

**Consideration of whether to commence an investigation into whether to  
omit the Mobile Termination Access Services from Schedule 1 of the  
Telecommunications Act 2001**

**Date:** 23 September 2015

**The Commission:** Dr Stephen Gale

Pat Duignan

Elisabeth Welson

Regulation Branch, Commerce Commission

Wellington, NEW ZEALAND

23 September 2015

## **Consideration of whether to commence an investigation into whether to omit the Mobile Termination Access Services from Schedule 1 of the Telecommunications Act 2001**

In accordance with Clause 1(3) of Schedule 3 of the Telecommunications Act 2001 (the Act), the Commerce Commission New Zealand (the Commission) has considered whether there are reasonable grounds to commence an investigation into whether the designated Mobile Termination Access Service (MTAS) should be omitted from Schedule 1 of the Act. After careful consideration, the Commission has decided that there are no reasonable grounds to commence an investigation to determine whether MTAS should be omitted from the Act.

### **Summary of our decision**

1. MTAS is a wholesale service supplied by a Mobile Network Operator (MNO) which allows subscribers on other networks to communicate (either by way of a voice call or an SMS<sup>1</sup>) with subscribers of that mobile network operator. MTAS is an essential input required in order to complete retail calling and messaging services between networks ('off-net' services).
2. MTAS became a designated service in Schedule 1 of the Act on 23 September 2010.
3. Clause 1(3) of Schedule 3 of the Act requires that the Commission consider, at intervals of not more than five years after the date on which a designated service or specified service comes into force, whether there are reasonable grounds for commencing an investigation into whether the service should be omitted from Schedule 1 of the Act. The Commission is required to consider whether there are reasonable grounds to investigate by 23 September 2015.
4. The reasons for our decision are set out in the following sections. In summary, we consider that there are no reasonable grounds to commence an investigation into omitting MTAS because:
  - 4.1. each MNO has a monopoly over termination of calls on its network and a subscriber under the Calling Party Pays (CPP) principle will typically not be sensitive to the cost of incoming calls. This means the MNO may increase the wholesale MTAS price without risk of losing its subscribers;
  - 4.2. the ability to increase MTAS prices in the absence of regulation can distort downstream competition between MNOs, in particular where there are asymmetric market shares. Such distortions, which were evident in the form of high differentials between on-net and off-net prices, were one of the concerns which led to designation of MTAS in 2010;

---

<sup>1</sup> Short Messaging Service.

- 4.3. high MTAS prices also raise the price of fixed-to-mobile calls and distort competition between fixed and mobile originated calls, as MTAS is the major cost of completing calls which originate on fixed networks;
  - 4.4. the Commission's annual monitoring reports indicate an improvement in competition since the regulation of MTAS, including less market concentration in the industry, an increase in the proportion of off-net calls, and a reduction in retail prices relative to some other OECD countries;
  - 4.5. there appears to be no competition benefit arising from deregulation and a relatively low cost of continuing regulation; and
  - 4.6. given that MTAS remains a monopoly service supplied by each MNO, deregulation would in our view create the risk of the distortions referred to above re-emerging, and therefore deregulation of MTAS would be unlikely to promote competition.
- 5. We note that our decision to retain MTAS as a designated service is also consistent with international practice, with mobile termination remaining subject to regulation as a result of recent regulatory decisions in Australia and the United Kingdom, and remaining on the European Commission's recommended list of markets which still warrant ex ante regulation.
  - 6. We have completed our consideration of the matter and have concluded that there are no reasonable grounds to investigate whether MTAS should be omitted from the Act. As a result, MTAS will remain as a designated service as part of Schedule 1 of the Act.

## **Legislative framework**

- 7. Part 2 of Schedule 1 of the Act describes MTAS as:

Termination (and its associated functions) on a cellular mobile telephone network of any or any combination, of the following:

- (a) voice calls originating on a fixed telephone network:
- (b) voice calls originating on another cellular mobile telephone network:
- (c) short-message-service (SMS) originating on another cellular mobile telephone network

For the avoidance of doubt, these services include the termination of internationally originated voice calls and SMS, and voice-over-Internet-protocol-originated voice calls, where these are handed over at a mobile switching centre in New Zealand.

- 8. Clause 1(3) of Schedule 3 of the Act requires that the Commission considers, at intervals of not more than five years after the date on which a designated service or specified service comes into force, whether there are reasonable grounds for commencing an investigation into whether the service should be omitted from Schedule 1 of the Act.

