# Optus Submission to

# Australian Competition and Consumer Commission

# on

# Draft Decision on Optus 2007 MTAS Undertaking

**August 2007**

**Public**

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## 1. Executive Summary

1.1 In June 2007 the Australian Competition and Consumer Commission (the Commission) released a draft determination in which it proposed to reject Optus' 2007 Mobile Terminating Access Service (MTAS) Undertaking, in which Optus had undertaken to provide the MTAS at a price of 12 cents per minute (cpm).

1.2 The chief basis for this decision was the Commission's conclusion that the price of 12 cpm proposed in the Optus 2007 Undertaking is above the efficient cost of supply of the MTAS. This conclusion has been informed by cost estimates produced by the WIK Mobile Network and Cost Model (the WIK model) and other corroborating information.

1.3 In reliance on its belief that 12 cpm is in excess of the efficient cost of supply of the MTAS, the Commission has formed a number of conclusions with regard to the legislative criteria for acceptance of undertakings. These conclusions include that the Optus 2007 Undertaking:

- would not promote the long term interests of end-users (LTIE) because it would not be likely to:
  - i) promote competition in relevant markets; nor
  - ii) encourage the economically efficient use of, and investment in infrastructure;
- would adversely impact the interests of persons who have a right to use the MTAS; and
- would not be likely to promote the economically efficient operation of a carriage service/telecommunications network facility.

*Use of the WIK model*

1.4 The Commission considers that the regulated price of the MTAS should be closely aligned with the efficient cost of supply of the MTAS, and that the relevant cost concept to use in calculating the efficient cost is the Total Service Long-Run Incremental Cost plus a mark-up to account for a contribution to organisational-level common costs (TSLRIC+).

1.5 The Commission has stated that the WIK model would be used to assist it in informing itself of an estimate of the efficient cost of supply of the MTAS for inclusion in pricing determinations for the period 1 July 2007 to 30 June 2009.[1] In the course of making its draft decisions on the Optus 2007 MTAS Undertaking and the MTAS Pricing Principles, the Commission has used the WIK model to estimate the efficient cost of the supply of the MTAS.

[1] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* Page 132

1.6 Optus submits that even if the regulated price of the MTAS is to be closely aligned with the efficient cost of provision of the MTAS, the Commission should not be informed by the WIK model as it does not provide an estimate of the efficient cost of the MTAS.

1.7 The WIK model purports to estimate the costs of a hypothetical mobile network operator in Australia using a scorched earth approach. However Optus considers that the hypothetical MTAS cost that results from its method is not practically achievable by any real world operator, either an existing operator or a new entrant.

1.8 Optus submits that the WIK model is not capable of estimating the forward looking efficient cost of supply of the MTAS (rather, it is likely to underestimate it) since the model designs a physical network that is incapable of providing a mobile service of the quality and service delivery standard provided by mobile network operators in Australia.

1.9 Optus submits that the WIK model ignores the costs existing mobile network operators face as the result of past prudent investments and holds them to a standard of operational and cost efficiency they cannot achieve.

1.10 Optus submits that the WIK model uses a number of assumptions that are not feasible for an efficient entrant even if it adopts efficient network structures and operations, and which substantially underestimate the cost to a hypothetical mobile network operator in providing the MTAS service which means that it cannot be relied upon as an estimate of the efficient cost of the supply of the MTAS. It therefore does not present an estimate of efficient costs.[2]

1.11 Optus considers that the price of the MTAS should be informed by reference to the costs of a mobile network operator if those costs can be shown to be efficient.[3]

1.12 Optus' submissions on the WIK model are developed further in Section 3.

*The remainder of this submission*

1.13 Optus considers that the other corroborating information on which the Commission has relied in reaching its conclusions are irrelevant considerations for the purposes for which they have been used. This submission is developed further in Section 4.

1.14 Optus considers that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by either the outputs of the WIK model or by the other corroborating evidence. It follows that the Commission's findings on the legislative criteria formed in reliance on this conclusion, and its rejection of Optus' undertaking on this basis, are invalid. The legislative criteria are considered in Section 5.

