

# **Submission to the Commerce Commission on the revised MTAS Undertakings**

- Public version

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## Introduction and overview

We have been asked by 2degrees to provide comments on the Revised MTAS Undertakings<sup>1</sup> submitted to the Commerce Commission by Telecom and Vodafone. In our view, Telecom and Vodafone's Undertakings are unlikely to allow effective competition to flourish in the New Zealand mobile market and fail to meet the Commerce Commission's on-net price crosscheck. It is also our view that the calling MTRs submitted in 2degrees' revised undertakings (2 October 2009) are inefficiently high.

Sections 1 and 3 of this submission respectively consider the likely impact of the duopolists' Undertakings on the competitive supply of calls and texts. Section 2 considers the Commission's on-net price crosscheck and applies it to calls. The on-net price crosscheck for texts is applied in section 3.

The duopolists' submissions that accompanied their Undertakings also make some claims that deserve brief responses. Section 4 considers Vodafone's view that its proposed SMS rates are so low that no cost modelling is necessary and also discusses set-up cost charges. Section 5 makes some comments on Telecom's and Vodafone's discussions of the cost-benefit analysis associated with their Undertakings. A conclusion is provided in section 6.

### **1. The proposed MTRs would likely prevent effective competition on voice**

The duopolists' proposed call MTRs will likely prevent effective competition from emerging in the supply of mobile calls. In particular, such MTRs will allow the duopolists to engage in on-net discounting as means of softening competition both between themselves, and especially from 2degrees.

For example, if Telecom's 2010 Undertaking MTR of \$0.12 were applied across the market, then 2degrees would be at a substantial competitive disadvantage when making a competitively comparable offer against calling packages from Telecom or Vodafone that included substantial on-net tariff discounting. As an illustration, consider 2degrees' position when competing with Telecom or Vodafone, should either duopolist retail a plan similar to Vodafone's Starter 2000 plan (a commercial offering that includes substantial on-net discounts in the form of 2000 on-net texts and free calling and SMS to a BestMate).<sup>2</sup> Adopting assumptions that would tend to understate the harm to

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<sup>1</sup> Submitted 2 October 2009, hereafter referred to as "Undertakings".

<sup>2</sup> Starter 2000 is described in Concept Economics' cross-submission dated 18 August 2009 (hereafter Concept's cross-submission), section 3.1.

2degrees,<sup>3</sup> applying the call MTR of \$0.12 (and Telecom's proposed SMS rates), then 2degrees ex-GST retail revenue net of termination outpayments would be \$14.90 for a customer that only takes moderate advantage of the discount, and even less for a customer with a more realistic usage profile. From this, 2degrees would need to recover any handset subsidies and network costs, making the viability of such an offer questionable. In contrast, the duopolists would earn closer to \$30 from the same customer. This illustration follows the worked example contained in the Concept Economics cross-submission but with adjusted MTAS rates.

The 50% difference in revenues ( $(\$30 - \$14.90) / \$30$ ) arises purely as an artefact of the \$0.12 MTR and the text termination rate, rather than being based on any differences in the resources the competing carriers use to supply service. Thus, even if 2degrees is as efficient as, or more efficient than, Telecom or Vodafone, it would earn substantially less than what Telecom or Vodafone would earn despite offering the same package. This arbitrarily handicaps 2degrees' capacity to compete with Telecom and Vodafone, that is, handicaps the only carrier likely to bring competitive pressures to the New Zealand market. Moreover, such low margins may ultimately result in 2degrees' failure.<sup>4</sup>

While these calculations (and those that follow) omit revenues from inbound traffic, taking account of inbound revenues would, on average, increase the difference between the revenues gained by the duopolists, and those obtained by 2degrees. This is because, given 2degrees lower retail off-net prices, and the duopolists' advantage in setting on-net prices, less traffic, on a per customer basis, flows onto 2degrees' network than off.

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<sup>3</sup> The assumptions are identical to those applied in Concept's cross-submission, in section 3.1, except for the following adjustments: some revenue from voice mail calls is included (making the package more profitable to 2degrees); and there is a 1.22 to 1 ratio between outbound and inbound SMSs on 2degrees network (which implies a per text MTR of \$0.0078 under the Telecom Undertaking – that is,  $(\$0.03 * 5 + \$0.08 * 10) / 122$ ).