9. We may not consider under clause 1(3) of Schedule 3 of the Act whether or not there are reasonable grounds to commence an investigation into omitting a designated service or specified service earlier than 12 months before the end of the five year interval. Where a designated service or specified service is amended or altered, the effective date of that service coming into effect is the date the altered or amended service came into effect.
10. The MTAS designated service came into effect on 23 September 2010. Therefore, the Commission must consider whether or not there are reasonable grounds to commence an investigation into omitting MTAS by no later than 23 September 2015.
11. The Commission's review under clause 1(3) of Schedule 3 of the Act is limited to considering whether there are reasonable grounds for commencing an investigation into whether the service should be removed from Schedule 1. It does not extend to considering introducing a new service or amending an existing service.
12. If we decide that there are reasonable grounds for commencing an investigation into whether a designated service or specified service should be omitted from Schedule 1 under section 66(b), we must commence the investigation not later than 15 working days after making that decision.
13. In reaching a view, we must make the decision that will best give, or is likely to best give, effect to the purpose set out in section 18 of the Act.
14. Consistent with past decisions, we consider that reasonable grounds to investigate whether a service should be omitted from Schedule 1 exist where competition has developed to such an extent that continued regulation is unlikely to best promote competition in relevant telecommunications markets for the long-term benefit of end-users.

## Background to the MTAS

### Scope

15. MTAS is a wholesale service which is used by fixed-line and mobile network operators as an essential input to complete calls and SMS to other mobile networks.<sup>2</sup> MTAS incorporates mobile-to-mobile (MTM) voice termination, fixed-to-mobile (FTM) voice termination and SMS termination.
16. The inclusion of MTAS in Schedule 1 enabled the Commission to set the prices and terms by which mobile network operators terminate calls and SMS messages on their networks. On 5 May 2011, the Commission issued a STD which set price terms for the MTAS in accordance with the IPP<sup>3</sup>.

---

<sup>2</sup> Termination of calls on fixed networks is subject to regulation under the designated service 'Interconnection with a fixed PSTN'.

<sup>3</sup> Commerce Commission: *Standard Terms Determination for the designated services of the mobile termination access services (MTAS) fixed-to-mobile voice (FTM), mobile-to-mobile voice (MTM) and short messaging services (SMS)* Decision 724, 5 May 2011.

### The nature of termination

17. The key elements required to provide voice and SMS retail services are *network access, call origination, call conveyance*, and in the case of off-net services, *termination on other networks*.
18. *Termination* is generally defined as the last leg of routing a call from the originating customer to the terminating customer. Service providers sell voice, SMS, and data services in the retail mobile market. This includes a range of subscription services and the ability to make outgoing calls and SMS and use data services. Under the CCP model as used in New Zealand, the price of a call (or SMS) is paid for by the calling party. In the case of an off-net call (between different networks), the retail price of the call will include the wholesale price of the termination service. The wholesale termination charge is also the major cost of calls from the fixed network to the mobile network. The calling party pays for the termination service, rather than the call recipient.
19. As a result, the network operator that terminates the call can increase the wholesale termination rate without risk of its subscribers switching to another network. This gives rise to a termination monopoly in respect of each mobile network, which is discussed further below.

### Assessment of whether there are reasonable grounds to commence an investigation

#### Submissions

20. On 16 June 2015 we wrote to parties with an interest in the regulation of the MTAS services, inviting views on whether there are reasonable grounds for the Commission to commence an investigation into omitting these services from Schedule 1 of the Act.
21. Submissions were received from CallPlus, the Telecommunications Users Association of New Zealand (TUANZ), Spark New Zealand (Spark), Vodafone New Zealand (Vodafone) and 2degrees Mobile (2degrees).
22. Spark argued that there are three strong mobile operators in a competitive and innovative mobile market and that parties are able to agree commercial arrangements at cost. Spark further proposed deferring a decision for a period of one year should the Commission conclude that deregulation was not warranted at this time.
23. Vodafone also argued that the mobile market in New Zealand is competitive and that retail prices were now below OECD average. Vodafone also proposed deferring the Commission's review until completion of the 2020 regulatory review being undertaken by the Minister, and recommended that the Commission re-visit the matter in two years' time.
24. CallPlus, TUANZ, and 2degrees argued that there were no reasonable grounds for the Commission to commence an investigation, and that continued regulation of MTAS is necessary. CallPlus's view is that Mobile Termination Rates (MTRs) remain well above cost and that there are no market forces to ensure a reasonable MTR. CallPlus also

alluded to the potential issues that may arise in the fixed-line market, noting that all three MTAS access providers (Spark, Vodafone and 2degrees) also provide fixed-line services, while a number of fixed-line only service providers, such as CallPlus, do not have mobile networks. TUANZ referred to the difficulties for a new entrant without a regulated MTAS.