[2] *Application by Optus Mobile Pty Ltd Limited & Optus Networks Pty Limited* ACompT 8, para 116-118

[3] *Application by Vodafone Network Pty Limited & Vodafone Australia Limited [2007]* ACompT 1, para 44

## 2. Background

2.1 On 16 February 2007 Optus lodged an ordinary access undertaking (Optus 2007 Undertaking) with the Commission with respect to the domestic GSM terminating access service (DGTAS).

2.2 The Optus 2007 Undertaking is intended to cover the period 1 July 2007 to 31 December 2007. It outlines the terms and conditions under which Optus undertakes to supply the DGTAS, including a service description and the proposed charges of 12 cpm for the service.

2.3 The Commission's approach is that access prices for the MTAS should in general be based on efficient cost-based pricing, and that it is generally not in the long term interest of end-users to depart from TSLRIC+ based pricing for providing the service. TSLRIC+ is interpreted by the Commission as a forward-looking measure of costs, which means that the referable costs are those of the most efficient means possible and commercially available. The Commission considers that this approach allows efficient access providers to fully recover the costs of providing the service and so promotes the legitimate business interests of the access provider. [4]

2.4 The Commission engaged WIK-Consult GmbH in June 2006 to develop a bottom-up cost model with specific economic and engineering parameters for estimating the efficient cost of supply of MTAS in Australia using a TSLRIC+ conceptual framework.

2.5 The Commission stated that the WIK model would be used to assist it in informing itself of an estimate of the efficient cost of supply of the MTAS for inclusion in pricing determinations for the period 1 July 2007 to 30 June 2009.[5]

2.6 In March 2007 the Commission issued a discussion paper on the Optus 2007 Undertaking and Optus lodged with the Commission its submission in support of the Undertaking.

2.7 In June 2007 the Commission released a draft determination in which it proposed to reject Optus' 2007 Mobile Terminating Access Service (MTAS) Undertaking, in which Optus had undertaken to provide the MTAS at a price of 12 cents per minute (cpm).

2.8 The Commission considers the Optus 2007 Undertaking:

- is consistent with the standard access obligations (SAOs) that are applicable to Optus;
- is not inconsistent with any relevant ministerial pricing determination;
- contains non price terms and conditions that are reasonable; and

[4] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 13

[5] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* Page 132

- contains price terms and conditions that are not reasonable for the period beyond 30 June 2007.[6]

2.9 Having regard to section 152AH(1) of the Trade Practices Act (the Act), the Commission concluded the Optus 2007 Undertaking:

- would not promote the long term interests of end users (LTIE) as it is unlikely to:
  - i) promote competition in the relevant markets; nor
  - ii) encourage the economically efficient use of, and investment in infrastructure;
- would adversely impact the interests of persons who have a right to use the MTAS; and
- would not be likely to promote the economically efficient operation of a carriage service/telecommunications network facility.

[6] ACCC (2007)The Optus 2007 Undertaking in relation to the Domestic Mobile Terminating Access Service draft decision, page 35

## 3. The WIK model

3.1 This section considers issues arising from using a cost estimate from a model of a hypothetical efficient mobile network designed by a bottom up scorched earth model generally to inform MTAS prices, and the particular assumptions in the WIK model.

3.2 The Commission considers that the regulated price of the MTAS should be closely aligned with the efficient cost of supply of the MTAS, and that the relevant cost concept to use in calculating the efficient cost is the Total Service Long-Run Incremental Cost plus a mark-up to account for a contribution to organisational-level common costs (TSLRIC+).[7]

3.3 The Commission has stated that the WIK model would be used to assist it in informing itself of an estimate of the efficient cost of supply of the MTAS for inclusion in pricing determinations for the period 1 July 2007 to 30 June 2009.[8] In the course of making its draft decisions on the Optus 2007 MTAS Undertaking and the MTAS Pricing Principles, the Commission has used the WIK model to estimate the efficient cost of the supply of the MTAS.

3.4 The WIK model has produced the following results for relevant efficient operator scenarios detailed in the WIK model version released on 16 February 2007:

- 5.2 cpm for the 31% market share operator scenario; and
- 5.6 cpm, for the 25% market share operator scenario.

3.5 Optus submits that the WIK model is not capable of estimating the forward looking efficient cost of supply of the MTAS (rather, it is likely to underestimate it) since the model designs a physical network that is incapable of providing a mobile service of the quality and service delivery standard provided by mobile network operators in Australia.

