi coverage and is not connected to Stour Marine's core network, the subscriber can elect to route the call to voicemail or forward the call to another number.
- 2.60 In terms of coverage *within* a Stour Marine site, it is possible for a Stour Marine subscriber to make and receive calls while in motion (for example, moving from the area covered by one base station to another). Calls cannot be handed over between sites, because no two sites' coverage areas overlap.

Figure 1: Stour Marine target network architecture



Source: Stour Marine

- 2.61 The diagram in Figure 1 was submitted to us by Stour Marine. We understand that Stour Marine has more than one base station in each marina that it serves, and that a call may pass between different base stations in the coverage area if the caller is in motion during a call. Figure 1 is therefore merely representative of the equipment used in the Stour Marine network.
- 2.62 We set out the views of the Parties (and T-Mobile's as an interested party – on interested parties, see further below), on the appropriate characterisation of Stour Marine's service, and our view, at paragraphs 4.7 to 4.28.

Section 3

The Dispute

History and background

Failure of commercial negotiation

- 3.1 In September 2008, Stour Marine entered into discussions with O2 (among other CPs) about agreeing termination rates for voice calls that originate and terminate on their respective networks.
- 3.2 In relation to the termination rate that Stour Marine should pay O2 for voice calls that originate on Stour Marine's network and terminate on O2's network, the Parties agreed that this should be the lowest regulated MTR, which is currently 4.4ppm.²² O2's termination rate is limited by O2's 2007 MCT charge control, discussed above.
- 3.3 The Parties have not been able to agree on the termination rate that is applicable for calls that originate on O2's network and terminate on Stour Marine's network. Therefore, O2 customers cannot currently call Stour Marine customers.
- 3.4 Stour Marine has provided evidence to us of written negotiation between the Parties that took place from March 2009 until September 2009. Stour Marine contends that in fact negotiation began in September 2008, and included "*numerous emails, [...] one face to face meeting [...] two voice conference meetings and [the exchange of] three confidential commercial documents*".
- 3.5 Despite such commercial negotiations, the Parties were unable to agree on the level of the termination rate.

Stour Marine dispute resolution referral to Ofcom

- 3.6 On 6 December 2009 we received a submission from Stour Marine for Ofcom to resolve a dispute concerning the failure of the Parties to agree on a termination rate for calls that terminate on Stour Marine's network.
- 3.7 Having considered submissions from Stour Marine and O2, we were satisfied that the Dispute is a dispute between CPs relating to network access, as provided by section 185(1)(a) of the 2003 Act. This is because the Dispute concerns the terms on which the Parties are prepared to exchange traffic with each other – specifically for calls that originate on O2's network and terminate on Stour Marine's network.
- 3.8 We further considered that the Dispute met the criteria set out in Ofcom's 'Guidelines for the handling of competition complaints, and complaints and disputes about breaches of conditions imposed under the EU Directives'²³, and in line with these guidelines, we did not consider that there were appropriate alternative means for resolving the Dispute.

²²The amended MCT Charge Controls on O2 (and Vodafone, T-Mobile, Orange and H3G) will expire on 31 March 2011.

²³ http://www.ofcom.org.uk/bulletins/eu_directives/guidelines.pdf.

- 3.9 On 12 February 2010, we decided that it was appropriate for us to handle the Dispute for resolution. We informed the Parties of this decision and published details of the Dispute on our website.²⁴

Scope of the Dispute

- 3.10 In the notification we set out that the scope of the Dispute was to determine the termination rate payable by O2 for voice calls originating on O2's network and terminating on Stour Marine's network. We invited comments from stakeholders on the scope of the Dispute as originally published. Following minor comments, we determined the scope as stated, namely:

“to determine the termination rate payable by O2 for voice calls originating on O2's network and terminating on Stour Marine's network.”

Interested parties

- 3.11 Upon opening this Dispute for resolution, we invited interested stakeholders to express an interest in the outcome of this matter. The following stakeholders expressed an interest:
- (i) C&W
 - (ii) T-Mobile
 - (iii) Software Cellular Network Limited (trading as “Truphone”); and
 - (iv) COLT.
- 3.12 Only T-Mobile has made a submission in relation to the matters in dispute.

Information provided by the parties

- 3.13 Having received Stour Marine's initial submission (and O2's initial response), on 18 January 2010 we met with Stour Marine in order to understand more about the service it offers in the context of the Dispute. On 22 January 2010 we spoke to O2 by telephone to clarify its understanding of Stour Marine's service and to discuss its initial views on the matters in dispute.
- 3.14 After accepting the Dispute for resolution on 12 February 2010, on 10 March 2010, we sent each of Stour Marine and O2 a notice under section 191 of the 2003 Act requiring each of them to provide certain documents, call data and other information in connection with the Dispute (this request had been sent in draft on 5 March 2010) (“the information request”). We received the requested information from the Parties by 25 March 2010.
- 3.15 On 30 March 2010, in light of Stour Marine's response to the information request, we asked a number of further questions. Stour Marine provided its response to the questions on 9 April 2010.
- 3.16 On 16 April 2010 we asked Stour Marine a further set of further questions, and Stour Marine provided its response to the questions on 20 April 2010.

²⁴ http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ocases/open_all/cw_01041/.

- 3.17 On 8 March 2010, we received a submission from T-Mobile as an interested third party setting out its views on the matters in dispute.
- 3.18 The remainder of this section outlines the arguments put forward by the parties in their submissions and in the course of the investigation. The information we have received has helped to inform our analysis set out in section 4 below.

Summary of the parties' arguments

- 3.19 The Parties have put forward arguments in support of the level of termination rate that each considers is appropriate, which are broadly linked to the service Stour Marine offers, and its costs of terminating calls. T-Mobile, as an interested party, has also made a submission on these issues.

Stour Marine's arguments

- 3.20 Stour Marine contends that the minimum level of termination rate that it can accept is 4.4ppm, which is broadly based on the following:
- (i) the costs of termination should be recovered through the termination rate;
 - (ii) that termination rates form part of Stour Marine's business model and are required to generate revenue; and
 - (iii) the rate set in previous Ofcom determinations (the MCom and C&W determinations) is appropriate in this case, not least because the Stour Marine service is broadly equivalent to the MCom and C&W services which were considered in those disputes.
- 3.21 We summarise each of these arguments below.

Cost of termination

- 3.22 Stour Marine submits that its unit cost of termination is 3.6ppm. It therefore argues that O2's offer of 0.6ppm (see further below) is substantially below what it would consider commercially viable, and would result in a loss.
- 3.23 It submits that an "*inability to connect to all UK mobile operators at a reasonable rate*" would reduce its incoming voice traffic, and it therefore suggests that a reduction in total minutes carried will increase the cost per minute.
- 3.24 Stour Marine considers that the transit fee that it pays ought to be taken into account in determining the level of termination charge. It argues that, as a relatively small operator, it is obliged to involve a transit operator to route calls. The transit operator in question, C&W, charges a transit fee of [X]
- 3.25 for voice traffic. Stour Marine describes this as a "*significant standing charge for all traffic [that] greatly influences the inter-operator rates Stour Marine must charge in order to remain commercially viable.*"
- 3.26 Stour Marine argues that the transit fee is only one element of its costs and the requested level of 4.4ppm is justified by the "*level of infrastructure and other costs [it] incur[s] with carrying the traffic [that terminates on Stour Marine's network].*"

3.27 We set out our assessment of available evidence concerning Stour Marine's costs of termination in section 4 at paragraph 4.39 et seq.

Revenue generation

3.28 Stour Marine also argues that it needs the requested rate in order to provide revenue to *"support the viability of [its] business and to provide revenue to support [its] continued roll-out."*

3.29 In other words, Stour Marine considers that, rather than simply covering costs, there should be scope to generate profit from the calls that terminate on its network. In its response to the information request it suggests that:

"termination costs between networks produce viable businesses which allow each business to develop and grow. Without [...] a minimum of 4.4ppm Stour Marine will not be able to grow and we will also have to reduce our staff and development activities."

3.30 Stour Marine goes on to state that:

"As Stour Marine provides services to small niche markets in rural and leisure areas these will undoubtedly be adversely affected if the 4.4ppm rate cannot be achieved."

Other arguments made by Stour Marine

3.31 Stour Marine also contends that:

- (i) O2 considers Stour Marine to be a Voice over Internet Protocol ("VoIP") operator, although O2 has provided no evidence to support this;
- (ii) O2 has further provided no evidence to support its claim that "Stour Marine does not operate infrastructure to a similar level as Mapesbury Communications";
- (iii) O2 has refused to consider a viable alternative to its proposed rate of 0.6ppm and this failure to agree a "reasonable" rate is seriously damaging the business;
- (iv) The other main operators (both fixed and mobile) have all agreed reasonable termination rates with Stour Marine (with the exception of T-Mobile); and
- (v) If a rate lower than 4.4ppm is set, all other UK operators will want the same rate, which will limit Stour Marine's ability to remain in business and adversely affect those customers in the niche rural and leisure markets that Stour Marine serves.

O2's arguments

3.32 O2 contends that the appropriate termination rate in this case should be based *"[...] on the prevailing fixed WiFi provider rate, but [...] make an additional allowance for the "mobility" element of Stour Marine's core network. This is because the technology employed by both fixed WiFi providers and Stour Marine is based on the IEEE 802.11x standard. O2 believes that BT has entered into reciprocal arrangements with fixed WiFi providers, paying them on average 0.3ppm for terminating calls. O2*

*offered Stour Marine twice this amount, to reflect the additional cost of the mobile element of Stour Marine's service.*²⁵

3.33 In essence, O2 argues that Stour Marine's costs are approximately 0.6ppm based on the fact that its service resembles a WiFi fixed network with a mobile element. We refer to this as "0.6ppm" or "O2's requested rate" in the remainder of this document. O2's reasoning is broadly based on the following:

- (i) Stour Marine should be entitled to recover its reasonably incurred costs of termination, but no more;
- (ii) Stour Marine's costs are approximately 0.6ppm based on the fact that its service resembles a WiFi fixed network with a mobile element²⁶; and
- (iii) anything beyond cost recovery (i.e. a termination rate in excess of cost) would be unreasonable, because it would be likely to distort competition, increase O2's costs and may lead to other operators seeking to obtain the same rate.

3.34 We summarise each of these arguments below.

Costs of termination

3.35 It appears to be common ground between the Parties that Stour Marine is entitled to recover its efficient costs of terminating voice calls. However, O2 argues that such costs would not exceed 0.6ppm based on its view of Stour Marine's service and related infrastructure.

3.36 O2 considers that a "*cursory review of Stour Marine's inputs and assumptions suggests that many of these are wrong and have the effect of over-inflating cost estimates*". O2 asserts that Stour Marine has not responded to questions O2 has posed on these cost matters.

Distortion of competition

3.37 O2 considers that any rate in excess of 0.6ppm would be likely to distort competition. In its response to the information request, it cites three examples of how this may happen:

- (i) it would increase O2's costs and result in higher prices for O2's services than would otherwise be the case;
- (ii) it would enable Stour Marine to subsidise its other retail activities; and
- (iii) it would encourage inefficient market entry.

T-Mobile's arguments

3.38 T-Mobile states that it is concerned that Ofcom may resolve the Dispute purely on the basis of achieving consistency with the MCom and C&W determinations.

²⁵ O2 response to question 12 of the information request.

²⁶ We note in O2's response to question 9 of the information request that O2 increased its original offer of 0.3ppm to make to a "*specific allowance for the additional cost that Stour Marine incurs, of a mobile core network*".

- 3.39 T-Mobile observes that Ofcom's determinations in both the MCom and C&W determinations were based on conclusions that there was broadly i) service equivalence; and ii) cost equivalence between the services provided by the new entrants in each case and those provided by the relevant national MNOs. In the present case, it does not consider that either the service or costs of Stour Marine fall within an "acceptable margin" of those of the national MNOs. It would therefore be wrong for Ofcom to follow the analysis and conclusions set out in the MCom and C&W determinations.

Service equivalence

- 3.40 T-Mobile makes a number of arguments as to why the service offered by Stour Marine does not compare to the MCom service and why the termination rate set in MCom is therefore inappropriate for Stour Marine. In particular:
- (i) Stour Marine does not provide a fully mobile service that is equivalent to the service provided by the national MNOs. Its service is provided within a very confined area with limited mobility;
 - (ii) Stour Marine does not market its service as a mobile service but as a WiFi service for marina residents; and
 - (iii) voice call termination to mobile numbers allocated to Stour Marine is provided via a VoIP client, but occurs independently of the use of a mobile network. Stour Marine's retail service (Greenfone) is supplied independently of its wholesale network capacity service and calls may be terminated on Stour Marine's mobile numbers irrespective of whether they are carried on Stour Marine's WiFi network.

Cost equivalence

- 3.41 T-Mobile considers that where there is a significant gap between the cost of termination and the termination rate set, there is a danger of creating arbitrage opportunities and distorting competition.
- 3.42 It considers that Stour Marine's only costs of termination are those associated with "*call routing via a soft switch in the Stour marine core network*", which do not justify a termination rate in the region of 4ppm.
- 3.43 In summary, T-Mobile considers that Stour Marine is providing a nomadic VoIP connection to which a mobile number has been attached rather than a true mobile service. It considers that neither Stour Marine's service nor its costs fall within an acceptable margin of the equivalent service or costs of T-Mobile or any other national MNO.

Nature of Stour Marine's service

- 3.44 Stour Marine, O2 and T-Mobile all made arguments about the nature of Stour Marine's service. We consider these arguments separately, and our views, in section 4 at paragraphs 4.8 to 4.17.

Section 4

Ofcom's analysis

Introduction

- 4.1 This section sets out our assessment of the issues in dispute; it contains the analysis and reasoning in reaching our provisional conclusions, which we go on to set out in section 5.
- 4.2 In deciding how best to resolve the Dispute and set a termination rate which is reasonable and strike a fair balance between the interests of the Parties taking into account all the circumstances of the case²⁷, we have considered the arguments made by the Parties and any interested parties, taking account of Ofcom's objectives, including its statutory duties and Community obligations under sections 3 and 4 of the 2003 Act (in conjunction with Article 8 of the Framework Directive).
- 4.3 The analytical framework we have used to come to our provisional conclusions is outlined below.

Consideration of the issues

- 4.4 We have adopted an approach which gives consideration to the CAT's guidance in the *TRD* judgment about how disputes ought to be resolved. We have also considered the application of each of the six principles of pricing and cost recovery as an appropriate basis for assessing different options and set a termination rate which is fair and reasonable as between the Parties. Our analysis therefore considers the following:
- (i) Ofcom's objectives in resolving the Dispute;
 - (ii) the Parties' arguments on the characterisation of Stour Marine's service and our views;
 - (iii) the Parties' arguments on the termination rate that should apply to calls originating on O2's network and terminating on Stour Marine's network and our views, with reference to:
 - the potential options that are available;
 - our assessment of Stour Marine's costs of providing termination;
 - any relevant benchmarks;
 - our principal statutory duties and a consideration of the potential effects on competition and consumers of setting a particular termination rate; and
 - where not otherwise addressed by the factors above, the six principles of pricing and cost recovery, which are:
 - i. Cost causation: costs should be recovered from those whose actions cause the costs to be incurred;

²⁷ As referenced by the CAT in the TRD judgment, see paragraph 178.

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

4.5 We discuss each of these elements of our analytical framework below. We set out our provisional conclusions on the basis of this analysis in section 5.

Ofcom's objectives in resolving the Dispute

4.6 Ofcom's objectives are set out in section 2.

Characterisation of Stour Marine's service

4.7 As a first step in our analysis, we have considered the nature of the service provided by Stour Marine and how this service should be characterised, having regard to the underlying technology employed. Specifically, we have considered whether Stour Marine's service should be characterised as a mobile or a fixed service, taking account of the Parties' and interested parties' arguments.