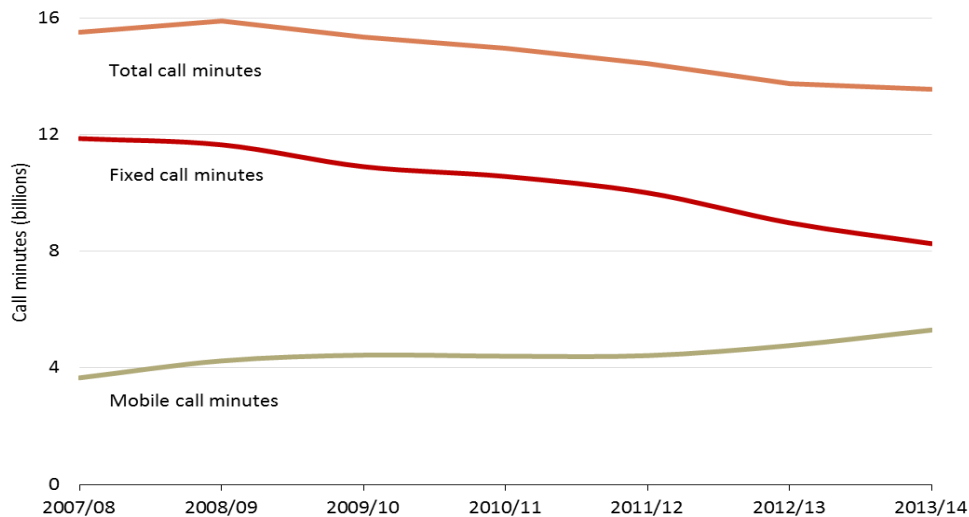
25. In its submission, 2degrees:
  - 25.1. indicated that regulated MTAS services are critical for mobile operators to compete in downstream retail markets, as the originating network must have access to mobile termination on other networks;
  - 25.2. argued that there remain strong commercial incentives in markets dominated by Spark and Vodafone to abuse market position and the dominant mobile network operators are incentivised to increase their competitor's costs and impose barriers to access; and
26. maintained that designation of MTAS as a regulated service provides certainty and stability to the market, and is a regulatory backstop recognised as necessary internationally.

### **Our assessment of current market conditions**

27. In considering whether there are reasonable grounds to commence an investigation, we have reviewed the market definitions that we used in our 2010 assessment (contained in the **Attachment**) that resulted in designation of the service, and considered whether competitive conditions in the supply of MTAS are likely to have improved.
28. It remains our view that the relevant market in which MTAS is supplied is the wholesale market for termination services on each mobile network. Each mobile network operator has a monopoly on terminating traffic on its network.
29. We agree with Spark's and Vodafone's submissions that New Zealand's retail mobile market is becoming more competitive. This is supported by the Commission's market evidence presented in **Figures 1-5** below. In our view, the increasingly competitive downstream market is, in part, a result of the regulation of MTAS, which imposed significant reductions in the price of MTRs since our May 2011 STD. Increased competition has benefited end users through lower retail prices, increased choice, and innovative service offerings.