3.6 Optus submits that the WIK model ignores the costs existing mobile network operators face as the result of past prudent investments and holds them to a standard of operational and cost efficiency that they cannot achieve.

3.7 Optus submits that the WIK model uses a number of assumptions that are not feasible for an efficient entrant even if it adopts efficient network structures and operations, and which substantially underestimate the cost to a hypothetical mobile network operator in providing the MTAS service which means that it cannot be relied upon as an estimate of the efficient cost of the supply of the MTAS. It therefore does not present an estimate of efficient costs.[9]

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[7] Optus considers that fixed and common costs should be allocated according to Ramsey-Boiteux principles and that a network externality surcharge should be incorporated into MTAS prices. These considerations, however, are not the chief subject of this submission.

[8] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* , Page 132

[9] *Application by Optus Mobile Pty Ltd Limited & Optus Networks Pty Limited [2006]* ACompT8 para 116-118

3.8 As such the use of the WIK model by the Commission as a means of estimating the efficient cost of supply of the MTAS in Australia is inconsistent with the observations of the Tribunal that the task of assessing the forward looking costs of a new entrant must involve some balancing of opposing considerations and must take account of the actual markets in which the relevant services are provided.

3.9 Optus submits that the WIK model is an irrelevant consideration for the purpose of setting MTAS prices.

3.10 Optus also submits that the design of the WIK model and its assumptions demonstrate that the MTAS prices it produces will underestimate the forward looking efficient cost of the MTAS on an Australian mobile network operated by a new entrant because it adopts an unrealistic and infeasible network design and adopts assumptions that are not consistent with the network options and costs faced by a new entrant.

3.11 Further, by adopting a scorched earth approach the Commission has ignored a relevant consideration being the cost incurred by existing mobile network operators (if they can be shown to be efficient).[10] This is a relevant consideration because it takes into account the legitimate business interests of the mobile network operator – that the business can receive a reasonable return on invested capital.

3.12 It is generally accepted that a compromise between an estimate of forward looking efficient costs and the legitimate business interest of operators is achieved by estimating cost based on a bottom up scorched node model. The methods for building such a model involve either:

- Modelling a scorched earth network using network design algorithms and calibrating the outputs against the networks of actual mobile networks in operation; or
- Modelling a scorched node network using actual mobile network information and calibrating the outputs for efficient network design.

3.13 Optus submits that the Commission has not been informed by either approach and that this is inconsistent with the observations of the Tribunal that the task of assessing the forward looking costs of a new entrant must take account of the actual markets in which the relevant services are provided.

3.14 Optus would also observe that the Commission has relied upon the WIK model in rejecting the undertaking even though the consultation process is not yet complete:[11]

> "Interested parties will note that the Commission is in the process of establishing pricing principles for the period beyond 30 June 2007, and even though this process is not yet complete, the information above provides a

[10] The Commission itself notes that the "Tribunal affirms this position that alternative model approaches may also be appropriate if it can be established that the actual costs incurred by an MNO are efficient.

[11] ACCC (2007) *The Optus 2007 Undertaking in relation to the Domestic Mobile Terminating Access Service* draft decision, page 9

reasonable basis to conclude that price below 12cpm is appropriate for the supply of MTAS for the period 1 July 2007 to 31 December 2007."

3.15 In summary Optus submits that the WIK model does not provide proper support for the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS.

**Hypothetical mobile network modelling**

3.16 Optus considers that the efficient cost of supply of the MTAS should be estimated by reference to the costs of real world mobile network operators, and not solely by reference to a hypothetical scorched earth network.

3.17 Optus submits that the efficient cost of provision of the MTAS cannot be estimated by reference to the WIK model since it estimates the hypothetical efficient MTAS cost based on a network design that is not practically achievable by any real world operator, either an existing operator or a new entrant.