The Parties' arguments

4.8 The Parties have made detailed arguments on the nature of the service offered by Stour Marine. In essence Stour Marine considers that it provides mobile services. In contrast O2 considers that "*Stour Marine's network infrastructure [bears] more resemblance to a WiFi fixed network, than to a mobile network [..]*."²⁸ Like O2, T-Mobile argues Stour Marine's service "*does not offer a mobile service, but a nomadic VoIP service connection to which a mobile telephone number has been attached.*"²⁹

Stour Marine's arguments³⁰

4.9 Stour Marine considers that its network has similar attributes to MCom's network as described in the MCom determination except that, unlike MCom, Stour Marine uses WiFi access technology in licence-exempt spectrum.³¹

4.10 Stour Marine considers that "*all mobile infrastructure operators can be identified with only a few key indicators:*

(i) They operate a radio access layer using their own equipment and infrastructure;

²⁸ O2's response to question 9 of the information request.

²⁹ Page 2 of T-Mobile's submission.

³⁰ Set out in Stour Marine's original submission of 6 December 2009 and its response to the information request.

³¹ Licence-exempt spectrum refers to spectrum which can be used without a licence, as long as the equipment conforms to certain conditions such as limits on transmitter power.

- (ii) *They operate core infrastructure to handle traffic and customer mobility management;*
- (iii) *They use finite radio spectrum resources controlled by their own radio access layer; and*
- (iv) *They have a direct relationship with the end customer for the provision of appropriate user terminals and software.”³²*

- 4.11 Stour Marine points out that it has agreed “*reasonable commercial termination rates*” with the other incumbent MNOs and also fixed operators, and that it is directly connected to C&W for both voice and data traffic. It considers that the MCom determination was “*technology agnostic*” and therefore was not simply limited to GSM networks.
- 4.12 Stour Marine also seeks to counter its perception of O2’s view that it is simply a VoIP operator by confirming that it operates a “*radio access layer*” and “*core switching system*”. It also argues that it is a “*mobile operator licensed by Ofcom to supply mobile services*”, and that it has “*a regulated MSISDN number range, network code and signalling arrangement ..*”.
- 4.13 Stour Marine has requested a “*.. minimum termination rate of 4.4ppm, which [it] believes is justified by the level of infrastructure and other costs [it incurs] with carrying the traffic*”. This is based on the fact that Stour Marine views its business as “*very similar to that of Mapesbury Communications.*”

O2’s arguments³³

- 4.14 O2 distinguishes between MCom and Stour Marine, noting that Stour Marine deploys its service using unlicensed spectrum (whereas MCom used licensed spectrum) and fewer network sites. O2 considers, therefore, that it would not be appropriate to allow Stour Marine to receive the lowest regulated MTR.
- 4.15 Instead, O2 submits that Stour Marine’s service is more akin to a fixed service, and suggests that Stour Marine should receive a termination rate based on “*the prevailing fixed WiFi provider rate, but to make an additional allowance for the “mobility” element of Stour Marine’s core network. This is because the technology employed by both fixed WiFi providers and Stour Marine is based on the IEEE 802.11x standard. O2 believes that BT has entered into reciprocal arrangements with fixed WiFi providers, paying them on average 0.3ppm for terminating calls. O2 offered Stour Marine twice this amount, to reflect the additional cost of the mobile element of Stour Marine’s service.*”³⁴

T-Mobile’s arguments³⁵

- 4.16 T-Mobile does not consider that Stour Marine provides a fully mobile service because, in summary:

³² Stour Marine’s response to question 5 of the information request.

³³ Set out in O2’s response to the information request.

³⁴ Set out in O2’s response to question 12 of the information request. O2 believes the average level of the termination rate is 0.3ppm between BT and the WiFi fixed CPs. There are no charge controls on these rates. While we have not verified the accuracy of the average reported by O2, we note it reflects the termination rate associated with single tandem calls.

³⁵ Set out in T-Mobile’s submission to us of 8 March 2010.

- (i) Stour Marine has deployed WiFi technology over a smaller footprint and Stour Marine's voice service is available independently of its WiFi network connectivity;
 - (ii) a VoIP service over WiFi is not equivalent to a voice service over GSM. It considers that VoIP over WiFi is a lower quality service and lacks the ability to provide location information for emergency services in all circumstances;
 - (iii) there is nothing mobile-specific about Stour Marine's VoIP service since the VoIP client can be installed on laptops and desktops, which limits its ability to be used in motion;
 - (iv) Stour Marine's service is more akin to a nomadic VoIP service than a mobile service.
- 4.17 T-Mobile argues that the differential between Stour Marine's likely costs of termination and the lowest regulated MTR is too great for this rate to be appropriate. It submitted that allowing Stour Marine to receive this rate would result in it receiving a rate that was entirely unrelated to cost.

Ofcom's views

- 4.18 While it is arguably increasingly difficult to draw a clear distinction between fixed and mobile network services, we consider that the service offered by Stour Marine is, on balance, a mobile service. From a consumer's point of view, the service will provide them with a mobile number, and supports their mobility within the coverage area.
- 4.19 In reaching our view we have considered the retail service offered by Stour Marine. A number of characteristics of Stour Marine's service appear to be similar to the services offered by, for example, other mobile operators such as the national MNOs, M-Com or C&W:
- (i) **Marketing**; commercially, Stour Marine behaves in ways that demonstrate a belief that it is competing with other more conventional mobile services. Stour Marine describes itself as "*a UK company set up with the express purpose of serving marina users with high quality, simple and affordable wireless internet access.*"³⁶ Stour Marine also owns and provides retail services through Greenfone, which is described as "*...a new UK mobile phone operator*".³⁷ The Greenfone website says that "*[b]y taking our Greenfone service you will be allocated a mobile phone number all of your own and the ability to make and receive calls via a Sip based phone or software client.*"³⁸ It also says that "*...you can now use our service anywhere in the world where you can get either a WiFi connection or a 3G data link on any Mobile phone network.*"³⁹
 - (ii) **Mobility**; Intra-site mobility is supported in Stour Marine's WiFi network allowing customers to receive calls on their mobile devices while in motion within the site coverage.⁴⁰ Within each site served by a Stour Marine WiFi network, it is possible

³⁶ See http://www.stourmarine.net/WifiAccess/about_us.aspx

³⁷ <http://greenfone.com/green/index.aspx>

³⁸ Ibid.

³⁹ <http://greenfone.com/green/service.aspx>

⁴⁰ This is due to the fact that sites have "*multiple radio base transceiver systems of head ends all linked to a master station [..]*", and a call can be passed between "head ends" while the call is in motion. Stour Marine stated in its response to the information request that its network supports voice calls to devices that can be used in motion within the coverage area of its network. This goes beyond

for a call to be handed between separate radio access cells while retaining a call or connection. Each network site has a number of wireless radio access cells to support multiple subscribers and intra-site mobility within the coverage area of the site. At each site, a site controller manages the mobility of the subscribers between different radio access cells. Outside the coverage area of these sites, Stour Marine subscribers must have subscriptions to other networks to make and receive calls because Stour Marine does not have roaming agreements in place with other networks at the present time. Stour Marine stated in its response to the information request that its network supports voice calls to devices that can be used in motion within the coverage area of its network. We note T-Mobile's arguments that a service provided via WiFi is of lower quality than a GSM service and provides limited mobility. In the time available for consideration of the Dispute, we have not assessed the extent of any qualitative differences between the Stour Marine service and GSM services provided by other national MNOs. To be clear, we do not know whether such differences exist and, if so, their extent. In principle, such quality differences could go in different directions. For example, for the sites targeted by Stour Marine, if existing GSM and UMTS coverage is patchy or limited, Stour Marine's WiFi access network may provide better call quality. Conversely, if the GSM and UMTS coverage were good and not subject to capacity constraints in the same area, they may offer better quality than Stour Marine's WiFi access network. To the extent that any qualitative differences do exist, these would not alter our assessment of the function and characteristics of Stour Marine's services. As regards mobility, we acknowledge that Stour Marine's network infrastructure covers a more limited area than that typically covered by national MNOs. However, this does not cause to alter our assessment of the characteristics of Stour Marine's services.

- (iii) **Definition of "mobile service"**; in the context of the regulatory framework, the National Telephone Numbering Plan ("NTNP")⁴¹ defines a "mobile service" as "... a service consisting in the conveyance of Signals, by means of an Electronic Communications Network, where every Signal that is conveyed thereby has been, or is to be, conveyed through the agency of Wireless Telegraphy to or from Apparatus designed or adapted to be capable of being used while in motion."⁴² Stour Marine's service falls within the definition of a mobile service as defined in the NTNP.

The scale of the deployed network infrastructure and the types of equipment technology can vary between different communication providers, and although Stour Marine has not deployed 2G or 3G technology, WiFi technology falls under the umbrella of wireless telegraphy. Stour Marine's use of unlicensed spectrum does not, contrary to the argument made by O2, affect our consideration of whether or not it can be considered a mobile service. In our view, what matters is the nature of the service provided using particular inputs (rather than the characteristics of the inputs themselves). Accordingly, our focus is on the characteristics of the service offered by Stour Marine (and not whether this service is delivered via licensed or unlicensed spectrum).

4.20 Stour Marine does not offer its services using its own infrastructure outside its network coverage area – and its coverage area is very much smaller than the

the user-provided functionality of, for example, a cordless handset or use of a wireless router at a single location.

⁴¹ <http://www.ofcom.org.uk/telecoms/loi/numbers/numplan080410.pdf>

⁴² Page 6 of the NTNP.

national footprint of any one of the national MNOs. In some cases (e.g. C&W) smaller operators can supplement their own services with national roaming agreements, although Stour Marine has not done so.

- 4.21 In our provisional view, despite the limited area covered by Stour Marine's WiFi network infrastructure, its retail service over its WiFi network can best be characterised as a mobile service. This provisional view is consistent with the existing regulatory policy set out in the NTNP and the available commercial evidence identified above. T-Mobile's argument that Stour Marine's service is available independently of its WiFi network does not alter this assessment.
- 4.22 The demand for termination on Stour Marine's network is a derived demand which comes from originating networks serving calling parties. Having identified Stour Marine's service as a mobile service for which it holds mobile number ranges, it follows that for calls to such subscribers the relevant wholesale termination service is a form of wholesale mobile voice call termination. For example, in order to call a Stour Marine subscriber, the calling party (e.g. an O2 subscriber) will need to dial a mobile number, and from the calling party's perspective this would be indistinguishable from any other call to a mobile subscriber.
- 4.23 Furthermore, Stour Marine is able to determine the termination rate for a call to its mobile numbers by virtue of holding mobile number ranges and controlling the ability to authenticate subscribers. Stour Marine holds the number, controls the ability to authenticate users, and enables them to receive calls.
- 4.24 In the 2007 MCT Statement we defined the relevant market as "*wholesale mobile voice call termination provided in the UK to other Communications Providers by [the MNO in question]*".⁴³ The MNOs in question were O2, Orange, T-Mobile, Vodafone and H3G, and therefore, there was a relevant market of wholesale mobile voice call termination found for each MNO. The 2007 MCT Statement focussed on the (then) five national MNOs⁴⁴ because these were the most significant operators at the time. Since then a number of other operators have begun offering mobile services using their infrastructure (such as MCom, C&W and Stour Marine).
- 4.25 An important aspect of market definition is that it should focus on the service offered, not the means by which that service is delivered. This is known as "technology neutrality" and is at the heart of the EC regulatory framework for electronic communications;⁴⁵ it is also one of our duties in section 4(6) of the 2003 Act. Based on this, in the 2007 MCT Statement we found that voice call termination provided on 3G was in the same market as that provided using 2G. This was because callers could not distinguish whether a call was terminated on either technology, MNOs charged the same MTR for calls to either 2G or 3G subscribers, and MNOs cannot determine which technology terminates a given call (indeed the same call might switch from being delivered on 3G to 2G and vice versa if the handset permits).⁴⁶ Moreover, in the case of H3G which relied (and still does) on other national MNOs for

⁴³ See section 3 of the 2007 MCT Statement.

⁴⁴ The UK operations of Orange and T-Mobile have since merged.

⁴⁵ See http://ec.europa.eu/information_society/policy/ecomm/current/index_en.htm. Recital 18 of the Framework Directive states "*The requirement for Member States to ensure that national regulatory authorities take the utmost account of the desirability of making regulation technologically neutral, that is to say that it neither imposes nor discriminates in favour of the use of a particular type of technology, does not preclude the taking of proportionate steps to promote certain specific services where this is justified, for example digital television as a means for increasing spectrum efficiency.*" Also see Article 8(1) of the Framework Directive.

⁴⁶ See section 3, 2007 MCT Statement.

national roaming, it did not charge a different MTR for calls delivered via national roaming on such third party networks – i.e. if the called subscriber was out of coverage of H3G's 3G network.

- 4.26 In the case of Stour Marine, considering the issue in the context of a dispute resolution process within a relatively short statutory timeframe means that we have not (and could not) undertake the type of market definition analysis that we usually carry out in a market review. Nevertheless, in our view, at the wholesale level, it is more appropriate to define the relevant service provided by Stour Marine as a wholesale mobile voice call termination service rather than a wholesale fixed voice call termination service because:
- (i) Stour Marine's retail service is mobile – that is subscribers pay for a service which offers mobility and their access connection is over a radio access network, i.e. they do not pay for a fixed access connection – copper or optic fibre connection to a fixed location – as would be the case for a fixed service. Subscribers of fixed services may use cordless or wireless handsets, however the wireless handsets are operated from user-controlled wireless routers or customer premises equipment. In the case of Stour Marine subscribers, the radio access network is controlled by Stour Marine, and provides mobility beyond that provided by a fixed access connection;
 - (ii) Stour Marine has mobile number ranges, and hence any calls to its subscribers will be calls to subscribers who hold numbers that fall within a mobile number range, i.e. from a calling party perspective they are calling a mobile subscriber; and
 - (iii) Stour Marine controls the ability to authenticate users, enables them to receive calls and is able to set the termination rate for calls to its subscribers.
- 4.27 For the reasons above, we consider that the Stour Marine service that is the subject of the Dispute is wholesale mobile voice call termination.
- 4.28 Finally, we note that this view is consistent with our proposals in the 2010 MCT Consultation which sets out our view, subject to consultation, that all entities providing mobile services should be regulated with respect to wholesale voice call termination on a technology neutral basis.

Assessment of the appropriate termination rate

Potential options

- 4.29 Consistent with the *TRD* judgment, where the CAT said that Ofcom's first task is to examine the reasons put forward by the parties to a dispute, we consider below the arguments for and against:
- (i) setting the applicable termination rate for calls originating on O2's network and terminating on Stour Marine's network at the lowest regulated MTR which is currently 4.4ppm, as suggested by Stour Marine (Option 1);
 - (ii) setting the applicable termination rate at 0.6ppm, as suggested by O2 (Option 2); and

(iii) also taking account of interested parties' submissions, here T-Mobile's, we also consider the argument for and against setting the applicable termination rate by reference to an estimate of Stour Marine's costs of termination (Option 3).⁴⁷

4.30 Put another way, Options 1-3 could also be characterised as follows:

- (i) Option 1: setting the applicable termination rate so as to achieve reciprocity between the Parties (without reference to Stour Marine's specific costs⁴⁸). If all termination rates are set reciprocally this will result in symmetry for the industry as a whole.
- (ii) Option 2: setting the applicable termination rate on the basis of average fixed reciprocal charge with some additional allowance made for the mobility element in Stour Marine's service, as requested by O2. O2's requested rate is consistent with this principle.
- (iii) Option 3: setting the applicable termination rate at a point estimate of Stour Marine's costs of termination.