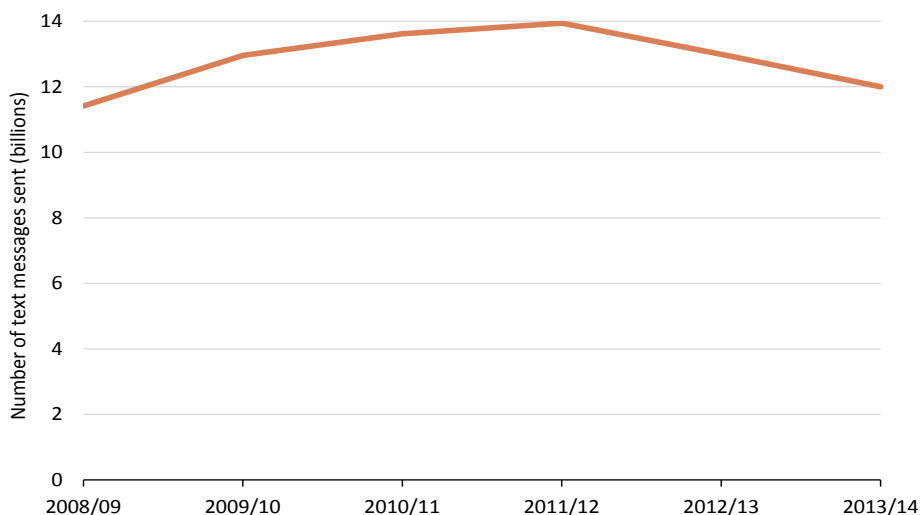
30. Switched voice calls continue to be a key telecommunications service. Although total switched voice calls have declined somewhat in recent years, switched mobile calls have continued to grow as can be seen in **Figure 1**. In the 2013/14 year there were 8 billion minutes of switched calls and 5 billion minutes of mobile calls.<sup>4</sup>

**Figure 1: Fixed, mobile and total calling minutes**



31. Similarly, SMS continues to be a key telecommunications service although total volumes have also declined somewhat in recent years to 12 billion, as can be seen in **Figure 2**.

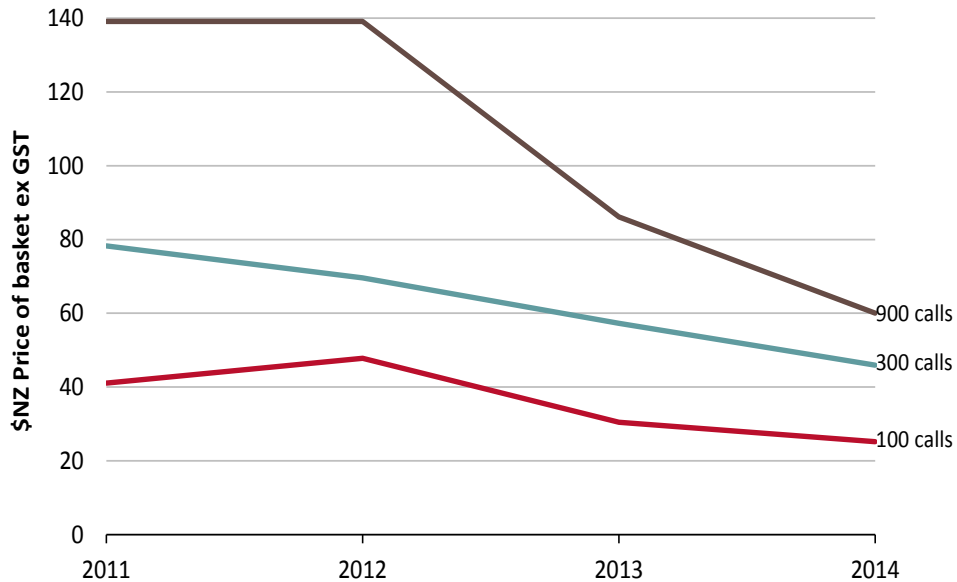
**Figure 2: SMS volumes**



<sup>4</sup> Figures 1-5 are taken from: Commerce Commission: *Annual Telecommunications Monitoring Report 2014*. 8 June 2015. <http://www.comcom.govt.nz/regulated-industries/telecommunications/monitoring-reports-and-studies/monitoring-reports/>