3.18 In its March submission on the WIK model, Optus made the following submissions:[12]

- The scorched earth approach (and WIK's particularly uncompromising approach to modelling) essentially penalises operators who have made prudent business decisions simply because new information or new technology has emerged. If applied, such a hard-line approach would deter investment in the industry.
- Internationally, the majority of fixed network models apply the scorched node approach.[13] Further, in Australia, the Commission continues to have no issue with Telstra's PIE II fixed network model being based upon a scorched node framework.[14] The Commission / NERA model of Telstra's fixed line network was based on a scorched node approach.
- The scorched node method has been unanimously preferred because regulators have recognised that due to reasons of simplicity and feasibility, as well as historical factors, applying a scorched earth approach is generally not feasible. Such a viewpoint is also explicitly supported by the Independent Regulators Group (IRG) that considers the scorched node approach to be a "principle of implementation and best practise" in LRIC network modelling.[15]
- Optus submits that given international experiences with both fixed and mobile network modelling, as well as the nature of the Australian

[12] Optus (March 2007) Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia, , pages 8-10.
[13] Jurisdictions where the scorched node approach has been used for fixed network modelling has been applied include the European Union, United Kingdom, Germany and United States.
[14] ACCC (2003) *Final Determination for model price terms and conditions of the PSTN, ULLS and LCS services*, October 2003,page 41.
[15] IRG (2000), *Principles of implementation and best-practice regarding FL-LRIC cost modelling*, 24 November 2000page 3.

mobile network, the Commission needs to strongly re-consider whether the scorched earth model is a reasonable and appropriate approach.

- Optus believes that it is in the interests of all parties for there to be increased collaboration to produce a more finely calibrated and realistic model.[16]

3.19 In response, the Commission has noted the advantages of flexibility that a scorched earth approach brings, and noted that it has made some attempt to contextualise the WIK model for Australian conditions.[17] It also notes that "Sometimes the issues with a scorched-node approach include the identification of which network and what mobile network operator's nodes to use as a reference point. The Commission considers that under these circumstances the use of a scorched-earth approach to examining the costs of the most efficient operator providing the MTAS in Australia is an important tool to support future regulatory processes."

3.20 Optus submits that the Commission's dismissal of the scorched-node approach has no basis; the identified "issue" is an important practical consideration, but not, however, a fatal flaw in the approach (and if the Commission believes that it this a fatal flaw it has certainly not explained how and why this may be so). The "issue" has also been addressed by regulators in most other jurisdictions in which MTAS prices are regulated. Optus considers that the Commission has not adequately addressed Optus' submissions on the disadvantages of a scorched earth approach.

*Existing mobile network operators*

3.21 Optus considers that the hypothetical MTAS cost estimated using a hypothetical efficient mobile network designed by a bottom up scorched earth model is not practically achievable by an existing mobile network operator which has been operating efficiently for a significant length of time for two main reasons.[18]

3.22 First, existing operators built their networks some time ago. Due to the dynamic nature of demand, the design of these legacy networks is no longer likely to be optimal. As Optus noted in its March submission on the WIK model,[19] the design of a mobile network is heavily influenced by inter-temporal factors and as such the optimal or efficient configuration of the mobile network will vary depending upon the build date and constraints at the time. In each period, network deployments are made on the basis of traffic and demand forecasts that may or may not eventuate. For example, an operator may have to increase network capacity in the future to extend coverage and/or

[16] Optus notes this has been the method used by many regulators internationally (e.g. OPTA and Ofcom) and is preferable to the current process.
[17] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 36.
[18] Optus requests that the Commission considers these reasons separately as it is concerned the Commission has previously applied a blanket dismissal of such matters without due consideration to the specifics of Optus position.
[19] Optus (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia*, March 2007, page 18.

capacity to an unplanned development (eg housing estate or transport corridor).

3.23 A scorched earth approach may yield costs lower than those of legacy networks because if the network were to be built today, the network would have a completely different (and potentially more efficient) architecture. It may however not be reasonable to impose scorched earth pricing on existing operators since such efficiencies are not achievable by existing mobile network operators (it is not economic for existing operators to optimise their networks continually). Accordingly, a truly efficient network can only ever be hypothetical.

3.24 It follows that even if the WIK model was a realistic representation of an efficient mobile network in Australia (which it is not), it would be unreasonable to set an MTAS price in reliance on the WIK model, since to do so would be to hold mobile network operators to an unreasonably high standard of efficiency. That is to say, given the uncertainties of the market and dynamic nature of demand, it is not reasonable to expect mobile network operators to make network investment decisions with perfect foresight. To hold operators to such an unrealistic standard (by regulating their prices as if they were able to meet such a standard) would be to disregard their legitimate business interests and the fact that they have made prudent investment decisions.