Assessment of costs

4.31 The *TRD* judgment requires that, even where the parties do not make substantive submissions on cost issues, Ofcom should at least consider whether an analysis, even if broad-brush, of prices against costs is necessary.⁴⁹ The CAT also noted that, in the context of dispute resolution, Ofcom is not expected to analyse costs in the way it would in, for example, the setting of a price control SMP condition.⁵⁰

4.32 An assessment of Stour Marine's costs of termination is a relevant consideration for the purposes of the Dispute, and particularly to our consideration of the Options. In particular, we think it is relevant to assess whether any of the Options would deny Stour Marine the opportunity to recover its efficiently incurred costs. This is indeed relevant to the options proposed by T-Mobile and O2.

4.33 There are a number of possible reasons for Stour Marine's apparently lower costs:

- (i) **Technological efficiency:** As noted in paragraph 4.19, Stour Marine's choice of WiFi technology may yield greater cost efficiencies, i.e. it has a lower unit cost for providing a similar service (i.e. wholesale MCT) than if it was provided using 2G or 3G technology.
- (ii) **Service quality:** Lower quality service provided to end users might in theory result in lower unit costs. We have already discussed (at paragraph 4.16 *et seq.*) T-Mobile's view that Stour Marine's lower costs are due to Stour Marine providing a lower quality voice service.

⁴⁷ A similar option would be to set a rate based on this estimate, plus a margin above cost. However, in the context of regulatory price setting, the definition of the margin is typically subsumed into the cost analysis, because regulated charges typically involve an assessment of the efficient cost of capital – i.e. the minimum return to investors necessary to continue providing capital to the regulated firm – which is added to the cost-stack for the service in question.

⁴⁸ Note that this option would involve a rate set by reference to a cost-based rate, since it would reflect the hypothetical efficient operator costs in 2010/11, as set out in Table 1 at paragraph 2.26. The amended MCT Charge Controls took into account the CC determination and the CAT's judgments on the MCT Appeals.

⁴⁹ See paragraph 184 of the *TRD* judgment.

⁵⁰ See paragraph 183 of the *TRD* judgment.

- (iii) **Lower cost geographic areas:** A potential further reason for Stour Marine's apparently lower MCT costs is due to Stour Marine serving areas that have lower costs than the national average (on which the lowest regulated MTR is based).

The Parties' arguments

- 4.34 Stour Marine has estimated that its total cost of terminating voice calls is 3.6ppm, which comprises:
- (i) operating and capital costs;
 - (ii) costs of financing its investments (based on its current bank loans and outstanding equity);
 - (iii) other non-network costs; and
 - (iv) a payment to C&W based on arrangements that Stour Marine has in place with C&W for terminating traffic.
- 4.35 Stour Marine requests a termination rate equal to the level of the lowest regulated MTR, which is 4.4ppm in nominal terms and is fixed until 31 March 2011. While it accepts that this termination rate would be above its costs of termination, Stour Marine contends that it needs this rate in order to be able to generate revenue to "support the viability of [its] business and to provide revenue to support [its] continued roll-out."⁵¹
- 4.36 In contrast, as noted previously, O2 stated that Stour Marine's termination rate should be based "[...] on the prevailing fixed WiFi provider rate, but [...] make an additional allowance for the "mobility" element of Stour Marine's core network. This is because the technology employed by both fixed WiFi providers and Stour Marine is based on the IEEE 802.11x standard. O2 believes that BT has entered into reciprocal arrangements with fixed WiFi providers, paying them on average 0.3ppm for terminating calls. O2 offered Stour Marine twice this amount, to reflect the additional cost of the mobile element of Stour Marine's service."⁵²
- 4.37 However, apart from its reference to the average reciprocal fixed charge of 0.3ppm, O2 did not provide any evidence as to why its proposed rate of 0.6ppm would be reflective of Stour Marine's efficient termination costs. We do not place great weight upon this point. We recognise that O2 may not be in a position to obtain specific evidence as to Stour Marine's costs. We also consider that, given our duty to promote competition, regulators should be particularly cautious to avoid taking an approach to regulatory dispute resolution that creates incentives for commercially sensitive information such as costs to be passed between potential competitors.
- 4.38 T-Mobile did not submit any specific evidence in relation to Stour Marine's costs of termination. Again, we do not place great weight upon this point. However, T-Mobile noted that MTRs are charges to meet the incremental cost of providing capacity for network use related to call termination. In this respect, it argued that the costs of Stour Marine's WiFi network are already recovered by Stour Marine by making separate subscription charges to their customers for the WiFi connectivity. In addition, where a Stour Marine customer receives calls through a network other than that of Stour Marine (e.g. through another WiFi network), which could often be the

⁵¹ Page 10 of Stour Marine's original submission of 6 December 2009.

⁵² O2 response to question 12 of the information request.

case, it would incur no incremental costs for terminating the call, resulting in a “windfall [MTR] payment to Stour Marine”. As such, T-Mobile argued that at most, the only costs of termination are “those associated with call routing via a soft switch in the Stour Marine core network. However, these will be insignificant and do not justify a charge of c 4ppm.”

Ofcom’s assessment of costs

4.39 Our assessment of the costs of termination, includes a consideration of,:

- (i) evidence from Stour Marine’s initial submission on its voice call termination costs;
- (ii) our estimate of Stour Marine’s costs of termination, using Stour Marine’s call volume and cost estimates in a manner that more closely matches our cost allocation assumptions in the 2007 MCT cost model;
- (iii) evaluation of the cost evidence submitted by O2 and T-Mobile; and
- (iv) national 2G/3G MNOs⁵³ efficient termination costs based on estimates produced by Ofcom’s MCT cost model issued as part of the 2010 MCT Consultation.

4.40 Annex 2 contains a more detailed description.

4.41 We have used Stour Marine’s call volume and cost estimates in a manner that more closely matches the general cost allocation assumptions that we have applied in modelling the costs of MCT in the past (i.e. in setting the current MCT Charge Control which expires in March 2011). In order to do this, we have altered some of the calculations that Stour Marine used in its estimate so that it more accurately reflects how Ofcom believes costs should be allocated to MCT (see paragraph 2.10 of Annex 2).

4.42 In assessing the costs of termination for the regulated charges of the national MNOs we used economic depreciation⁵⁴, which provides a more stable termination cost per call minute over the lifetime of a network. This technique is difficult to apply to new businesses like Stour Marine as economic depreciation takes into account the likely volumes served on those assets over their full lifetime, which are highly uncertain for a new mobile provider targeting a niche market. To provide a rough proxy for the unit cost implied by adapting Stour Marine’s cost estimates as would be derived under economic depreciation, we derived a constant ppm rate over the five-year period.⁵⁵

4.43 Although we have based our assessment of costs on the best evidence in the time available, for a number of reasons, Stour Marine’s estimates and our own estimates based on adjustments thereof are subject to a significant margin of error for the following reasons:

⁵³ By “national 2G/3G MNOs” we mean national MNOs that offer 2G and 3G services (such as Vodafone, T-Mobile, Orange and O2), as opposed to national MNOs that offer a “pure” 3G service (such as H3G).

⁵⁴ See annex 2 for a definition of economic depreciation.

⁵⁵ This approach, as applied in the MCom and C&W disputes, derives a constant ppm rate over a five-year period 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.

- (i) the cost estimates are sensitive to Stour Marine's particular assumptions underlying its submission. For example, if the volume forecasts used were biased upwards (or downwards) relative to actual volumes, the projected unit costs could be significantly lower (or higher) than actual unit costs;
- (ii) Stour Marine's submission represents its view of historically incurred expenditure, which may not provide the best forward-looking view of costs;
- (iii) the cost modelling is static in the sense that it does not provide for the addition of new sites that, according to Stour Marine's submissions, may be more expensive to serve;
- (iv) a comprehensive economic depreciation calculation would take account of years beyond the five year horizon that, for pragmatic reasons, we have had to simplify. In this respect, call volumes and changes in asset prices in later periods could impact upon an appropriate view of costs.⁵⁶ However, we note that these two effects may operate in different directions and the net effect is uncertain but possibly not as large as might be the case for other mobile operators deploying other technologies; and
- (v) at the time of the draft determination it is unclear whether the payment from Stour Marine to C&W of [redacted] is based on arrangements that Stour Marine has in place with C&W for terminating traffic includes activities or network elements usually included in the cost-stack for MCT.

4.44 Bearing in mind the significant caveats above, at this stage, we estimate that Stour Marine's costs of termination may lie in the range 0.4ppm to 2.1ppm.⁵⁷ Further details of our cost assessment are provided in Annex 2.

Ofcom's mobile call termination cost model

4.45 In order to provide greater context to the above estimates of Stour Marine's unit costs, we have also included consideration of the incumbent MNOs efficient unit costs of termination.

4.46 The current MCT charge controls for the 2G/3G MNOs were set on the basis of forecast unit costs for 2010/11 of 4.0 ppm in 2006/07 prices (4.4 ppm in 2010/11 prices). This reflects the costs, asset price trends, volumes and other assumptions made at the time (including those made following the revisions to the cost model

⁵⁶ It might be the case that in the periods beyond the five-year timeframe, Stour Marine's 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, based on its current business model, the scope of Stour Marine's growth is limited to some extent by its target customers (i.e. those located at marinas or leisure facilities). A comprehensive economic depreciation calculation would also take into account expected reductions over time in modern equivalent asset (MEA) prices and operating costs, which would tend to increase the unit cost in earlier years by bringing forward cost recovery (the "MEA effect").

⁵⁷ The main source of difference between our costs estimates and Stour Marine's is the particular assumptions over the appropriate allocation of its network costs as between off-net termination and other traffic types. Our allocation assumptions suggest a lower proportion of total network costs should be allocated to termination than indicated by Stour Marine. The assumptions we used to derive this estimate are based on the application of the assumptions in the 2007 MCT model to allocate costs to termination and a particular view of volumes on Stour Marine's network. With a higher allocation of costs to termination we would be closer to Stour Marine's own estimates. Further, given the significant uncertainty over call volumes, applying different volume assumptions might suggest a wider range of unit costs.

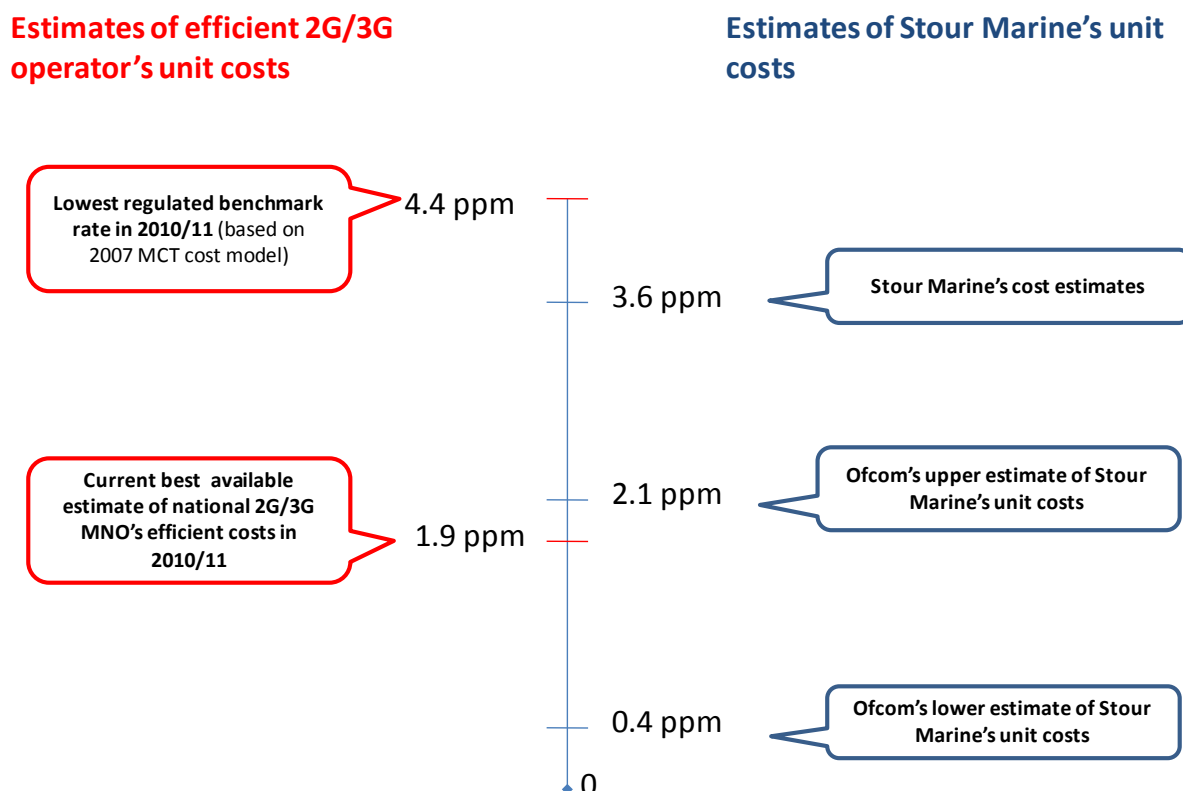
made in light of the CC's determination). Since then, it seems likely that the efficient unit costs of MCT for a national MNO are now much lower.

- 4.47 Ofcom is currently consulting on a new MCT cost model for the proposed charge control from 2011 to 2015 in the 2010 MCT Consultation. In Annex 2 we have set out more recent (preliminary) estimates of the unit cost termination for the national 2G/3G MNOs based on the latest release of our MCT cost model. An indicative estimate for a national 2G/3G MNO's efficient unit costs in 2010/11 is 1.9 ppm (in 2010/11 prices). At least part of the reason for these lower unit costs is likely to relate to higher volumes, lower equipment costs and the introduction of site sharing.
- 4.48 We note that there are a number of important caveats associated with the outputs of the updated MCT cost model. In particular, we are consulting on proposals for a new MCT charge control from 2011 to 2015, and the cost model assumptions and hence unit cost outputs are yet to be finalised. Nevertheless, the latest release of the MCT cost model suggests that unit costs for a national 2G/3G MNO are now some way below the unit costs projected under the assumptions of the 2007 MCT cost model (which in 2010/11 prices would be 4.4ppm)).

Conclusions on cost estimates

- 4.49 Stour Marine's own estimate suggests that its incurred costs (at 3.6ppm) are below its requested rate of 4.4ppm. On the basis of our own cost analysis, which attempts to mimic at a high level the cost modelling approach of the 2007 MCT cost model, it would appear that the lowest regulated MTR of 4.4ppm would comfortably allow Stour Marine to recover its efficiently incurred costs, which at this stage we estimate to lie in the range 0.4 ppm to 2.1 ppm.
- 4.50 However, based on our own cost analysis, at this stage it would appear that O2's view of an appropriate termination rate of 0.6ppm may not allow Stour Marine to recover its efficiently incurred costs. Only with unit costs towards the lower end of our range would cost recovery be likely at the rate proposed by O2.
- 4.51 Figure 2 below compares our estimate of Stour Marine's costs of termination (between 0.4ppm and 2.1ppm), with our our most recent estimate of the unit costs incurred by national MNOs in providing 2G and 3G voice services.

Figure 2: Summary of different unit cost benchmarks (2010/11 prices)



Source: Ofcom

4.52 There are a number of possible reasons for Stour Marine's apparently lower costs:

- (i) **Technological efficiency:** As noted in paragraph 4.19, Stour Marine's choice of WiFi technology may yield greater cost efficiencies, i.e. it has a lower unit cost for providing a similar service (i.e. wholesale MCT) than if it was provided using 2G or 3G technology.
- (ii) **Service quality:** Lower quality service provided to end users might in theory result in lower unit costs. We have already discussed (at paragraph 4.16 et seq.) T-Mobile's view that Stour Marine's lower costs are due to Stour Marine providing a lower quality voice service. We explain below why we disagree with T-Mobile's view.
- (iii) **Lower cost geographic areas:** A potential further reason for Stour Marine's apparently lower MCT costs is due to Stour Marine serving areas that have lower costs than the national average (on which the lowest regulated MTR is based).