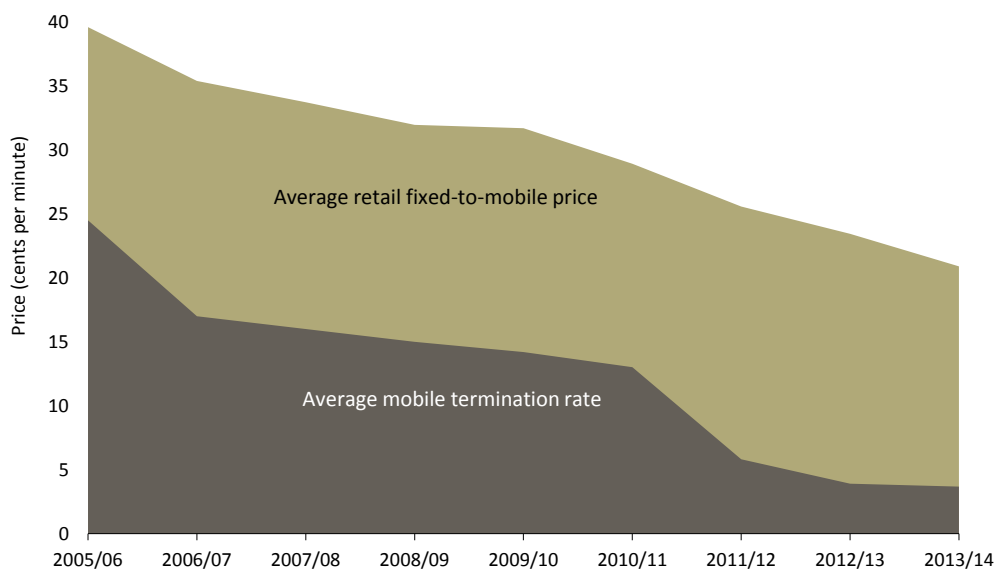
32. Since MTAS was regulated in 2011, the price of consuming a 'basket' of mobile calls and SMS has fallen dramatically, as can be seen in **Figure 3**.

**Figure 3: Trends in \$NZ price of filling higher-use OECD mobile baskets**



33. The average retail price of fixed-to-mobile calls has also fallen since MTAS was regulated and the mobile termination rate for voice calls reduced. The fall in the retail calling price has been more gradual than the fall in the wholesale termination rate as can be seen in **Figure 4**.

**Figure 4: Trend in average FTM wholesale and retail prices**

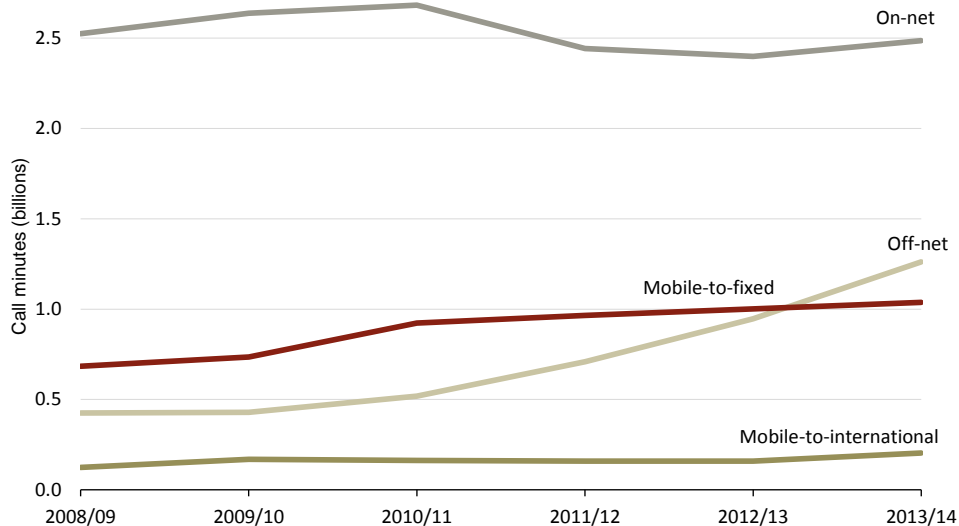


34. Another market feature that caused concern in 2010 was the very high level of on-net calling (and the relatively low level of off-net calling). The proportion of on-net calls



has declined in recent years as off-net calling has grown strongly, as can be seen from **Figure 5**.

**Figure 5: Mobile call volumes by call type**



35. However, as noted above, the supply of the upstream termination input is subject to market power. We do not consider that improvements in downstream competition imply any removal of regulation of the upstream wholesale MTAS input.
36. We do not agree with Spark's description of the market as containing 'three strong operators'. As noted in our *Annual Telecommunications Monitoring Report 2014*, while the overall market shares of Vodafone and Spark have declined in terms of subscribers since the entry of 2degrees, 2degrees gained only enough connections in 2013/4 to enable it to maintain its market share of approximately 24% of subscribers. 2degrees' share of revenues is less than that of its connections due to its smaller share of high-value customers.
37. International practice points to the mobile interconnection issue existing irrespective of the size of the mobile network operators. We are of the view that in the New Zealand context, removal of MTAS would result in MTRs increasing. Given the lack of alternatives to MTAS, there is a strong incentive for the well-established mobile network operators to raise their MTRs. There is little incentive on MNOs to take unilateral action to lower MTRs, as costs are passed to the end-user.