The ratio of the last assumption [VRI, 2°RI] [VRI, 2°RI] the current imbalance that 2degrees has with Vodafone (of approximately [VRI, 2°RI] [VRI, 2°RI] to 1), but is [VRI, 2°RI] [VRI, 2°RI]. As a result, it likely overstates the net revenues 2degrees would earn *when making an offer equivalent to the Starter 2000 plan*. The presently observed imbalance occurs because of the present difference between Vodafone's on-net rates and 2degrees' retail prices. In our example, 2degrees sets off-net prices so as to offer equivalently attractive prices to the Starter 2000 plan. Such prices would be much lower than those presently offered by 2degrees. As a consequence, the traffic imbalance between 2degrees and an on-net discounter (such as Vodafone, but also Telecom, should it choose to price in that way) would be substantially higher than [VRI, 2°RI] [VRI, 2°RI] to 1.

<sup>4</sup> Even with Vodafone's lowest call MTR of \$0.0375 on second by second basis (applying a 25% mark-up to convert the minute plus second rate to a second by second rate) and its text rate of \$0.012, the difference in revenues on the customer of the example is close to \$6 (2degrees almost earns \$25.50, while either duopolist would earn over \$31). 2degrees advises that the minute to second mark-up should be 28.5%.

Under other calling plans which have even more generous on-net traffic offers, 2degrees' situation would be even worse. One such plan is Vodafone's Mega 20 plan which, in comparison to the Starter 2000 package, offers 190 additional minutes for an increase of \$8.89 plus GST. In other words Vodafone effectively provides the extra on-net minutes for around \$0.047 plus GST per end-to-end calling minute.

We note that even in later years of the Undertakings, while it does become easier for 2degrees to compete with existing retail offers, 2degrees will remain at a competitive disadvantage to Vodafone and Telecom. For example, applying Telecom's 2014 rate of \$0.07 per voice minute to the Starter 2000 example shows that 2degrees' retail revenue net of termination payments would be around 30% lower than that of Telecom and Vodafone.

## 2. The implied maximal efficient cost of voice calling

The Commission suggested a rule-of-thumb or rough cross-check: that the duopolists' on-net retail prices provide a means of estimating the *maximum* efficient level of cost recovery that MTRs should support, being one half of 82% of each duopolist's average on-net prices.<sup>5</sup> This approach indicates the maximal allocation of costs to call minutes that the duopolists have chosen themselves. This is a maximal estimate since it would be unusual for profit-maximising firms, and especially unusual for the present duopolists both of whom have substantial market power, to set prices that do not allow recovery of efficiently incurred costs.

Various versions of the duopolists' average on-net revenues have been submitted to the Commission. In some of these, subscription revenues have been allocated to call revenues. In our view, there is no basis for doing this to estimate the maximum costs that *can be attributed to call minutes*. In setting their retail prices, Telecom and Vodafone have already chosen how to allocate costs between subscriptions, calls, texts and other services. The prices they set for calls, in particular the lowest prices they set for calls, provide a maximal estimate of what costs can be attributed to call minutes.

On call minutes, [TRI, VRI]

[TRI, VRI]. Telecom and Vodafone's reported average on-net mobile calling prices are respectively [TRI, VRI] [TRI, VRI] per minute, which applying the Commission's cross-check would suggest call termination costs could not respectively exceed [TRI, VRI] [TRI, VRI] per minute.

In economics, there is generally only one efficient cost, the lowest cost of supply. Moreover, it is implausible that there would be a material exception to this rule in the case of Telecom and Vodafone. Both produce the same services in the same

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<sup>5</sup> For simplicity of discussion we adopt the Commission's estimate that retailing costs amount to 18% of the ex-GST retail price, but note that is a factual matter on which we have not passed any judgement.

circumstances. Even allowing for volume adjustments due to economies of scale (and it is debatable whether such an adjustment would be legitimate when it comes to considering efficient costs), it is not credible that the difference in the rule-of-thumb results as between the duopolists could represent a difference in the efficient costs incurred by them. As a result, the maximal termination cost for both carriers is likely to be less than [TRI, VRI] [TRI, VRI] per minute.