- 4.53 It is difficult to determine using available (qualitative) cost information which of these factors might be most relevant in this case.
- 4.54 As noted above, it would appear that if Stour Marine were to receive the lowest regulated MTR of 4.4 ppm, it would earn a sizeable margin over its incurred costs on each call terminated on its network. However, a similar situation would seem to arise for the national 2G/3G MNOs, since they charge up to the lowest regulated MTR, but the latest release of our MCT cost model suggests that their own incurred costs of MCT may be significantly less than this.

Benchmarks

- 4.55 As regards benchmarking, the CAT stated in the *TRD* judgment⁵⁸ 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”.*
- 4.56 The CAT considered that if the proposed charges were so distant from the benchmark, Ofcom should consider whether this indicates that charges are unreasonable. This means that benchmarks serve as a reference point to help our consideration of whether the rates proposed by the Parties are fair and reasonable.
- 4.57 We set out below the benchmarks that may be relevant in the context of this Dispute, taking account of the Parties’ submissions.
- 4.58 The benchmarks that we consider potentially relevant are:
- (i) FTRs – for example, an average of the reciprocal FTRs set by fixed providers other than BT;
 - (ii) the current regulated MTRs, which will expire on 31 March 2011 (i.e. the amended MCT Charge Controls).
- 4.59 The Parties have not referred to any other benchmarks, and we are not aware of any other national or international benchmarks that might be appropriate benchmarks in this case.
- 4.60 We consider in further detail below whether it is in fact appropriate to apply these benchmarks in the context of the Dispute.

The Parties’ arguments

- 4.61 Stour Marine has requested a rate consistent with that applied in Ofcom’s determination of the MCom and C&W disputes, which was with reference to the lowest regulated MTR.
- 4.62 O2’s view is that Stour Marine’s network infrastructure bears more resemblance to a fixed network than to a mobile network. Reflecting this view, in O2’s initial negotiations with Stour Marine, it made an offer of around 0.3ppm which was in its view in line with the average termination rates paid by BT to other fixed network operators under the reciprocal arrangements for fixed call termination.⁵⁹ O2

⁵⁸ At paragraph 186 of the *TRD* judgment.

⁵⁹ In the recent Wholesale Narrowband Market Review available at http://www.ofcom.org.uk/consult/condocs/wnmr_statement_consultation/main.pdf, all fixed operators

subsequently recognised during negotiations with Stour Marine, and in its response to the information request, that there is an element of mobility in Stour Marine's core network, for which a specific allowance should be made.⁶⁰ Therefore, O2 has suggested that, while Stour Marine's operation is more like a fixed network, a higher rate of 0.6ppm is appropriate in recognition of its view of the additional costs that Stour Marine incurs for a mobile core network.

- 4.63 T-Mobile considers that it is not appropriate to adopt the lowest regulated MTR as a benchmark for calls terminating on Stour Marine's network because the service or costs of Stour Marine do not fall within an acceptable margin of the service/costs of the regulated MNOs. In T-Mobile's view the lowest regulated MTR reflects traffic on 2G/3G networks and accordingly is not an appropriate benchmark in this case, or should be adjusted substantially to reflect Stour Marine's use of cheaper technology and scale.

Ofcom's views

- 4.64 As explained in paragraphs 4.18 - 4.28 above we consider Stour Marine's retail service to be best characterised as a mobile service. Callers (and originating networks on their behalf) to Stour Marine subscribers require voice call termination to complete the call. Since we consider Stour Marine's service to be a mobile service and calls to Stour Marine's subscribers are to mobile numbers, we consider that the relevant wholesale service is MCT.
- 4.65 It follows that the most appropriate benchmark rate would be the lowest regulated MTR. That is, we do not consider that FTRs – such as might be determined by averaging the reciprocal FTRs set by fixed providers other than BT – to be an appropriate benchmark in this case.
- 4.66 While some aspects of Stour Marine's service may be seen as alternative to fixed network services (such as using fixed broadband connectivity to connect WiFi access points with the core network), for the reasons set out in paragraph 4.19 above. We consider that Stour Marine's service is sufficiently distinguishable from a fixed service and is a mobile service. In any case, some of the services offered by the national MNOs have, on the face of it, much in common with services at a fixed location delivered over WiFi. For example, with Orange's UMA service MCT is delivered using WiFi and fixed broadband connectivity.⁶¹ For calls to subscribers of such services it remains the case that the national MNOs would continue to charge their own MTR (which for Vodafone, O2 and T-Mobile/Orange would be 4.4ppm in nominal terms).
- 4.67 It appears that the main reason O2 and T-Mobile have referred to FTRs as appropriate benchmarks is that they consider them to be closer to Stour Marine's costs of providing termination than the lowest regulated MTR. However, this choice of benchmark rate seems to be driven as much by O2 and T-Mobile's view of Stour Marine's costs, than by whether Stour Marine might be characterised as a mobile operator. For example, O2 considered an uplift to its original offer of 0.3ppm to reflect its view of Stour Marine's mobile core network costs. In so far as O2 and T-

were found to have SMP in termination. BT as the largest provider of fixed termination is subject to a specific charge control. Other fixed providers have a SMP obligation to set termination on fair and reasonable terms which is interpreted as reciprocity – i.e. reciprocal with the BT rate. In practice, the implementation of the reciprocity regime has resulted in different rates set by each non-BT CP depending on the volume of traffic it sends to BT's digital local exchanges and BT's tandem switches.

⁶⁰ O2's response to question 9 of the information request.

⁶¹ <http://shop.orange.co.uk/shop/show/offer/uma>.

Mobile's arguments go to estimates of the costs of Stour Marine's service, we have dealt with these issues at paragraphs 4.39 *et seq* above. In our assessment of which benchmarks are relevant on the other hand, we have considered whether further evidence can be brought to bear, in particular appropriate comparators in competitive markets (or regulated rates where the markets in question are not effectively competitive).

Effects on competition and consumers

- 4.68 In considering the appropriate level of termination rate that should apply to calls that originate on O2's network and terminate on Stour Marine's network we have had specific regard to our principal duties under section 3(1) of the Act, which are to:
- (i) further the interests of citizens in relation to communications matters; and
 - (ii) further the interests of consumers in relevant markets, where appropriate, by promoting competition.
- 4.69 Article 8(2) of the Framework Directive clarifies the duty to promote competition (which is also the first Community requirement under section 4(3) of the 2003 Act). It provides that national regulatory authorities shall promote competition by, among other things, ensuring that there is no distortion or restriction of competition and encouraging efficient investment in infrastructure, and promoting innovation.
- 4.70 We have applied this element of our analytical framework with specific reference to each of the Options identified at paragraph 4.29 above, having regard to the competition effects and effects on consumers that would arise from each Option.

Competition effects

- 4.71 We have examined the extent to which each of Options 1-3 would promote effective competition.
- 4.72 Both O2 and T-Mobile consider that allowing Option 1, the lowest regulated MTR which Stour Marine is asking for, would distort retail competition. They argue that at this rate, Stour Marine would be allowed a margin from termination that other higher cost operators with national presence could not achieve, and which Stour Marine would be able to use to cross-subsidise its retail activities.
- 4.73 Even if Stour Marine's business were ultimately unsuccessful, T-Mobile is concerned that this would create an undesirable precedent. T-Mobile argues that while Stour Marine "... *may not develop into a competitive force, there are a large number of significant VoIP operators which would fully leverage the arbitrage opportunity Ofcom would create in adopting the Prior Disputes [the MCom and C&W determinations] as a precedent. This would significantly distort competition and could result in significant unintended consequences.*"⁶²
- 4.74 The remainder of this sub-section takes account of the specific facts of the Dispute, but also the precedent point raised by T-Mobile.

⁶² From T-Mobile's conclusions in its submission dated 8 March 2010.

Option 1

- 4.75 In carrying out our analysis, we have considered the potential competition effects of setting a termination rate for Stour Marine that might be significantly different to its efficiently incurred costs, which may be the case under Option 1.
- 4.76 Margins from MCT give MNOs the scope and incentive to subsidise or discount their retail services - e.g. handsets, monthly subscriptions, call origination and data tariffs. This is known as the "*waterbed effect*".⁶³ If all MNOs earned the same margin in termination, then none would have a competitive advantage in the retail markets - i.e. each could profitably subsidise the same amount for a given subscriber.
- 4.77 One way in which termination margins can theoretically be equalised is to assess the costs of termination of every operator and allow them a bespoke MTR which reflects the same margin over their own costs. However, such an approach has undesirable incentive properties. This is because MTRs are costs faced by rivals, so MNOs have an incentive to raise their rivals' costs by either (a) not being cost-efficient and/or (b) overstating their own costs of termination.
- i) With regard to (a), because termination assets are typically used to also originate calls, if the retail market is competitive this will incentivise cost efficiency on the origination side, and hence termination costs should also be largely efficient. Nevertheless, where costs can be passed-through to rivals, this will at the margin weaken the incentive to be cost-efficient.
 - ii) With regard to (b), the usual asymmetry of information between the regulator and the regulated firm gives the latter a skewed incentive if its regulated MTR is set by reference to its own incurred costs. For example, MNOs could report a higher allocation of costs to termination than to origination due to "peculiarities" of their own subscriber base.
- 4.78 Moreover, we also consider that an individual cost assessment for each network to be impractical, given the changing nature of the mobile market, the nascent forms of mobile competition now emerging and the risk of error (see discussion of Practicability within the context of the six principles of pricing and cost recovery at paragraphs 4.149 *et seq* below).⁶⁴ An additional concern about this approach arises in the context of dispute resolution, where the process needs to be completed within a relatively short statutory timeframe.
- 4.79 Alternatively, if the assumption is made that operators in the market should be cost-efficient, then if such a hypothetical cost benchmark can be created, then industry MTRs can be set by reference to this rate – i.e. a symmetric MTR for all MNOs. Indeed, this is the method advocated by the European Commission's *Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC)* ("the EC Recommendation").⁶⁵ If all

⁶³ The waterbed effect is a well-recognised principle, and is explained and discussed in the 2007 MCT Statement, the TRD judgment and the 2010 MCT Consultation.

⁶⁴ For evidence regarding the nature of the changing market, see further in the 2010 MCT Review, in particular Chapter 3.

⁶⁵ See <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF>. Also see Article 8 of the Framework Directive 2002/21/EC, which states: "...Member States shall take utmost account of the desirability of making regulations technologically neutral and shall ensure that, in carrying out the regulatory tasks specified in this Directive [...], in particular those designed to ensure effective competitive, national regulatory authorities do likewise."

MNOs were as equally efficient as this benchmark, then all would earn the same margin in termination given the symmetric MTR.

- 4.80 MNOs that can outperform this cost standard will earn a margin in termination and thus have a competitive advantage in the retail market. MNOs that are less efficient than this cost standard will be disadvantaged in the retail market. Therefore, the approach of setting MTRs by reference to a benchmark unrelated to the specific incurred costs of each individual MNO has strong incentive properties to reduce costs, outperform the cap and hence benefit from a competitive advantage in the retail access and origination market.
- 4.81 MNOs can reduce costs in a number of ways. In the case of new entrants, incumbents might argue that cost reduction is achieved by unfair “cherry picking”⁶⁶ of lower cost areas.
- 4.82 We have considered the extent to which setting a termination rate at the lowest regulated MCT rate would enable “cherry picking” by Stour Marine. In considering this question, we have examined the ability of O2 and other national MNOs to replicate the services that Stour Marine offers and the technology that it employs in delivering these services, and to offer services in the same geographic area as Stour Marine.
- 4.83 The ability of the MNOs to match or otherwise respond to Stour Marine’s service, if both receive a similar termination rate, also substantially reduces the potential concern about competitive distortions. Indeed, if we allowed Stour Marine a termination rate that is less than the lowest regulated MTR (e.g. 0.6ppm as requested by O2) it could be disadvantaged relative to O2 and the other national MNOs in serving its targeted customer base. If the incumbent national MNOs matched or otherwise responded to Stour Marine’s service (for example, by using the same technology as Stour Marine or some alternative), then they would be receiving a higher termination rate than Stour Marine (i.e. they would receive their own regulated MTRs of 4.4ppm or more). It might enable them to profitably offer retail prices that Stour Marine would be unable to match, not because of inferior performance by Stour Marine but because of the disparity in termination rates operating to the advantage of the incumbent MNOs (see also paragraph 4.97 below).
- 4.84 Another variant on the “cherry picking” argument is that entrants are able to select new, lower cost, technologies. It might further be argued that incumbents are constrained in their technology choice due to the more limited entry models available at the time they entered. However, we do not consider that such arguments apply in this case since incumbent national MNOs have the ability to offer services using identical or very similar technology to that employed by Stour Marine. There are no specific barriers to MNOs offering mobile services using alternative technologies to their 2G/3G propositions and to price such services as they choose. Moreover, in these circumstances, the national MNOs would continue to receive the regulated termination rate which is set with reference to the national average efficient costs of termination of a hypothetical efficient MNO using 2G/3G technology.

⁶⁶ Cherry picking can be defined as the situation where new entrant operators choose to compete against incumbent national operators, who are potentially constrained by their national coverage commitments, only in areas which can be served at relatively low cost (typically urban areas). By cherry-picking the low cost areas, they can undercut incumbents’ national tariffs, which are likely to reflect national average costs, without necessarily being more efficient.

- 4.85 In any case, we discussed in our cost analysis (paragraphs 4.51- 4.54 above) that although subject to a number of caveats, the 2G/3G MNO's national average unit are today likely to be significantly less than forecast at the time the charge controls were set (i.e. 1.9ppm (in 2010/11 prices) compared to 4.4ppm). Hence, even if the incumbent MNOs were to compete against Stour Marine using existing 2G/3G technology, then on the assumption that the areas served by Stour Marine are close to the national average cost to serve, those operators would continue to earn margins above their costs. This is because they receive the lowest regulated MTR for all traffic terminating on their networks irrespective of the costs they actually incur.
- 4.86 For these reasons, we consider that national MNOs would be able to respond effectively to any competitive behaviour that Stour Marine might adopt. Accordingly we do not consider that concerns over "cherry picking" apply to this Dispute.

Option 2

- 4.87 In carrying out our analysis, we have also considered the potential competition effects of setting a termination rate for Stour Marine at the rate requested by O2.
- 4.88 As noted above, we have estimated Stour Marine's efficient costs of termination at between 0.4ppm and 2.1ppm (subject to certain qualifications). Accordingly, if Stour Marine were to receive a termination rate of 0.6ppm this could potentially lead to under-recovery of costs by Stour Marine.
- 4.89 Failing to allow Stour Marine a termination rate that enables cost recovery would weaken the incentive of entrants like Stour Marine to enter, thereby reducing consumer benefits from increased retail competition or diversity of choice (e.g. in less well served market segments or locations).
- 4.90 Assessment of costs is not the only factor to consider in resolving this Dispute. Accordingly, we have also considered O2's argument for a termination rate of 0.6ppm by reference to other factors.
- 4.91 First, O2's argument is predicated on characterising Stour Marine's service as being more akin to a fixed service than a mobile service. For the reasons set out at paragraph 4.64 *et seq*, we disagree with this categorisation. Our provisional conclusion is that Stour Marine provides MCT (not fixed call termination) and the logic of O2's argument for a termination rate of 0.6ppm is inconsistent with this conclusion.
- 4.92 Second, it remains the case that allowing Stour Marine a termination rate of 0.6ppm would also be inconsistent with the principle discussed at paragraph 4.140 below that providers of equivalent services should receive the competitive price for those services, irrespective of how they choose to deliver them. In competitive markets, more efficient firms should be entitled to benefit from any greater efficiency that they can achieve. This view is consistent with both the 2007 MCT Statement and the *TRD* judgment. In the latter, the CAT noted that "[i]t 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."⁶⁷ Penalising a provider that is able to achieve efficiencies by removing its ability to retain a higher margin in excess of its costs would be inconsistent with this principle. Applied to the facts of the Dispute, allowing Stour Marine a termination rate of 0.6ppm would significantly limit

⁶⁷ Paragraph 186, *TRD* judgment.

the benefit it would derive from providing MCT services at apparently lower cost than its national MNO competitors.