### Experience overseas

38. Termination services are recognised as an essential input for providing end-to-end services. Termination is widely recognised internationally as a bottleneck resource. National regulatory authorities in the UK and Australia have recently considered the rationale for regulating mobile termination and both have retained regulation. The

European Commission (EC) has also retained the wholesale market for mobile termination on its recommended list of markets that still warrant ex ante regulation.

### *The UK*

39. The United Kingdom's regulator Ofcom, in its recent review of the mobile termination market, noted that each mobile communications provider (MCP) has a 100% share in its relevant market and that each is '...in effect, a monopolist in the supply of mobile termination to its customers'.<sup>5</sup> Ofcom noted that:

In the absence of a requirement to provide network access to other communications providers (CP) on fair and reasonable terms, MCPs could refuse access to their network or provide access subject to unreasonable terms...

An originating CP whose interconnection request is rejected...or made subject to unreasonable terms, would not be able to connect its customers to customers of that MCP or would only be able to do so in a way which was likely to impair the service it offers, thereby harming the originating CP's customers. Refusals to interconnect, or the provision of interconnection on unreasonable terms, could also impede effective competition and thus, by extension, further harm end-users.<sup>6</sup>

### *Australia*

40. The Australian Competition and Consumer Commission (ACCC) in its recent final access determination for MTAS found that mobile network operators have a monopoly over the voice and SMS termination services on their networks. The ACCC also found that there were currently no effective substitutes for these services.
41. The ACCC concluded that in the absence of regulation, mobile network operators have the ability and incentive to deny, or set unreasonable terms of access to termination services, and that regulation of these services was in the long-term interests of end-users.<sup>7</sup>

### *European Commission*

42. In 2014, the EC revised its recommended list of markets which are susceptible to ex ante regulation.<sup>8</sup> The EC has retained 'wholesale voice call termination on individual mobile networks' as a market which still warrants ex ante regulation.<sup>9</sup> The EC found that there are there are no substitutes at the wholesale level, either currently or in the

<sup>5</sup> Ofcom: *Mobile call termination market review 2015-18*, 17 March 2015, para 4.22. [http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-call-termination-14/statement/MCT\\_final\\_statement.pdf](http://stakeholders.ofcom.org.uk/binaries/consultations/mobile-call-termination-14/statement/MCT_final_statement.pdf)

<sup>6</sup> Ibid, paras 5.16-17.

<sup>7</sup> Australian Competition & Consumer Commission: *Domestic Mobile Terminating Access Service Declaration Inquiry*, June 2014. <http://www.accc.gov.au/regulated-infrastructure/communications/mobile-services/mobile-terminating-access-service-declaration-review-2013/final-decision>

<sup>8</sup> European Commission (C2014) 7174, "Commission Recommendation of 9.10.2014 on relevant product and service markets within the electronic communications sector susceptible to *ex ante* regulation in accordance with Directive 2002/21/EC of the European Parliament and of the Council on a common regulatory framework for electronic communications networks and services", and Annex.

<sup>9</sup> See Market 2 of the EC Annex.

foreseeable future, which might constrain the setting of charges for termination in a given network.

### **Additional considerations**

43. We are aware that 'new' technologies and changes in how existing services in the market are delivered may in time have disruptive effects on the market. However, in our consideration we have confined our assessment to developments likely to have an impact on the markets in the near-future.
44. We note that the outcome of our consideration does not mean that regulation of MTAS would continue to be applied irrespective of market conditions until the Commission is required to reconsider the matter in 2020.
45. We have considered the development and adoption of Over-the-Top (OTT) services utilising Voice-over-Internet Protocol (VoIP). OTT services can potentially be a substitute for conventional mobile services. OTT services incur no termination charges when both parties have the OTT service on their device.
46. The European Commission recently concluded that at European Union level OTTs have only exercised limited competitive constraints so far, and noted:
 