[TRI, VRI]

[TRI, VRI].<sup>6</sup> Of course, by that point in time, the response of Telecom and Vodafone to increased competition will likely have resulted in even lower retail on-net prices, and hence in an even lower implied maximal termination cost. Thus, the Telecom and Vodafone Undertakings may never have termination charges that are consistent with implied costs.

### 3. SMS rates

Telecom and Vodafone's reported average on-net mobile SMS prices are respectively [TRI, VRI] [TRI, VRI] per message, which applying the Commission's rule-of-thumb would suggest SMS termination costs could not respectively exceed, following the reasoning above, [TRI, VRI] [TRI, VRI] per text.

However, [TRI, VRI] [TRI, VRI] SMS termination costs. For example, we have demonstrated elsewhere<sup>7</sup> that the cost of supplying texts is essentially zero (for example, because texts are transmitted over signalling channels that are necessary for voice communications and because texts require very little capacity). Consequently, even if the efficient mark-up on termination costs substantially exceeded, to pick a number, a thousand percent, which would imply end-user demand for SMS that was extremely unresponsive to price, the efficient SMS termination price, including some contribution toward shared costs, would still be a tiny fraction of a cent.

Vodafone's Undertaking proposes an SMS rate of \$0.012 per text. Putting aside what the efficient SMS termination rate is likely to be, Vodafone's proposed rate is [TRI, VRI] [TRI, VRI] the maximal cost allocation implied by the Commission's rule-of-thumb [TRI, VRI] [TRI, VRI].

Telecom's Undertaking is even less appropriate. Telecom proposes bill and keep for SMS given a degree of traffic imbalance, but then applies very steep charges to traffic that is sufficiently out-of-balance: if traffic imbalance rises above 7%, then a charge of

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<sup>6</sup> [TRI, VRI] [TRI, VRI] on second by second basis (applying a 25% multiplier to convert the minute plus second rate to a second by second rate).

<sup>7</sup> Concept's cross-submission, page 21; see also the Conference discussion (2-3 September 2009).

\$0.03 per text applies to every text that lies in the 7-12% imbalance range, with any further imbalanced texts being charged \$0.08 per text.

Telecom justifies such charges as being necessary to prevent spam, but as discussion at the conference made clear, there are alternative and more effective means of handling spam than MTRs. Indeed, even carriers in markets where bill and keep applies, such as the US, have no difficulty in controlling spam.

Telecom's text rates would (1) provide all carriers with strong incentives to avoid unilaterally cutting off-net retail prices below the market's present (at least most broadly available) lowest level of \$0.08 plus GST (offered by 2degrees), (2) would prevent small entrants (notably 2degrees) from offering text bundles that effectively compete with on-net bundles such as those that Vodafone presently offers, and (3) for plausible levels of traffic imbalance created by on-net discounting, results in an average per SMS rate that exceeds the Commission's rule-of-thumb maximum.

Each of these points are dealt with in turn.

### ***Incentives to cut off-net SMS prices***

If any carrier unilaterally cut off-net retail prices (net of GST) below \$0.08, then, in the absence of matching price cuts from its rivals, the price-cutting carrier would observe an increase in outbound traffic imbalance that is not matched by inbound traffic. To the extent that the price cut resulted in a traffic imbalance of more than 1.12 outbound texts to every inbound text, the new per text price would be below the marginal cost of sending the text (being the artificially set termination fee of \$0.08). Of course, setting a below marginal cost price is exceptionally unlikely to be profit maximising, and hence would not generally be undertaken. Thus, to the extent that such traffic imbalance could occur, carriers would be discouraged from cutting prices below current levels.