- 4.93 Third, accepting O2's argument would in effect result in setting a termination rate for Stour Marine with specific reference to its technology choice and a specific estimate of its costs at present. To the extent that any of these variables altered, it would affect the justification for a rate at this level. For example, if Stour Marine's costs were to increase significantly, a termination rate of 0.6ppm would no longer be justified. However, Stour Marine would have to renegotiate the rate with O2 and seek to have Ofcom re-determine the rate if it could not do so. In contrast, allowing Stour Marine to receive the lowest regulated MTR would be an appropriate rate going forward irrespective of any changes in Stour Marine's business.

Option 3

- 4.94 In carrying out our analysis, we have also considered the potential competition effects of setting a termination rate for Stour Marine that is based on Stour Marine's efficiently incurred costs of termination, which is the case under Option 3.
- 4.95 Implementing this option would require establishing Stour Marine's costs of termination, on the available evidence. The ability to do so would be a pre-condition for both developing the option and ensuring that its implementation is practicable.
- 4.96 While O2 and T-Mobile argue that allowing Stour Marine a termination rate that is not strictly cost-based would distort competition, we do not consider this to be the case. This is because incumbent MNOs are readily able to deliver MCT services in the same manner as Stour Marine and any cost advantage experienced by Stour Marine is down to its efficient technology choice for the area and customers it has targeted. Moreover, as noted above, there is no threat to cost recovery by national MNOs in these circumstances as the (regulated) termination rate that they would receive would cover their national average efficient costs of termination.
- 4.97 In contrast, allowing Stour Marine a termination rate set with reference to its specific costs could operate to the benefit of national MNOs, and distort competition in their favour and against an operator like Stour Marine. This is because while Stour Marine operates in only a limited geographic area, and would receive a termination rate set with reference to its costs of termination in this area, national MNOs would continue to benefit from a regulated termination rate that is set with reference to the national average costs of termination for a hypothetical efficient MNO. Accordingly, the incumbent MNOs could receive a rate in excess of costs in some areas and a rate below their costs in other areas. In this situation, as noted above at paragraph 4.83 above, if national MNOs could receive a higher termination rate if they decided to match Stour Marine's service this would give them a competitive advantage over Stour Marine which was due to asymmetric regulation and not to greater efficiency.

Conclusion on competition effects

- 4.98 Effective competition requires that the termination rate set should be sufficient to allow efficient entry but should not lead to a distortion of competition. Based on the analysis above, if Stour Marine were to receive less than the lowest regulated MTR, we consider that the risk of any distortion of competition would be greater than the risk that competition would be distorted in favour of Stour Marine and against the incumbent national MNOs if Stour Marine were to receive the lowest regulated MTR.

- 4.99 In summary, setting a termination rate at the lowest regulated MTR would, in principle, deliver the following benefits to competition:
- (i) rewarding Stour Marine for greater efficiency and its decision to deliver MCT services via potentially lower cost technology;
 - (ii) potentially, encouraging long-term industry cost reductions and product improvements (for example, by encouraging new entrants that can offer equivalent services using new/innovative solutions to join the market);
 - (iii) promoting a competitive price for an equivalent service, as we would expect to see in a competitive market, which is consistent with statements made by the European Commission, the CC and the CAT (referred to at paragraph 4.138 *et seq.*) and the proposals for consultation set out in the 2010 MCT Review;
 - (iv) increasing benefits to consumers from further competition in mobile services by lowering barriers to entry through regulatory certainty; and
 - (v) in principle, increasing the services offered to Stour Marine's target customers (who might not otherwise have access, or potentially limited access to services).⁶⁸
- 4.100 We recognise that allowing Stour Marine a rate that exceeds its costs could lead to Stour Marine simply retaining a higher margin. We have also carefully considered T-Mobile's arguments that setting a rate that exceeds Stour Marine's costs could cause problems of cross subsidisation and arbitrage. We also note T-Mobile's argument that, to the extent that calls terminate outside Stour Marine's network infrastructure, Stour Marine would incur no incremental cost for those calls and would, therefore, enjoy a "windfall profit". We do not have information to suggest that a significant volume of calls to Stour Marine subscribers do in fact terminate outside its network infrastructure, but even if they did some core network costs would nevertheless be incurred.
- 4.101 We consider that the potential for distortion of competition that would result if Stour Marine received the lowest regulated MTR is, in reality, low given Stour Marine's size and the ability of other MCPs to match Stour Marine's service. We have not identified any specific barriers to other MNOs seeking to set up similar service propositions to Stour Marine based on the same technology.
- 4.102 Our consideration of competition effects leads us to the provisional conclusion that Option 1 should be preferred.

Effects on consumers

- 4.103 We have considered the effect on consumers, in terms of distribution of benefits, of setting a particular termination rate, based on Options 1-3, for calls that are terminated on Stour Marine's network. This includes consideration of, for example, the impact of particular rates on prices paid by customers and expanding services offered at remote locations.
- 4.104 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

⁶⁸ We have not investigated Stour Marine's target market in detail.

exists). The entry of Stour Marine into the mobile market is one possible example of such further competition.

Option 1

- 4.105 Allowing Stour Marine the lowest regulated MTR would likely benefit its customers at least to some extent.
- 4.106 As Stour Marine operates in competitive retail markets it has an incentive to pass through some of the margin in the form of lower retail tariffs. However, the extent to which this might occur will depend on the extent to which its actually incurred costs of MCT are lower than the termination rate that it receives and the strength of the waterbed effect (i.e. Stour Marine's incentive to subsidise or discount its retail services).
- 4.107 We also recognise that a potential distortion could occur if Stour Marine received higher MCT margins due to asymmetric regulation of its termination charges (i.e. it received a rate in excess of the lowest regulated MTR). This is because Stour Marine would be able to offer lower retail tariffs due to unequal treatment in relation to its termination rate relative to the incumbent MNOs – assuming equal cost efficiency. We consider that a termination rate above the lowest regulated MTR could unfairly distribute benefits to Stour Marine and its customers at the expense of callers to the Stour Marine network.
- 4.108 However, setting Stour Marine's termination rate at the lowest regulated MTR would mean that callers to Stour Marine subscribers would not be charged any more than calls to other mobile providers. In these circumstances, the basis for Stour Marine being able to earn higher margins (than incumbent MNOs) would only occur where it had lower unit costs than its rivals, for example, through using more efficient technologies (although, as noted in paragraph 4.82 *et seq*, all national MNOs are able to replicate the services offered by Stour Marine (using equivalent technology). Hence, any benefit accruing to Stour Marine (in terms of higher margins in MCT) and potentially to its customers (in terms of lower retail tariffs via the waterbed effect) would result from it providing termination with lower cost technology. Consistent treatment of entrants in this way, provides benefits to consumers in terms of encouraging entry of more efficient providers and hence competition in mobile retail services (or entry in market segments not otherwise well served).
- 4.109 In its submission, Stour Marine highlighted that its target market segment is:
- “... wireless access for voice and data services to the leisure marine and seasonal leisure holiday markets with the mainland UK. Wireless connection to this market segment is limited due to the remote nature of the sites and the “nomadic” nature of the customers themselves. Cellular service are in these areas often patchy or non-existent due to the difficulty of installing suitable radio sites in these areas of “great natural beauty”.”*
- 4.110 We have not investigated Stour Marine's claims in detail. However, if it is the case that mobile services are limited in the areas in question, then the introduction of Stour Marine's service could increase the services offered to its target customers who would not otherwise have access (or otherwise quite limited coverage) from alternative mobile providers. Setting entrant termination rates at the lowest regulated MTR is more likely to encourage entry than, for example, a rate that is equivalent to the entrant cost of providing MCT (assuming they are more efficient than

incumbents), and ensures that callers to mobiles pay no more for such calls than if the called party were a subscriber of an incumbent national MNO.

Option 2

- 4.111 Setting the applicable termination rate at 0.6ppm as requested by O2 is predicated on assessing Stour Marine's efficient costs of termination and allowing Stour Marine an additional margin to reflect the "mobile element" of Stour Marine's service.
- 4.112 Our provisional estimate of Stour Marine's costs is between 0.4ppm and 2.1ppm. The higher of these rates is nevertheless lower than the lowest regulated MTR. However, this is disputed by Stour Marine (and our own estimates are subject to the uncertainties on costs noted in paragraph 4.31 *et seq* above).
- 4.113 If Stour Marine were allowed a termination rate of 0.6ppm (i.e. a lower rate than the lowest regulated MTR), callers from O2 to Stour Marine's services would be the main beneficiaries of this lower termination rate (to the extent that O2 passed this lower rate onto its customers).⁶⁹
- 4.114 However, while regulation based on Stour Marine's costs would mean lower costs to callers, it would not provide the same incentives to encourage entry or reduce the costs of providing mobile services generally.
- 4.115 While callers to Stour Marine subscribers might in theory benefit from a lower rate than the lowest regulated MTR for such calls (in so far as incumbent operators passed on the lower MTR in reduced retail call prices), Stour Marine's customers would likely benefit from a rate set at the lowest regulated MTR (via the waterbed effect).

Option 3

- 4.116 Setting a termination rate for Stour Marine at a strictly cost-based level based on Stour Marine's own costs would distribute the benefits of Stour Marine's lower cost structure to O2 and other national MNOs and the customers of those networks.
- 4.117 As noted above, our estimate of Stour Marine's costs is subject to considerable uncertainty. If, under Option 3 we set a rate based on a point estimate of SM's incurred costs, there is a risk that this could be too low, or turn out to be too low going forward, which could undermine cost recovery by Stour Marine and lead to a transfer in favour of O2. Insofar as this fed through to consumers, in the short-run there would be an advantage to the customers of O2 and a disadvantage to the subscribers of Stour Marine (if the latter tried to recoup the shortfall from them). Similar reasoning would apply if the same termination rate were applied for all calls to Stour Marine customers (i.e. not just calls from O2). In the long-run, setting the termination rate of entrants at their own individual incurred costs is likely to dampen the incentives for infrastructure based competition in mobile services, for example, by creating regulatory uncertainty and barriers to entry. Moreover setting strictly cost-based termination rates based on incurred costs for each new entrant increases

⁶⁹ In theory, O2 (and other operators) could pass on the lower termination rates that they would pay to Stour Marine onto their customers (in the form of lower retail prices for calls to Stour Marine). If so, this would distribute the benefits from Stour Marine's lower cost structure to callers of Stour Marine's customers. It is also possible that O2 and other operators would pass these benefits onto their customers in ways other than by reducing the cost of calls to Stour Marine's customers.

regulatory uncertainty and barriers to entry. This is because entrants can never be sure if the rate they propose will be challenged and because disputes and challenges of rates take time and are costly, which could be significant for small entrants with limited staff and turnover. This is exemplified by the current situation in which Stour Marine has experienced delay in agreeing a termination rate with O2, during which time its subscribers have been unable to receive calls from O2 customers.

Conclusion on consumer effects

- 4.118 In summary, we consider that allowing Stour Marine to receive the lowest regulated MTR would allow Stour Marine's customers to benefit from its lower cost structure. We consider that allowing Stour Marine a termination rate that is equivalent to its costs would alter the distribution of benefits such that they would accrue to the customers of O2 and other national MNOs rather than Stour Marine's customers.
- 4.119 Our consideration of effects on consumers leads us to the provisional conclusion that Option 1 should be preferred.

Six principles of pricing and cost recovery

- 4.120 The six principles of pricing and cost recovery provide a useful framework for assessing the termination rates put forward by the Parties. The following sub-section applies the six principles to the three Options that we have considered for setting Stour Marine's termination rate in this Dispute.

Cost causation

- 4.121 The cost causation principle states that costs should be recovered from those whose actions cause them to be incurred at the margin. Additionally, the *TRD* judgment stated that Ofcom should consider whether an analysis, however broad brush, of the relationship of prices to costs is necessary.⁷⁰
- 4.122 In Ofcom's "Determination to resolve a dispute between BT and Telewest about a geographic call termination reciprocity agreement" in June 2006 (the "Telewest decision"), 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"*
- 4.123 Charges for termination which reflect the efficient level of costs incurred when a call is terminated on Stour Marine's network are likely to be consistent with this view of cost causation.
- 4.124 Options 2 and 3 are both essentially based on adopting cost-based rates (albeit taking a static view of efficient costs), so are consistent with the cost causation principle (assuming the cost estimates are accurate).
- 4.125 However, there would be a risk in adopting Option 3, based on our own view of Stour Marine's costs. As explained in paragraph 4.43, we have not been able to conduct a detailed or robust evaluation of Stour Marine's costs. The range of cost estimates is likely to be sensitive to the assumptions of the cost modelling and Stour Marine's business plan so should not be thought of as fully robust or precise. Option 2 is within

⁷⁰ See number 2 at paragraph 184.

the bounds of our own cost estimates, but is towards the bottom end of our range – so there may be a greater risk that it is not fully reflective of Stour Marine’s actually incurred costs of termination.

- 4.126 We note, however, that Stour Marine's costs of termination may well be below the rate embodied by Option 1 (i.e. the lowest regulated MTR of 4.4ppm in 2010/11 prices which is what Stour Marine has requested. While Option 1 would entail a departure of prices from Stour Marine’s costs, it would remain the case that the calling party (whose actions cause the termination traffic) would be charged for the service provided to them.

Cost minimisation

- 4.127 In the context of the Dispute, the principle of cost minimisation implies that the termination rate set should provide incentives for costs to be minimised (i.e. consistent with promoting productive efficiency). With this in mind, if regulated termination rates are always set at the incurred costs of a MNO (as in the case of Option 3), this will reduce to some extent the incentive to minimise costs (though note that this is partly mitigated since the assets and activities used to provide termination are shared with the provision of origination). Nevertheless, incentives to enter markets are determined by the extent to which the entrant can outperform incumbents in all the relevant markets it enters. Termination is one such market, so regulating away an entrant’s cost advantage in termination reduces the profitability of entry and will weaken incentives to enter in the first place.
- 4.128 Options 2 and 3, which are essentially based on particular views of the appropriate cost-based rates, would therefore bring prices immediately down to cost, so have poorer incentive properties in terms of cost minimisation. Option 1, by contrast, would allow Stour Marine to price up to the rate set by incumbents so would offer a profitable reward for offering termination with more efficient lower cost technologies.

Effective competition

- 4.129 Consistency with this principle requires that the termination rate set does not undermine the pressure for effective competition.
- 4.130 Limiting termination rates to actually incurred costs while incumbent MNOs are able to set MTRs at a higher rate (and independently of operator-specific costs), is less likely to promote effective competition in the long-run. Indeed, as noted in paragraph 4.83 if the incumbents sought to serve the customers targeted by Stour Marine, for calls to such subscribers they would earn their own regulated termination. If this is higher than the rate determined for Stour Marine, assuming all operators are equally efficient, such asymmetric regulation would work to the advantage of the incumbents and to the disadvantage of the entrant.
- 4.131 The regulatory certainty brought about by the use of a single industry benchmark termination rate, may serve to reduce barriers to entry and thereby encourage effective competition.
- 4.132 Further, the cost analysis in paragraphs 4.51 to 4.54 suggests that the incumbent MNOs’ efficient national average unit costs are 1.9ppm in 2010/11 (2010/11 prices), which is some way below the lowest regulated MTR of 4.4 ppm. Therefore, if the incumbents were to compete against Stour Marine using existing 2G/3G technology, and the areas served by Stour Marine are close to the national average cost to serve,

then 2G/3G operators entering using 2G/3G technologies would continue to earn margins above their costs.

- 4.133 Our detailed assessment of the competition effects and effects on consumers arising from Options 1-3 are set out in paragraphs 4.68 to 4.119 above.