...currently OTT services are not yet at a level in which they can be considered actual substitutes to the services provided by infrastructure operators, certain technological developments, such as the growing importance of smartphones and the forthcoming expansion of LTE will likely result in a continuous expansion of OTTs....it is foreseeable that the importance of these services will continue to grow and have a direct impact on the market, particularly at the retail level.<sup>10</sup>
47. In its 2015 review of the UK's mobile termination market, Ofcom noted that in order for OTT to act as a constraint on competition, it is not necessary for substitution to be viable for all users or for all calls, only that there should be sufficient switching in response to a price rise to constrain that rise. However, Ofcom concluded that evidence available for the UK suggested that the set of calls that could potentially switch to OTT is small and unlikely to be sufficient to act as a constraint in their review period (2015-2018), although may over the longer-term.<sup>11</sup>
48. ACCC's 2014 inquiry into MTAS in Australia concluded that OTT services are not effective substitutes for mobile and fixed services. It noted that OTT messaging (unlike SMS) requires a smartphone and a data service to use, and that both the sender and receiver of OTT text messaging must use the same application, some of which can only be used on specific smartphones.
49. We note the evidence from the EU, and the UK and Australian regulators. In the New Zealand context we do not have sufficient evidence to indicate that OTT services are an effective substitute for mobile and fixed services at this time.

---

<sup>10</sup> op.cit. p17.

<sup>11</sup> Ofcom: op cit. paras 3.44-3.62.

50. We intend to continue to monitor the development of the markets, and would consider commencing an investigation should significant new evidence come to hand, that would indicate that these or the adoption of new technologies are likely to be effective substitutes for mobile and fixed services. Although Schedule 3 of Act provides that we must consider whether to launch an investigation every five years, it also provides that we can commence an investigation into omitting a service from Schedule 1 at any time.

### **Cost and benefits of regulation**

51. Regulation imposes costs, both direct and indirect, on industry. There is also a cost in administering regulation, which in the case of MTAS is borne by industry through a levy. However, we view these costs to be relatively low. We note that there was no comment on the cost of regulation in the submissions.
52. The Commission collects information from the mobile industry operators in order to meet its obligations to monitor the performance and development of the telecommunications markets. Much of this information is required regardless of whether there is specific regulation of mobile markets.
53. We are of the view that there is an overwhelming benefit in the regulation of MTAS at this time by providing stability to markets and lowering potential barriers for new entrants to these markets. This is in addition to the reduction in retail prices of mobile services and fixed-to-mobile calling. The improvements observed in competitive conditions in downstream retail markets since MTAS was designated, indicate the benefits that have been enjoyed by end users.

### **Likely competition effects of deregulation**

54. Given the low cost and substantial benefits of MTAS regulation, the Commission sees little risk in maintaining regulation. However, the risks to the market and to the end-user of unwarranted or premature deregulation are substantial.
55. We are of the view that in the absence of designation, there is a substantial risk that MTRs would rise due to the lack of competitive constraints on the supply of termination services, and that as a result, costs passed onto the end-user would increase. Absent regulation, we are of the view that the larger mobile network operators would be able to offer lower prices for on-net calls and would charge higher prices for off-net calls.
56. We are also of the view that this differential pricing of on-net and off-net calls by the larger mobile networks has the potential to lead to a traffic imbalance, with a net flow from the smaller mobile network operator (with lower off-net prices and relatively higher outbound traffic), to the larger mobile network operators (with higher off-net prices and relatively lower outbound traffic). With high above-cost MTRs, there is potential for a transfer of customers from the smaller to the larger mobile network operators.
57. Customers are likely to be attracted from the smaller MNO to on-net offers promoted by the larger MNOs. This is because they can then call a relatively larger customer

base and benefit from 'network effects'. In order to remain competitive, the smaller MNO would have to reduce prices for off-net calls in order to enable its smaller customer base to access other customers at competitive prices. The competition concerns that gave rise to designation of MTAS in the first place are likely to re-emerge. Therefore, there is no real prospect that de-regulation would better promote the S18 purpose at this time.

58. In the scenario outlined above, there is a risk that the smaller MNO would become confined to the relatively low and less profitable end of the market, typically pre-pay customers, earning proportionately less revenue from retail services than wholesale termination. This is likely to curtail the competitive impact of the smaller MNO.
59. It could be argued that high MTRs would result in the smaller MNO targeting low-value customers who are net call recipients. The result would be the smaller MNO being a net recipient of termination traffic, and thus a beneficiary from high MTRs. If this were to be the case it would be expected that the smaller network operator would oppose regulation of MTRs. To date, this has not been the case.
60. With three integrated network operators now offering fixed and mobile network services, the ability to price-discriminate on MTRs could be used to gain leverage in fixed-line services, making it more difficult for fixed-only providers to compete. Certainly, the price of fixed-to-mobile calling would be likely to rise.
61. Another possible impact of higher MTRs is that fixed-only operators might respond by increasing the cost of terminating mobile to fixed (MTF) calls on their networks. This might lead to calls for a STD to regulate the fixed-line interconnection market.<sup>12</sup>

## **Our conclusion**

62. We conclude that there are no reasonable grounds for commencing an investigation into whether the MTAS should be omitted from Schedule 1 of the Act at this time.