This is a material concern. For example, given present retail prices, 2degrees respectively experiences traffic imbalance with Telecom and Vodafone of approximately [TRI, VRI, 2°RI] [TRI, VRI, 2°RI] Thus, under the Telecom Undertaking text termination rate structure any carrier is unlikely to cutting its retail off-net text prices below 2degrees current \$0.08 (ex-GST). This is because such a cut would risk pushing outbound texts beyond the 12% balance point, and then each additional text would earn less than the text termination fee thereby incurring losses. [TRI, VRI, 2°RI]

[TRI, VRI, 2°RI]

### ***An inability to compete with on-net discounts***

The preceding discussion demonstrated that the \$0.08 marginal rate for terminating texts places a floor under retail off-net text prices. In particular, it is implausible that a carrier would unilaterally cut retail prices below 2degrees current offerings.

The high marginal rates of the Telecom Undertaking, however, have an additional anti-competitive effect: they also prevent a carrier like 2degrees from vigorously competing given the presence of on-net discounting. Because 2degrees' market share will be substantially smaller than its rivals for the foreseeable future, it cannot, by merely offering on-net texting discounts, compete with on-net packages, such as those found in Vodafone's plans (for example, Starter 2000 and Mega 20). While 2degrees' on-net prices might be the same as Vodafone's (or Telecom's), they would not be as attractive because 2degrees' customers, instead of being able to reach almost half of the market on-net (as can be reached on Vodafone's or Telecom's networks), are only able to reach a few percent of the market on-net. However, if 2degrees were to cut off-net prices so as to make an offering that is more equivalent to the on-net discounts offered by one of the larger carriers, then it would find it experienced substantial increases in traffic imbalance. Under Telecom's Undertaking, this would, for the reasons given in the preceding subsection, be very costly, and be unlikely to ever be profit-maximising. Thus, Telecom's undertaking rules out such competition.

### ***Average per text rates exceed the Commission's rule-of-thumb maximum***

In any case, each of the following [TRI, VRI]

[TRI, VRI]: (1) Vodafone's Undertaking SMS termination charge; (2) under Telecom's Undertaking, the marginal charge that applies to any texts that are more than 7% out of balance;<sup>8</sup> (3) under Telecom's Undertaking, the average charge that applies to imbalanced texts only for any text imbalance that exceeds [TRI, VRI]

[TRI, VRI]<sup>9</sup> and (4) under Telecom's Undertaking the average charge that applies to all texts once the traffic imbalance is [TRI, VRI] [TRI, VRI].<sup>10</sup>

## **4. To cost or not to cost**

Vodafone make the claim that their proposed SMS rates are so low that the process of cost modelling of texting can be avoided should the Commission decide to recommend regulation.<sup>11</sup> This is mistaken in two respects:

- First, as noted in the preceding section, Vodafone's proposed rates are not low relative to costs.
- Second, proper cost modelling of termination costs would result in estimates of SMS costs with minimal additional investment if voice termination costs are modelled. Thus, avoiding testing Vodafone's claim would save little in expenses, but would likely to show SMS costs are substantially lower than Vodafone's proposed rates.

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<sup>8</sup> The marginal charges are \$0.03 per text for traffic imbalances between 7 and 12% and \$0.08 thereafter (see Telecom's submission that accompanied its Undertaking, 2 October 2009, paragraph 18).

<sup>9</sup> *Ibid*, paragraph 20.

<sup>10</sup> At a 24% imbalance, the average charge per SMS is [TRI, VRI] [TRI, VRI].

<sup>11</sup> Vodafone Undertaking, paragraph 19.

## **Set-up costs**

The Commission has indicated that it thinks it is reasonable that both Telecom and Vodafone can charge 2degrees set-up costs. It seems reasonable to assume that 2degrees must also incur set-up expenses to terminate inbound traffic from Telecom and Vodafone. Without evidence to the contrary, these are likely to be the same as the costs Telecom and Vodafone efficiently incur. If that is so, then it seems unnecessary to build these into the Undertakings. However, it is possible, for reasons not currently explained, that 2degrees costs might be somewhat lower than those of Telecom and Vodafone, and so a net payment might be due to Telecom and Vodafone. However, that is something that ought to be demonstrated rather than just asserted.