Reciprocity

- 4.134 The principle of reciprocity requires that where services are provided reciprocally (as is the case with a two-way access mobile service), charges should also be reciprocal. For the reasons set out by Ofcom in the Telewest decision,⁷¹ 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.
- 4.135 Reciprocity is not necessarily the same as symmetry – i.e. reciprocity implies bilateral equivalence of rates between two given parties, symmetry means the same rate for all competing operators. In this case, reciprocity between Stour Marine and O2 would mean the same 4.4ppm rate set by both Parties (calls from Stour Marine to O2 are charged at O2's termination rate which is capped at the lowest regulated MTR). Strictly, symmetry cannot be achieved in a particular dispute since we cannot determine rates for the rest of the industry. However, in this case, three of the four national MNOs will be capped at the lowest regulated MTR (O2, Vodafone, and the combined Orange/ T-Mobile) in 2010/11.
- 4.136 In competitive markets where new entrants or incumbents offer services using new lower cost technologies, we would expect them to be able to charge up to the existing competitive rate for those services. From the customers' perspective if they cannot distinguish between termination services provided over different technologies, then they would generally not be willing to pay a premium for voice call termination on a particular technology. From the providers' perspective, if they are able to provide termination at lower costs than their competitors (for example due to developing a new efficient technology), then in a competitive market they could charge up to the prevailing competitive price and earn a profit from doing so - indeed this is the incentive to invest in cost reducing technology in the first place. Therefore, insofar as regulation seeks to mimic the outcome of a competitive market, this provides a strong rationale for setting the same MTR for all operators – i.e. symmetry in MTRs.
- 4.137 Clearly Option 1 would be most consistent with reciprocal rates as it would use the same regulated MTR as is applied to O2 under its charge control. Options 2 and 3, would be undesirable under the reciprocity principle, and would result in cost efficiency generated by Stour Marine being passed to its potential competitor, O2, and/or the subscribers of that competitor.

Other regulatory authorities' views on technology choice and symmetric rates

- 4.138 The proposition that in a competitive market for the same service, technological choice shouldn't affect the market price is one which guided the CC in its

⁷¹ Final determination published on 16 June 2006, see paragraph 78:
[http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_890/determinati
on.pdf](http://www.ofcom.org.uk/bulletins/comp_bull_index/comp_bull_ccases/closed_all/cw_890/determinati
on.pdf)

determination on the regulation of 2G and 3G MCT. The CC stated in its determination (at paragraphs 2.9.10 and 2.9.11):

“As a general principle, we agree with BT’s basic point that in a competitive market the introduction of a new and more efficient technology should not lead to an increase in price for an existing service.

Ofcom accepted that 3G technology is more efficient than 2G technology in carrying voice traffic. It also appeared to accept BT’s basic point as a matter of principle — it accepted that MCT is a homogenous service and that consumers are unable to select, are unaware of, and are likely to be indifferent to which type of network their calls terminate on, which implies that in a hypothetical competitive MCT market differences in 2G and 3G MCT charges would not be sustainable.”

- 4.139 Giving weight to the principle that symmetric termination rates are desirable in the context of considering the Dispute is consistent with the European Commission’s *Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU (2009/396/EC)*⁷², the CC’s *Mobile phone wholesale voice termination charges Determination (16 January 2009)*⁷³ and the CAT’s judgment in *Hutchison 3G UK Limited v. Ofcom*.⁷⁴ These regulatory precedents suggest that the European Commission, the CC or the CAT do not favour asymmetric termination rates except in limited circumstances (and, even then, only for a limited transitory period) and that, in general, the existence of symmetric termination rates is to be preferred.⁷⁵
- 4.140 The European Commission’s Staff Working Document Explanatory Note: *Accompanying document to the Commission Recommendation of 7 May 2009 on the Regulatory Treatment of Fixed and Mobile Termination Rates in the EU*⁷⁶ stated that:
- “As the relevant cost standard for setting termination rates should be [Bottom-up Long Run Incremental Costs (“BU LRIC”)] which reflects the cost of an efficient operator, there should in principle be no asymmetries between the rate of the established operator(s) and the rates of later entrants to the market. This is broadly consistent with the ERG Common Position on symmetry which states that termination rates should normally be symmetric and that asymmetry requires adequate justification”* (emphasis added).⁷⁷
- 4.141 This principle is also consistent with our current thinking as set out in the 2010 MCT Consultation.⁷⁸ As set out in Table 2 below, we propose that regulated MTRs would reduce to a symmetric rate next year (i.e. 2011/12) and each year thereafter.

⁷² <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:124:0067:0074:EN:PDF>.

⁷³ http://www.competition-commission.org.uk/appeals/communications_act/mobile_phones_determination.pdf.

⁷⁴ [2008] CAT 11.

⁷⁵ This preference is consistent with proposals contained in the 2010 MCT Consultation, see paragraph 7.76 et seq. of volume 2.

⁷⁶ http://ec.europa.eu/information_society/policy/ecomms/doc/library/public_consult/termination_rates/explanatory.pdf

⁷⁷ See page 16.

⁷⁸ See, in particular, paragraph 7.76 et seq.

Table 2: Proposed termination rates for calls to mobile numbers (pence per minute - 2008/09 prices)

	<u>2010/11</u>	<u>2011/12</u>	<u>2012/13</u>	<u>2013/14</u>	<u>2014/15</u>
Vodafone / O2 / Orange / T-Mobile ⁷⁹	4.3	2.5	1.5	0.9	0.5
H3G ⁸⁰	4.6	2.5	1.5	0.9	0.5
Other MCPs	Set on the basis of being fair and reasonable				

Source: 2010 MCT Consultation Ofcom, April 2010⁸¹

- 4.142 In the 2010 MCT Consultation, we propose to: (i) define separate markets for all calls to a given UK mobile number range for which a communications provider can determine the termination rate; (ii) designate each undertaking that has been allocated one or more of these number ranges as having significant market power (SMP) with respect to the (wholesale) market for the service of terminating calls to that range; (iii) regulate directly the termination charges of the four national MNOs which operate national mobile networks via a charge control (as in Table 1 above); and (iv) require other mobile providers to provide call termination on fair and reasonable terms. With regard to the latter, we have clarified that we would interpret fair and reasonable to mean that operators agree to exchange traffic in both directions at the same MTR as the symmetrical rate that applies to the four national MNOs.
- 4.143 The proposals set out in the 2010 MCT Consultation will be carefully considered in light of comments from stakeholders and other interested parties. In these circumstances, we do not rely on the policy expressed in that consultation in reaching any conclusions in respect of the Dispute. However, we note that if Ofcom did ultimately give effect to the proposals set out in the 2010 MCT Consultation, Stour Marine would be viewed as providing MCT and having SMP in that market. The remedy proposed for MCPs like Stour Marine in the 2010 MCT consultation is a fair and reasonable condition, which we would interpret to mean symmetry (i.e. symmetry with the lowest regulated MTRs noted in Table 2 above).
- 4.144 We are aware that, historically, charges for MCT have not always been reciprocal. On the other hand, we stated in the 2007 MCT review that *without fettering its discretion, in the event that it were to be regulating such charges, Ofcom is inclined to the view that it is likely to be desirable for new entrants' MCT charges to be aligned with those of incumbent suppliers. When assessing such matters, Ofcom will take into account all relevant considerations at the time, as it has done in the present market review*.⁸²
- 4.145 We further noted in the 2007 MCT Statement that we would anticipate further convergence in MNOs' mobile termination rates.⁸³ We remain of this view in the 2010 MCT Consultation and it is for this reason that we propose to set for the period 2011-

⁷⁹ 2G/3G MNOs.

⁸⁰ 3G MNO only.

⁸¹ See Table 1, page 3, http://www.ofcom.org.uk/consult/condocs/wmctr/wmvct_consultation.pdf

⁸² Paragraph 9.129.

⁸³ Paragraph 9.143.

2015 a fair and reasonable condition on the smaller MCPs, interpreted as a rate which is symmetric with the charge controlled rates of the incumbents.

Distribution of benefits

- 4.146 We note that callers from O2 to Stour Marine's services would be the main beneficiaries of a lower termination rate, to the extent that O2 passed this lower rate onto its customers. However, whether O2 passed this through to its retail customers would depend on the competitive pressure to do so – which might be weak since other originating operators pay the higher rate of 4.4ppm and calls to Stour Marine will be a tiny proportion of off-net calls from the O2 network. If Stour Marine were to charge the lowest regulated MTR, callers to Stour Marine would be no worse-off than they would be calling subscribers of any other MNO. Moreover, as argued in paragraph 4.105 *et seq* we consider that Stour Marine's subscribers might gain from Stour Marine charging a rate at the lowest regulated MTR (if Stour Marine's termination costs are lower than this rate). The extent of this benefit would depend on the strength of the waterbed effect.
- 4.147 Option 2 and Option 3 would distribute all the benefits of Stour Marine's lower cost structure to O2 (or its customers). There is a risk with either option in that, given cost uncertainties, they may result in setting a rate below Stour Marine's costs, which would lead to some redistribution of profits to O2 and potentially other operators.
- 4.148 Option 1 would mean that callers to Stour Marine's service would not be charged any more than calls to other mobile providers. The incentives this provides in terms of entry and innovation may provide benefits both to Stour Marine's customers as well as callers to its customers that would not otherwise be able to reach them (given that Stour Marine targets locations where existing mobile termination provision may be quite limited). The benefit accruing to Stour Marine (in terms of higher returns) and potentially to its customers (in terms of lower retail tariffs via the waterbed effect) would be due to it providing termination using more efficient technology.

Practicability

- 4.149 Consistency with the final pricing principle requires that the termination rate proposed is practicable and relatively easy to implement.
- 4.150 Setting Stour Marine's termination rate equal to the level proposed by O2, i.e. 0.6ppm, would only be practicable to implement if a retrospective billing settlement process were implemented. This is because Stour Marine charges other termination traffic at 4.4ppm. In real time it is not possible to identify the originating network where traffic is delivered by a transit operator (i.e. C&W). Where the same termination rate is agreed with all originating operators (as it would under symmetry), such retrospective settlement would not be necessary.
- 4.151 Also if Stour Marine's termination rate were set at the level proposed by O2 because this was considered a reasonable estimate of Stour Marine's costs – about which we are uncertain – this would suggest the need to revisit Stour Marine's costs if its costs changed due to entering new market segments or deploying alternative technology. Such an approach would not be technology neutral, nor future proof. This concern would apply more generally to any approach where the specific termination rate is determined by estimating the network costs of an individual operator at a given point in time.

- 4.152 In contrast, setting a termination rate based on the lowest regulated MTR would allow Stour Marine to receive a rate that is independent of its business model and technology. This is practicable in the sense that it removes the need to revisit the rate if Stour Marine's business model, or technology used were to change.

Summary of assessment of options based on the principles of pricing and cost recovery

Option 1 – lowest regulated MTR (4.4ppm)

- 4.153 Our considerations of the six principles of pricing and cost recovery do not cause us to alter our views on Option 1. We consider that this option would best promote effective competition. We also think that this option, which envisages O2 and Stour Marine receiving the same termination rate, would be most consistent with the principle of reciprocity. Option 1 also best promotes the distribution of benefits to consumers

Option 2 – bespoke rate based on an average reciprocal fixed charge and an allowance for mobile core network costs (O2's proposed 0.6ppm)

- 4.154 O2's proposal that Stour Marine should receive a bespoke termination rate has undesirable incentive properties in particular with regard to cost minimisation and effective competition. Moreover, it has implications for practicability, since it would require an accurate assessment of Stour Marine's costs at a specific point in time. In future, the premise of setting every entrant's terminate rate to cost would require the rate to be revised to reflect, for example, any change in locations served, volume changes or technology employed. This option would also result in a different termination rate depending on the identity of the calling party network (i.e. O2 would not pay the same rate as other originating networks).

Option 3 – cost-based termination calculated by reference to Stour Marine's actual incurred MCT costs

- 4.155 This option would arguably be most consistent with the principle of cost causation, however, as for Option 2, it has undesirable incentive properties in particular with regard to cost minimisation and effective competition and it does not score well on practicability grounds.

Provisional conclusions

Proportionality considerations

- 5.1 We have considered whether our provisional conclusion is a proportionate means of resolving this dispute, having had regard to our regulatory objectives. We have given careful consideration to whether there is any other means of resolving the dispute equally effectively.
- 5.2 For the reasons set out above, we do not consider that resolving the Dispute on the basis of either Option 2 or 3 would achieve the regulatory objectives which are an integral part of our statutory duties.
- 5.3 In particular, our principal duty (under section 3(1) of the 2003 Act) is to further the interests of citizens in relation to communications matters and to further the interests of consumer in relevant markets, where appropriate by promoting competition.
- 5.4 We explain above that both Option 2 and 3 would, if adopted, be likely to result in a distortion of competition and consumer detriment. As such, these options would generate outcomes that are inconsistent with our regulatory objectives in resolving this Dispute.
- 5.5 In addition, we further explain above that resolving this Dispute on the basis of Option 2 or 3 appears inconsistent with the six principles of pricing and cost recovery. In particular, either option would, if adopted, be likely to generate outcomes that are inconsistent with the principles of effective competition, reciprocity and practicability.
- 5.6 Accordingly, we consider that our provisional conclusion that this Dispute should be resolved on the basis of Option 1 is the correct means for meeting our regulatory objectives. We do not consider that there is a more appropriate alternative means and we do not think that Option 1 goes further than necessary to achieve the objectives. In contrast, we consider that the negative outcomes that would arise from the approaches outlined in Options 2 and 3 are such that they would not achieve our objectives and therefore also would not constitute a proportionate means of resolving the Dispute.

Discrimination considerations

- 5.7 We have considered whether our provisional conclusion is consistent with the need to avoid discrimination. Specifically, we have considered whether our provisional conclusion that Stour Marine should receive the lowest regulated MTR would tend to discriminate in favour of Stour Marine and against either O2 or other operators in a similar position to O2. For the reasons set out above, we consider that Stour Marine is an MCP and is (or could be) active in the same retail market as O2. In addition, Stour Marine offers wholesale mobile voice call termination service just as O2 does (albeit via different technology). It is open to O2 and other operators to adopt the same or similar technology to that of Stour Marine if such operators were to consider this to be beneficial for their business.
- 5.8 In these circumstances, we consider that it is appropriate and non-discriminatory to allow Stour Marine to receive the same termination rate that O2 would for providing wholesale mobile voice call termination: the lowest regulated MTR as proposed in our provisional conclusion. We note that O2 would receive the lowest regulated MTR irrespective of the technology that it employed in delivering this service.

- 5.9 Furthermore, if we declined to allow Stour Marine to receive the lowest regulated MTR this would tend to discriminate *against* Stour Marine, in that it would be providing the same service but would be treated differently from other MNOs in that it would be required to do so on different terms.

Assessment of the options

- 5.10 Our provisional conclusion is as follows:
- (i) Stour Marine is a MCP that is (or could be) active in the same retail market as the incumbent MNOs, including O2, and that offers wholesale mobile voice call termination in the same way as the incumbent MNOs;
 - (ii) our preferred option is that the termination rate applicable to calls originating on O2's network and terminating on mobile number ranges on Stour Marine's network should be set in accordance with the lowest regulated MTR, which for 2010/2011 is 4.4ppm in nominal terms;
 - (iii) once the termination rate is set following our final Determination, O2 is obliged to open Stour Marine's mobile number ranges on its network so that O2 customers will be able to call Stour Marine customers, and vice versa.
- 5.11 We believe that this provisional conclusion represents a fair balance between the interests of the Parties and is consistent with the CAT's guidance in the *TRD* judgment and with the six principles of pricing and cost recovery, as explained in section 4. It also accords with our objectives in resolving the Dispute.