---

<sup>12</sup> Currently fixed interconnection is contained in Schedule 1 of the Act, although not subject to a STD.

## Attachment

### Commission Schedule 3 investigations into MTAS

1. The Commission undertook a Schedule 3 investigation into mobile termination in 2004-2005. The outcome was a recommendation to the Minister that the termination by mobile operators of voice calls originating on a fixed network be designated.
2. The Minister required the Commission to reconsider its recommendation, so as to consider commercial offers made to the Minister by Telecom and Vodafone. Our reconsidered recommendation in April 2006 was that the termination of voice calls originating on a fixed network be designated.
3. The Minister declined to accept the Commission's reconsidered recommendation in lieu of the commercial offers made by the incumbent MNOs.
4. In February 2010 we concluded a further Schedule 3 MTAS investigation, largely prompted by the high proportion of on-net traffic on the mobile network. Our view was that there were reasonable grounds to regulate MTAS, as cost-based MTRs were likely to remove a barrier to efficient entry and expansion that would otherwise exist. However, the majority view of the Commission was to accept undertakings offered by Telecom and Vodafone as an alternative to regulation.
5. Following the Commission's recommendation to the Minister, in April 2010 Vodafone introduced a new on-net offer. The Minister required the Commission to reconsider its recommendation in light of the new retail on-net offer.
6. In June 2010 the Commission recommended to the Minister that the MTAS should be made a designated service and undertakings not be accepted. The Minister accepted our recommendation, and MTAS became a designated service effective 23 September 2010. The Commission set a regulated price for MTAS under the initial pricing principle on 5 May 2011.

### Previous market definition and competition assessment

7. In our 2010 Final Report<sup>13</sup>, we defined the relevant markets for the purposes of undertaking a competition assessment for the supply of mobile termination services in New Zealand as:
  - 7.1. the wholesale market for mobile termination on each mobile network;
  - 7.2. the retail market for mobile services; and

---

<sup>13</sup> Commerce Commission: *Final Report on whether the mobile termination access service (incorporating mobile-to-mobile voice termination, fixed-to-mobile voice termination and short-message-service termination) should become designated or specified services*, 22 February 2010.  
<http://www.comcom.govt.nz/regulated-industries/telecommunications/archive/determinations-archive/service-deregulation-reviews-archive/mobile-termination-access-services/>

- 7.3. the retail market for FTM/toll calls.
8. The Commission:
- 8.1. concluded that mobile network operators (MNOs) were subject to limited competition in the wholesale market for MTAS on their respective networks;
  - 8.2. in the retail mobile services market, noted that the entry of 2degrees was a positive development. However, we still had a number of competition concerns in relation to this market;
  - 8.3. noted that the larger MNOs often set retail prices for calls and SMS that remain on the same network at a level that is considerably lower than for calls and SMS between networks (referred to as on-net discounting). Such on-net discounting makes it more attractive for subscribers to belong to a large network;
  - 8.4. concluded that a combination of wholesale MTRs that are significantly above cost, with significant on-net discounting, created a barrier that restricts the ability of a small entrant MNO to compete with the larger MNOs. This conclusion applied to both MTM voice and SMS services;
  - 8.5. concluded that, faced with this barrier, the entry of 2degrees was unlikely to materially constrain the other MNOs in the retail mobile services market in New Zealand;
  - 8.6. noted that the competition problem that we had identified in the retail FTM / tolls markets was a barrier to competition created by above-cost MTRs. The difficulties faced by fixed-only operators in supplying FTM calls are particularly evident where integrated operators have offered retail FTM prices close to or below the wholesale MTRs.
9. In considering the relevant markets in which mobile termination services are supplied, we acknowledged that the supply of mobile services exhibits characteristics of a two-sided market involving origination and subscription services (calling parties) on one side, and termination services (call recipients) on the other. However, the two-sided nature of the market did not negate the termination bottlenecks on each mobile network, as mobile network operators face little constraint under CPP when setting prices for termination on their networks.
10. The definition of a wholesale market for mobile termination services on each mobile network was also consistent with the market definitions used by regulators overseas where CPP was present.