## **5. Telecom and Vodafone on CBA**

Both Telecom's and Vodafone's submissions argue that their proposed rates provide a net benefit that is higher than what would occur if regulation were imposed.<sup>12</sup> We do not wish to re-enter this debate beyond making a very simple point: the duopolists' focus is on matters that are peripheral to central issue before the Commission. That central issue is whether regulation, in contrast to what is contained in the Undertakings, would bring effective competition to the New Zealand mobile market.

The Commission's original cost-benefit analysis (CBA) was designed to answer a question that is not central to the present proceedings: whether regulation of MTRs, in the context of the Telecom-Vodafone duopoly and Telecom's near fixed telephony monopoly, would benefit end-users. The fixed-to-mobile (FTM) CBA analysis was developed to analyse a situation where entry was not on the cards. In such a case, regulation of MTRs largely transfers surplus from one group of end-users to another via carriers whose capacity to capture some of that transferred surplus is largely, if not entirely, unaffected by the regulation. In such a case, long-term benefits to end-users can only emerge if (1) regulated MTRs would lead to more efficient production choices, which create relatively small, but not unimportant, efficiency gains,<sup>13</sup> and (2) the carriers would be forced by *existing competitive pressures* to pass some of those efficiency gains on to end-users.

In contrast, the main point of interest in the present proceedings is what is required to ensure effective competition in the mobile market *where game changing competition from a third entrant is possible*. Thus, a continued focus on arguments about who gains and who loses due to changes in the FTM rate, and related arguments about pass-through and waterbed effects (whether on the FTM or the mobile-to-mobile rate), largely

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<sup>12</sup> For example, Telecom's Undertaking, paragraph 11, and Vodafone's Undertaking, paragraphs 22, 33, and 41.

<sup>13</sup> These are the so called Harberger welfare triangles, and are said to be second order gains (as they are related to a small fraction of total production, rather a first order gain, which is related to total volumes).

miss the crucial point—that MTR regulation today can bring effective competitive pressure from a third player that will in turn bring both substantial price cuts and cost savings to the industry. The beneficial effects of such competitive changes swamp the effects that Telecom and Vodafone focus on.<sup>14</sup>

## 6. Conclusions

The present inquiry arose because MTRs were inefficiently high. Such rates have the inefficient effect of either preventing successful entry, or of preventing a new entrant from engaging in effective competition, most notably when against on-net discounting from the established duopolists. The duopolists' Undertakings were meant to address this difficulty.

Unfortunately, for both voice and text, the Undertakings do not go far enough. Only Vodafone's Undertaking comes close to a reasonable (at least applying European Union standards<sup>15</sup>) MTR in calling, but fails to achieve such a rate for some years, by which point the proposed rate may well no longer be reasonable.

In contrast, Vodafone's SMS rates, though they embody substantial cuts, are still excessive by any measure, while Telecom's SMS rates are actually worse than present rates. Telecom's SMS MTR schedule would prevent any further competition in text pricing from developing. That schedule: (1) prevents any carrier from unilaterally cutting off-net text prices below the market's current lowest price, essentially removing future competition of that type, and, (2) prevents, just as present rates do, 2degrees from competing across the board (and if applied might play a central role in forcing 2degrees' exit). This is critical since only across-the-board competition from 2degrees will rapidly lower average prices in New Zealand and restore any-to-any connectivity, allowing New Zealanders to readily call other New Zealander regardless of the call recipient's network choice. This is in contrast to the inefficient "closed-net" traffic flows on-net discounting presently and intentionally creates.

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<sup>14</sup> Cost reductions are an example of first order efficiency improvements, as they generally apply across the full volume of production. As before, price declines to more efficient levels create second order efficiency gains (but pass first order quantities of surplus from producers to end-users). However, the difference is that MTR regulation in the present case has the potential to substantially change the extent of competition in this market, and hence to significantly lower both costs and prices, leading to first order efficiency improvements and transfers of surplus to end-users that would swamp the transfers considered in the earlier analysis. Yet, a substantial change in competition is exactly what Telecom and Vodafone are not modelling.

<sup>15</sup> Concept's original submission dated 9 July 2009, and cross-submission both argued that a case could be made for bill and keep in the case of voice calls, and that, in any case, first best MTRs are very likely to be substantially less than Vodafone's lowest rate of \$0.03 per minute.