Consideration of other relevant statutory provisions

- 5.12 The regulatory objectives for resolving the dispute are grounded in our statutory duties. For completeness we have considered the entire list of specific duties upon Ofcom as they appear in section 3 of the 2003 Act and also the six "Community requirements" set out in section 4 of the 2003 Act. (These "Community requirements" give effect, among other things, to the requirements of Article 8 of the Framework Directive.)
- 5.13 We consider that our proposals are consistent with these duties and we would highlight in particular:
- (i) the duty to secure the availability throughout the UK of a wide range of electronic communications services (section 3(2)(b) of the 2003 Act). To the extent that Stour Marine is able to offer services in parts of the UK which existing companies do not (or have chosen not to), we consider that our proposal is consistent with the duty.
 - (ii) the duty to have regard to the desirability of encouraging investment and innovation in relevant markets (section 3(4)(d)). Clearly encouraging investment from new entrant companies such as Stour Marine through dispute resolution is consistent with this duty.
 - (iii) the duty to secure that Ofcom's activities contribute to the development of the European internal market (section 4(4)). To the extent that competition is facilitated through the resolution of this dispute and new entrant companies, this might in turn also promote internal market aims, particularly in relation to competition.

- (iv) the duty to promote the interests of all persons who are citizens of the European Union (section 4(5)). To the extent that Stour Marine customers have particular needs as users of marinas, we consider that our proposal is consistent with this duty.
- (v) the duty to ensure technology neutrality (section 4(6)). We note that our proposals are technology neutral in approach.
- (vi) 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 (section 4(7) and 4(8)). The resolution of this dispute aims to resolve interconnection problems to the benefit of competition and customers.

Transparency and consistency considerations

- 5.14 Ofcom considers that this document clearly sets out the Parties and interested parties' arguments and Ofcom's reasoning that leads to the proposed conclusion and notes that the parties will have an opportunity to comment on Ofcom's proposals. The proposed resolution is also clear. Ofcom aims to ensure that its regulatory activities are transparent, accountable, proportionate, consistent and targeted. Our resolution is targeted at resolving the pricing and interconnection dispute as between the Parties.
- 5.15 In developing our approach, we have considered relevant previous decisions made by Ofcom, the CC determination and the EC rules in order to ensure that the proposed approach is consistent with regulatory practice.

Annex 1

The Draft Determination

Determination under sections 188 and 190 of the Communications Act 2003 (the “Act”) for resolving a dispute between Stour Marine Limited (“Stour Marine”) and Telefónica O2 UK Limited (“O2”) concerning the termination rate payable by O2 for voice calls originated on O2’s network and terminated on Stour Marine’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 6 December 2009 Stour Marine submitted a dispute for resolution;

(D) on 12 February 2010, 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 15 February 2010 Ofcom published details of the dispute on its website and invited comments from stakeholders on the scope of the dispute;

(F) on 15 February 2010 Ofcom set the scope of the dispute to be resolved as being to determine the termination rate payable by O2 for voice calls originating on O2’s network and terminating on Stour Marine’s network;

(G) a non-confidential draft determination was sent to the parties on 20 May 2010 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

The parties shall enter into a transaction in which:

- (a) O2 is obliged to open Stour Marine's mobile number ranges on its network so that O2 customers will be able to call Stour Marine customers, and vice versa; and
- (b) the level of termination rate in respect of each minute of traffic originated on O2's network and terminated on Stour Marine's network shall be the lowest regulated MTR, converted into nominal terms. This rate is currently set at 4.4ppm until 31 March 2011.

Binding nature and effective date

- 3 This determination is binding on Stour Marine and O2 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;
 - c) '**Lowest regulated MTR**' means the lowest current regulated MTR for 2G/3G mobile network operators in 2010/11. It was set by the Competition Commission and the Competition Appeal Tribunal at 4ppm in 2006/07 prices, which is 4.4ppm in nominal terms;

- d) **'ppm'** means pence per minute;
- e) **'Stour Marine'** means Stour Marine Limited, whose registered company number is 05914603, 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;
- f) **'O2'** means Telefónica O2 UK Limited, whose registered company number is 1743099, 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;
- g) **'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

20 May 2010

Annex 2

Cost estimates

Introduction

- A2.1 To gain a better understanding of the costs Stour Marine might incur when a call is terminated on its network, we have completed a high level assessment of termination costs based on data submitted to us by Stour Marine. We also assessed the evidence on Stour Marine's costs submitted by O2. In addition, we considered the efficient cost of termination of a national 2G/3G MNO.
- A2.2 Below we describe the following:
- Stour Marine's initial submission on its voice call termination costs;
 - A revised estimate of the cost of termination, using Stour Marine's call volume and cost estimates in a manner that more closely matches our cost allocation assumptions made in our 2007 MCT cost model;
 - The cost evidence submitted by O2 and T-Mobile; and
 - National 2G/3G MNO's efficient termination unit costs based on estimates produced by Ofcom's MCT cost model issued as part of the 2010 MCT consultation.

Stour Marine's initial submission

- A2.3 Table A2.1 contains a break-down of the costs associated with Stour Marine's initial 3.6 ppm estimate of mobile call termination.

Table A2.1: Stour Marine's estimated cost of termination (pence per minute)

Cost Category	Estimated cost (pence per minute)
Transit cost from C&W	[X]
Radio access cost (depreciated over [X] years)	[X]
Core costs (depreciated over [X] years)	[X]
Network Opex costs (annualised)	[X]
Interest, bank and other non network charges	[X]
TOTAL	3.6

- A2.4 Stour Marine's above estimates include the capital costs of its network infrastructure, operating costs and the cost of debt. In its capital costs, Stour Marine has included the core network elements (soft switch, MSS, and its charging and accounting systems) and radio access costs (radio access layer and site controllers). These elements are all depreciated over 5 years. Stour Marine's (annualised) opex estimates comprise hosting charges from its core infrastructure, equipment maintenance charges, leased line connection charges and software support charges. Stour Marine has allocated all of these costs to termination and in

order to determine the pence per minute charge it used available information from its billing systems to estimate the total traffic minutes (both off net and on net calls) in 2009 ([REDACTED] minutes). The above cost estimates include a payment of [REDACTED] for each terminated call to C&W by Stour Marine (as Stour Marine pays C&W this transit charge for both outbound and inbound calls).

Revised estimated cost of termination on Stour Marine's Network

- A2.5 In our determinations to resolve disputes between MCom and T-Mobile and C&W and T-Mobile over mobile termination rates we considered MCom's and C&W costs based on their five year business plans. Stour Marine has not submitted a detailed estimate of its costs in precisely the same way but has instead attempted to provide its best view of costs in 2010/11. Nevertheless, we have sought to replicate the type of analysis conducted in the MCom and C&W disputes, as it enables us to see the effect of applying different assumptions to those Stour Marine has adopted. This is important as we think that any cost estimates on which we might rely should be as consistent as possible with the approach adopted in the 2007 MCT cost model used to set the current MCT charge controls and in other dispute determinations involving MCT.
- A2.6 In Table A2.2 below we set out our revised estimates of the unit cost of termination on Stour Marine's network. There are two calculations presented below. First, using data submitted by Stour Marine, we have undertaken a calibration exercise to estimate its unit costs of operation over a five year period. This is shown in the first row for each cost item in Table A2.2 and uses Stour Marine's cost allocation assumptions and Stour Marine's use of total voice traffic in the denominator. In the second calculation we apply our own assumptions, in particular, an alternative allocation of network costs to termination and an alternative cost of capital assumption consistent with the approach adopted in the 2007 MCT cost model. As we have used alternative assumptions over the allocation of network and non-network costs to voice call termination, we have made a corresponding adjustment to Stour Marine's estimated volumes so that they only include off-net voice call termination volumes. The resulting unit costs are shown in the second row for each cost item in Table A2.2.
- A2.7 Another important determinant of the path of unit costs is the approach to depreciation. Our approach in current and past MCT charge controls is economic depreciation (also adopted by the CC). Economic depreciation tends to smooth network unit costs based on longer-term forecasts of network utilisation. That is, the same present value of capital costs is recovered, but the path of unit costs will differ from that of accounting depreciation if volumes are changing over the investment horizon. Because of data limitations, we have only estimated Stour Marine's costs over a five year timeframe. The proxy for unit costs based on economic depreciation is shown in the final column.

Table A2.2: Estimated cost of termination over 5 years (excluding transit)

	Notes	Year 1	Year 2	Year 3	Year 4	Year 5	Constant Rate ¹
Stour Marine opex estimate	2	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]	[REDACTED]

Revised opex estimate		[X]	[X]	[X]	[X]	[X]	[X]
Stour Marine depreciation estimate	3	[X]	[X]	[X]	[X]	[X]	[X]
Revised depreciation estimate		[X]	[X]	[X]	[X]	[X]	[X]
Stour Marine cost of capital estimate	4	[X]	[X]	[X]	[X]	[X]	[X]
Revised cost of capital estimate		[X]	[X]	[X]	[X]	[X]	[X]
Stour Marine network cost estimate	5	[X]	[X]	[X]	[X]	[X]	[X]
Revised network cost estimate		[X]	[X]	[X]	[X]	[X]	[X]
Stour Marine non-network cost estimate	6	[X]	[X]	[X]	[X]	[X]	[X]
Revised non-network cost estimate		[X]	[X]	[X]	[X]	[X]	[X]
Spectrum cost estimate	7	0.0	0.0	0.0	0.0	0.0	0.0
Network externality surcharge	8	0.0	0.0	0.0	0.0	0.0	0.0
Stour Marine's calibrated cost estimate		[X]	[X]	[X]	[X]	[X]	[X]
Revised cost estimate		[X]	[X]	[X]	[X]	[X]	[X]

1. To provide a rough proxy for the unit cost implied by adapting Stour Marine's cost estimates to a 5 year business plan, under the economic depreciation methodology, we derived the constant ppm rate over the five year period (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). As we do not have a reliable view of forecast volumes over the period or the way in which costs will vary in response to those variations, we have not included any growth assumptions in the base line modelling.

2. As Stour Marine has annualised its opex estimates in Table 1, for our calibration calculation we have applied the same ppm opex charge, assuming constant call volumes over a 5 year period. However, in its submissions, Stour Marine allocated some non-network costs to the opex estimates (estimated at around [X] of total opex). We have removed these costs from the opex estimates and re-allocated them to its non-network cost category.

3. Stour Marine has depreciated all of its network assets over 5 years, whereas the MCT methodology provides for a variety of asset lives for over 60 assets over different periods. We do not have a detailed breakdown of Stour Marine's capital costs. We do not therefore have superior information to Stour Marine to apply longer depreciation schedules for certain of its assets. In any case, the assets deployed by Stour Marine may well have a shorter life owing to its technology choice. This 5 year depreciation assumption may be on the conservative side, but we have not made any adjustments to account for any depreciation that has already occurred (i.e. the difference between Stour Marine's Gross Book Value and Net Book Value), which would point to a shorter depreciation schedule and higher ppm charges.

4. Stour Marine referred to a notional weighted average cost of capital (WACC) estimate of [redacted] in its submissions. However, Stour Marine did not necessarily consider this to be a reliable estimate as it had not conducted analysis with any degree of sophistication of its cost of capital. For our revised cost estimate we have therefore applied the pre-tax real WACC of 11.5% from the 2007 MCT model.⁸⁴

5. Network cost estimates are the sum of opex, depreciation and cost of capital. We have applied a 25% allocation of network costs to voice termination in line with the 2007 MCT model.⁸⁵ As Stour Marine's volumes relate to off-net and on-net incoming calls we have also adjusted Stour Marine's volumes to only include off-net volumes, which it has estimated are around [redacted] of total voice volumes.

6. In its estimates, Stour Marine included "other non network charges" of [redacted]. This comprised "interest bank and other non network charges." In the first row for this cost item, we have inferred a value by using it as a residual value that would yield a [redacted] constant estimate in NPV terms over 5 years. Under our revised estimates (shown in the second row for this cost item), this figure has been adjusted to reflect a 12.5% allocation of total administration costs to termination consistent with the 2007 MCT model.⁸⁶

7. No spectrum costs were included in either estimate as Stour Marine employs unlicensed spectrum, and hence they are not subject to any licence payments.

8. The network externality surcharge was not added to either estimate since this was excluded by the CC in its determination of the charge controls for the national MNOs.

A2.8 The cost estimates shown in Table A2.2 show first our "calibration" calculations – which convert Stour Marine's own calculations into a five year view of costs. This yields an overall cost of [redacted] ppm, which excludes the [redacted] ppm transit charge paid by Stour Marine to C&W for traffic terminating on Stour Marine's network. There is a question whether Stour Marine's payment to C&W should in fact be included. There are arguments that point in different directions:

- (i) On the one hand, we would not normally allow for "pure" transit charges when setting regulated termination charges (in particular because industry convention is that it is the calling party network that would ordinarily pay for any transit – i.e. under the "calling party pays" (CPP) convention); and
- (ii) On the other hand, it may be that Stour Marine's payment of this transit charge to C&W includes or relates to services other than "pure" transit. For example, Stour Marine may have effectively contracted out to C&W the provision of some of its network infrastructure to support termination and origination.
- (iii) We have requested further information on the particular services Stour Marine receives from C&W. However, it is still unclear whether this charge relates only to "pure" transit services or whether it reflects payment for other network services that could be classified as core network activities used to provide termination.

A2.9 In the second stage of our calculations for each cost category, we have applied revised assumptions, for example, over the allocation of network costs to termination (Notes 1 to 8 of Table A2.2 above explain in more detail the

⁸⁴ See A18.71 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

⁸⁵ See A14.69 at http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

⁸⁶ See A15.105 at

http://www.ofcom.org.uk/consult/condocs/mobile_call_term/statement/statement.pdf

assumptions we have applied to derive revised cost estimates). The result of applying these different assumptions yields an estimated cost of termination of [redacted] ppm (or [redacted] ppm including the transit payment by Stour Marine to C&W).

- A2.10 Care is required, however, with the interpretation of these figures. In particular, these results are underpinned by Stour Marine's estimates of demand for its service in 2009, which, in the absence of better information, we assumed would stay constant over a five year timeframe (for the purpose of our calibration exercise). Given that Stour Marine's service offering is relatively recent, it has explained that it cannot determine with very much accuracy projections of traffic, particularly as a result of not being able to offer full interconnectivity with all mobile providers. In addition, some volume uncertainty arises as Stour Marine's service proposition is currently unique to specific geographic footprints reflecting the leisure and marina market sector. In the time frame available, it is hard to determine reasonable projections for the growth of this addressable market. Given the uncertainty over traffic volumes and the effect on costs there could be quite different termination unit cost estimates. We have therefore conducted some sensitivity analysis which suggests a range for unit costs based on variation in traffic alone of 0.4 ppm to [redacted] ppm (or [redacted] ppm to [redacted] ppm if the full ppm payment to C&W for inbound calls is included).⁸⁷
- A2.11 Another uncertainty in our cost estimates relates to cost allocation assumptions. In particular, in calculating the above cost estimates, we have applied alternative assumptions over the allocation of costs to voice termination from those used by Stour Marine. We have based our alternative assumptions on those applied in the 2007 MCT model (see notes 5 and 6 to Table A2.2 for further details). It is unclear whether these assumptions are appropriate in estimating the cost of termination on Stour Marine's network. For example, the general MCT cost allocation includes particular assumptions over the mix between incoming and outgoing calls as well as the mix between data and voice calls. These were designed to approximate the routing of traffic and usage of assets on average in a national mobile network but may not necessarily apply to Stour Marine's service.
- A2.12 Another issue specific to Stour Marine in relation to unit cost estimates is that they are largely based on outturn call volumes at the marina locations it is currently serving. It is difficult to determine how its costs would vary in response to greater call volumes at those sites. It could also be the case that expansion of its business to other marinas or sites may be another driver of volume growth, however, how this would in turn drive costs is not clear. For example, the costs of serving other areas may not be the same as its current sites. Further roll-out may be a more "marginal" business decision, as Stour Marine may encounter lower volumes of customers and greater costs. This point was made in Section 4.0 of Stour Marine's main submission, where it noted that: "*Smaller capacity sites require a more costly solution per customer as is usual in this type of network.*"
- A2.13 The main source of difference between our costs estimates and Stour Marine's is around the appropriate allocation of those total costs between off-net termination and other call types. Our allocation assumptions suggest a lower proportion of total network costs should be allocated to termination than indicated by Stour Marine.

⁸⁷ This volume sensitivity was applied by keeping off-net voice call termination volumes constant in the first year (based around Stour Marine's estimates of outturn call volumes). We then used information from Stour Marine's forecasts to uplift volumes in years 2 to 5 (which suggest approximately double the volumes in year 2 onwards). As a downside scenario we applied a symmetrical assumption that volumes were halved in years 2 to 5.

Under certain assumptions, our estimates suggest a value of [X] ppm (or [X] ppm including the payment of [X] by Stour Marine to C&W for inbound traffic). However, as discussed above, the assumptions we used to derive this estimate are based on the application of the assumptions in the 2007 MCT model to allocate costs to termination and a particular view of volumes on Stour Marine's network. With a higher allocation of costs to termination we would be closer to Stour Marine's own estimates. Further, given the significant uncertainty over call volumes, applying different volume assumptions might suggest a wider range of costs as illustrated by our sensitivity analysis above.

- A2.14 Taking into account volume uncertainty and the inclusion or exclusion of payments to C&W for inbound traffic, we estimate a range for the unit costs of Stour Marine's service of 0.4 to 2.1 ppm (in 2010/11 prices) based on a modelling framework as comparable as possible – given the time and information available – to that used in the 2007 MCT cost model.

Evaluation of cost evidence submitted by O2 and T-Mobile

- A2.15 In O2's submission it stated that we should base Stour Marine's termination rate: *"... on the prevailing fixed WiFi provider rate, but to make an additional allowance for the "mobility" element of Stour Marine's core network. This is because the technology employed by both fixed WiFi providers and Stour Marine is based on the IEEE 802.11x standard. O2 believes that BT has entered into reciprocal arrangements with fixed WiFi providers, paying them on average 0.3ppm for terminating calls. O2 offered Stour Marine twice this amount, to reflect the additional cost of the mobile element of Stour Marine's service."* However, apart from O2's reference to its view of the average fixed termination rate of 0.3 ppm, O2's response did not provide explicit evidence that 0.6 ppm would be reflective of Stour Marine's termination costs. O2 argues that the cost of transit should be excluded from the cost assessment.
- A2.16 T-Mobile also provided a submission to Ofcom, but it did not submit specific cost evidence in relation to Stour Marine. However, it noted that MTRs are charges to meet the incremental cost of providing capacity for network use related to call termination. In this respect it argued that the costs of Stour Marine's WiFi network are already recovered by separate subscription charges. As such, T-Mobile argued that the *"only costs of termination are those associated with call routing via a soft switch in the Stour Marine core network. However, these will be insignificant and do not justify a charge of c 4 ppm."*

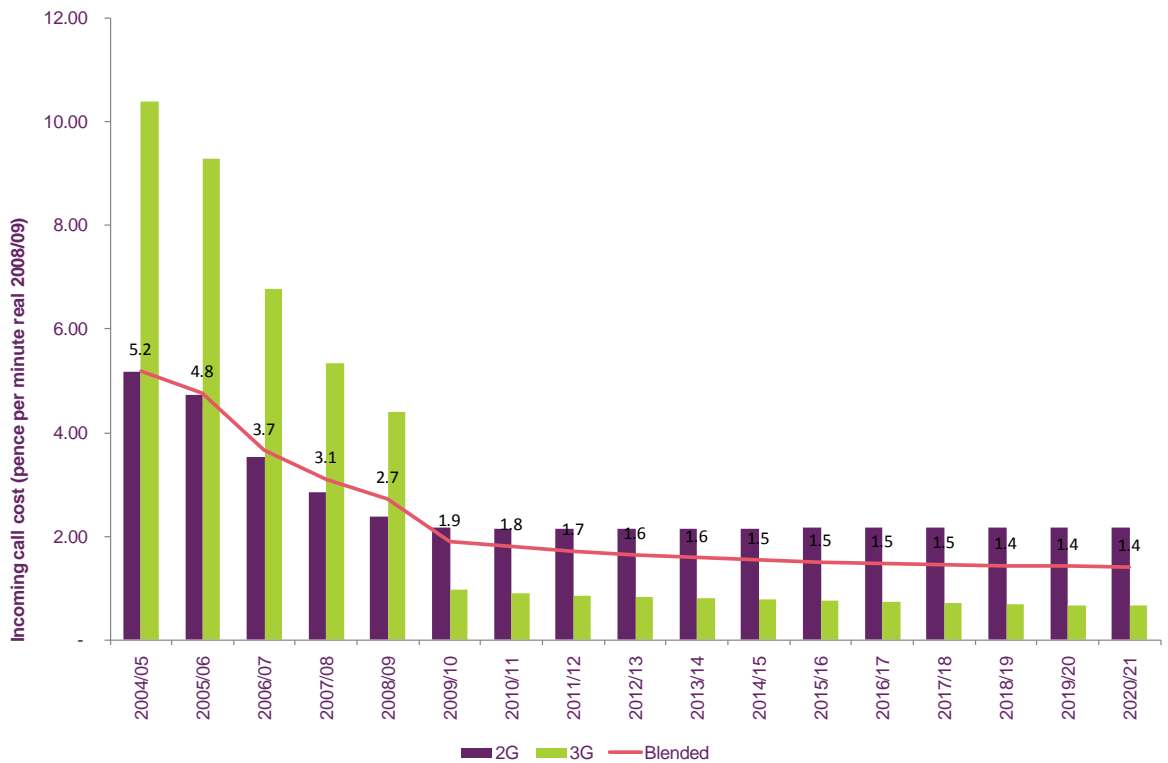
Ofcom's mobile call termination cost model

- A2.17 To provide greater context to the above estimates of Stour Marine's unit costs, we have also included consideration of national 2G/3G efficient unit costs of termination. The current MCT charge controls for the 2G/3G incumbent MNOs were set on the basis of forecast unit costs for 2010/11 of 4.0 ppm in 2006/07 prices (4.4 ppm in 2010/11 prices). This reflects the costs, asset price trends, volumes and other assumptions made at the time (including those made following the revisions to the cost model in light of the CC's determination). It seems likely that the efficient unit costs of MCT for an incumbent MNO are now much lower than forecast at the time the charge controls were set.

A2.18 Ofcom is currently consulting on proposals for a new MCT charge control from 2011 to 2015 in the 2010 MCT Consultation.⁸⁸ In this consultation we produced an updated cost model and, using this model, published preliminary estimates of the unit costs with the latest available information. The outputs of the modelling in this consultation are based on analysis of the MNO’s most recent cost information, revised estimates of the cost of equipment for 2G/3G services, and the evolution of traffic and developments like site sharing.

A2.19 In Figure A2.2 below, we show the outputs of our latest 2G/3G MNO cost analysis including a contribution to common costs (i.e. LRIC+), as this is more consistent with the cost standard that was previously used in the 2007 MCT model and from which the current charge controls were set.⁸⁹

Figure A2.2 : LRIC+ unit costs of incoming 2G and 3G voice (2008/09 prices)



Source: Ofcom, April 2010

A2.20 On the basis of these updated input assumptions it appears that the unit costs for a national 2G/3G MNO are around 1.8 ppm in 2010/11 in 2008/09 prices, equivalent to 1.9 ppm adjusted to 2010/11 prices.

A2.21 Clearly, these latest unit cost estimates are preliminary and we are still in the process of consulting stakeholders which may alter the final estimated unit costs produced by our model.

⁸⁸ http://www.ofcom.org.uk/consult/condocs/wmctr/wmvt_consultation.pdf

⁸⁹ In the 201 MCT Consultation, we are consulting on two possible cost standards to be used to calculate efficient termination costs, one cost standard only includes the long run incremental costs of termination (pure LRIC). The other also includes a contribution to common costs (i.e. LRIC +).

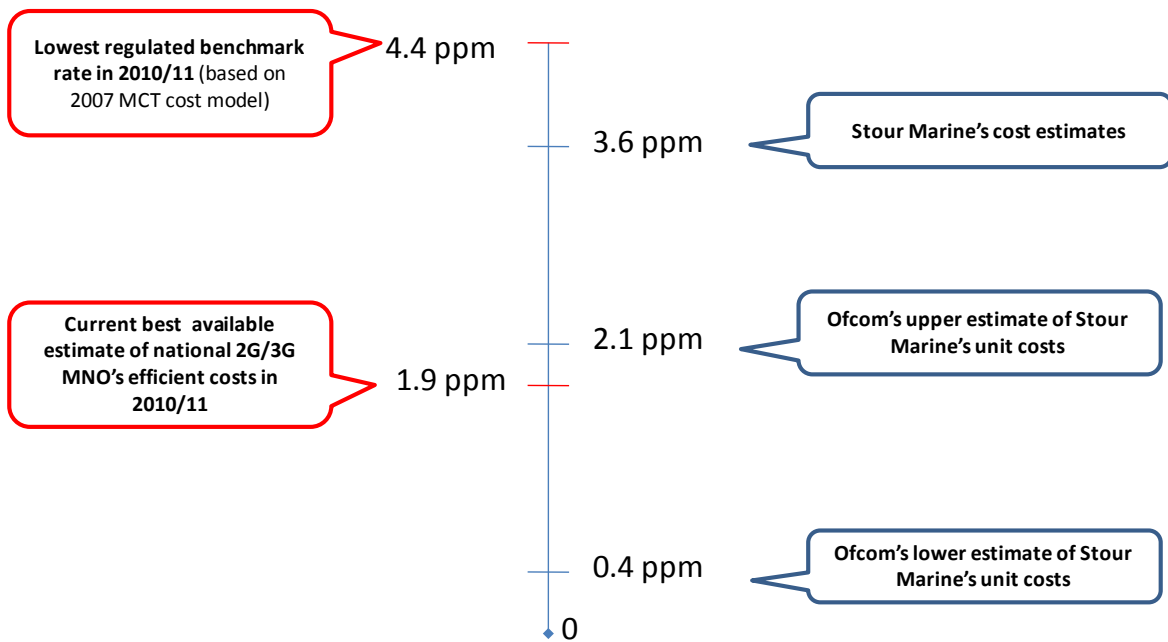
Summary of cost estimates

A2.22 In the above discussion we set out Stour Marine's own estimate of its costs and our own range of estimates under alternative assumptions. Furthermore, we have set out estimates of the national average unit costs termination for an efficient 2G/3G operator. Figure A2.3 below provides a summary of these cost estimates.

Figure A2.3: Summary of different unit cost benchmarks (2010/11 prices)

Estimates of efficient 2G/3G operator's unit costs

Estimates of Stour Marine's unit costs



Source: Ofcom,

Annex 3

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

- A3.1 Sections 185 to 191 of the 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 Act. Section 186 of the Act requires us to resolve a dispute referred which meets the requirements of section 185. Our powers to impose remedies to resolve disputes are set out in section 190 of the Act.
- A3.2 Our dispute resolution powers in the Act derive from the European Common Regulatory Framework, in particular, the Framework Directive and the Access Directive.⁹⁰ 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.
- A3.3 Article 5(4) of the Access Directive is implemented through the dispute resolution procedures set out in section 185 to 191 of the Act and Article 8 of the Framework Directive has been implemented in section 4 of the Act. Under section 4(2) of the Act, we are required to act in accordance with the six Community requirements when exercising our functions under the Act in relation to disputes referred to us under section 185. The six Community requirements set out in section 4(3) – (10) give effect, among other things, to the requirements of Article 8 of the Framework Directive and are to be read in accordance with them.
- A3.4 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;
 - 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

⁹⁰ 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 such compliance with certain international standards as is necessary for facilitating service interoperability and securing freedom of choice for the customers of communications providers.

A3.5 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 derive 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.

A3.6 Section 3 of the 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 Act.

A3.7 Section 3(1) of the 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.”

A3.8 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 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.”

A3.9 Section 3(3) of the 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.”

A3.10 Section 3(4) of the 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.

A3.11 In performing the principal duty of furthering the interests of consumers specifically, section 3(5) of the 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.

A3.12 Where it appears to us that any of our general duties under section 3 of the Act conflict in a particular case, we must secure that the conflict is resolved in the manner we consider best in the circumstances.⁹¹ Similarly, we must secure that any conflict between the Community requirements set out in section 4 of the Act is resolved in the manner we consider best in the circumstances.⁹² Where it appears that a general duty under section 3 of the Act conflicts with one or more duties under section 4 of the Act, priority is given to the duties set out in section 4 of the Act.⁹³

A3.13 We also exercise our regulatory functions according to the following regulatory principles:⁹⁴

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

⁹¹ Section 3(7) of the Act.

⁹² Section 4(11) of the Act.

⁹³ Section 3(6) of the Act.

⁹⁴ http://www.ofcom.org.uk/consult/condocs/plan/annual_plan/regulatory_principles.pdf

- 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.

Annex 4

Responding to this consultation

How to respond

- A4.1 Ofcom invites written views and comments on the issues raised in this document, to be made **by 5pm on 3 June 2010**.
- A4.2 Ofcom strongly prefers to receive responses using the online web form at http://www.ofcom.org.uk/consult/condocs/draft_deter_stour_marine_o2/, as this helps us to process the responses quickly and efficiently. We would also be grateful if you could assist us by completing a response cover sheet (see Annex 3), to indicate whether or not there are confidentiality issues. This response coversheet is incorporated into the online web form questionnaire.
- A4.3 For larger consultation responses - particularly those with supporting charts, tables or other data - please email matthew.peake@ofcom.org.uk attaching your response in Microsoft Word format, together with a consultation response coversheet.
- A4.4 Responses may alternatively be posted or faxed to the address below, marked with the title of the consultation.
- Matthew Peake
4th Floor
Competition Group
Riverside House
2A Southwark Bridge Road
London SE1 9HA
- Fax: 020 7783 4109
- A4.5 Note that we do not need a hard copy in addition to an electronic version. Ofcom will acknowledge receipt of responses if they are submitted using the online web form but not otherwise.
- A4.6 It would be helpful if you can explain why you hold your views and how Ofcom's proposals would impact on you.

Further information

- A4.7 If you want to discuss the issues and questions raised in this consultation, or need advice on the appropriate form of response, please contact Matthew Peake on 020 7783 4160.

Confidentiality

- A4.8 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, can you please specify what part or whether all of your response should be kept confidential, and specify why. Please also place such parts in a separate annex.

- A4.9 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.
- A4.10 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

- A4.11 Following the end of the consultation period, Ofcom intends to publish a final Determination by 11 June 2010.
- A4.12 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

- A4.13 Ofcom seeks to ensure that responding to a consultation is easy as possible. For more information please see our consultation principles in Annex 2.
- A4.14 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.
- A4.15 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 5

Ofcom's consultation principles

A5.1 Ofcom has published the following seven principles that it will follow for each public written consultation:

Before the consultation

- A5.2 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.
- A5.3 We will be clear about who we are consulting, why, on what questions and for how long.
- A5.4 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.
- A5.5 We will consult for up to 10 weeks⁹⁵ depending on the potential impact of our proposals.
- A5.6 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.
- A5.7 If we are not able to follow one of these principles, we will explain why.

After the consultation

- A5.8 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.

⁹⁵ In the case of disputes we will consult for ten working days from the publication date of the draft determination; this reflects the four month deadline for Ofcom to issue its final determination.

Annex 6

Consultation response cover sheet

- A6.1 In the interests of transparency and good regulatory practice, we will publish all consultation responses in full on our website, www.ofcom.org.uk.
- A6.2 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.
- A6.3 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.
- A6.4 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/.
- A6.5 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.