3.25 Rather, it seems more reasonable that mobile network operators are compensated absent those efficiencies that are not readily and workably achievable. For this reason, Optus regards a "scorched node" TSLRIC model in which certain network elements and technology choices are protected from optimisation as a more appropriate cost concept for the modelling of mobile network services. A scorched node design would apply an historic costing approach to certain network elements (consistent with the legitimate business interests of the access provider and the direct cost of providing the service), and a forward looking costing approach would be applied to the remaining elements, encouraging the network owner to make efficient investment decisions and adopt least cost technologies where they are feasible.

3.26 Second, the modern equivalent asset (MEA) prices used in the WIK model understate the capital investment of a mobile network operator in Australia today, since equipment prices have fallen in recent years.

3.27 Consequently, the networks of existing mobile network operators in Australia are highly unlikely to be as cheap as the hypothetical networks designed by models such as the WIK model, even if those networks were designed efficiently at the time they were built.

3.28 In this circumstance the existing mobile network operators are unlikely to have received appropriate compensation for past network investments because the falling price trends were not used historically to front load the return of capital invested.

3.29 It follows that calculation of a regulated MTAS price by reference to a hypothetical efficient mobile network designed by a bottom up scorched earth model using MEA prices would prevent existing mobile network operators in Australia from recovering their prudent investments in their mobile networks.

3.30 It is worth noting that neither of these reasons represents an inefficiency in network design by the existing mobile operators.

*New entrants*

3.31 Optus considers that the forward looking efficient MTAS cost estimated using the WIK model is not the MTAS cost of a hypothetical efficient mobile network designed by a bottom up scorched earth model as it is not practically achievable by a new entrant mobile network operator in Australia.

3.32 There are a number of key flaws in the WIK model that prove this point. First, the model does not demonstrate that the network could provide the service quality assumed nor does it demonstrate that the network could provide the declared service provided by a mobile network operator competing in the Australian market. Second, the model assumes a network design algorithm that can be demonstrated to fail in providing the service quality assumed if it were to be rolled out. Third, the model fails to take into account all the practical considerations that a new entrant would face in actually building a network. These are relevant considerations because they represent the forward looking efficient costs a new entrant would incur – being the costs that set the benchmark (or contestable) price in a competitive market that the Commission is seeking to mimic.

3.33 A key issue is that gaining approval for base station sites would be far more difficult and costly for a new entrant than it has been for the current mobile network operators. Existing towers were often built before 1997 when a different and much less stringent regulatory regime was in place. They are frequently in locations which would now require the approval of the local Council, but where such approvals would now be unlikely to be granted. Further the model takes no account of environmental planning requirements. Base station sites must be environmentally suitable, and the rights of operators to deploy base stations are often heavily constrained. In practice a new entrant would be likely to need to share existing sites to reduce the costs and time associated with its network rollout.

*Inconsistency of approach*

3.34 Estimation of an efficient new entrant's costs as the basis of pricing seeks to mimic a pricing outcome that would prevail in a competitive market, and is a typical approach for a regulator seeking to establish efficient pricing. However, if the WIK model is intended to reflect the network design of an efficient new entrant, then the new entrant assumption should be made consistently. A new entrant's network design would be optimised for current demand patterns and its equipment prices would be modern (and thus cheaper than an existing operator's); however a new entrant would have to contend with considerable practical difficulties in obtaining sites for its mobile network base stations (which would detract from the optimality of the network design and / or make the network considerably more expensive).

3.35 However, the WIK model is *not* consistent in this way. Rather, it takes the option that is cheaper in both cases: it assumes optimised network design and MEA equipment prices *and* assumes away practical difficulties in obtaining

sites for its mobile network base stations. This is logically inconsistent and more fundamentally, the cost level it results in is effectively meaningless, since it is not practically achievable by any real world operator (either existing or new entrant).

3.36 The Commission has been very clear that the aim of the WIK model was not to replicate the architecture of any particular mobile network operator's network. It relies upon this argument to counter Optus' (and others) claims that although contentions regarding WIK producing an 'unrealistic' network may be valid (or at least require further consideration), they are not relevant in terms of the aims of the WIK model.

3.37 At the same time the Commission has stated that, regardless of the issues raised by parties, based upon actual network data the WIK model results in a "reasonable outcome". Optus contends that these two positions are inconsistent.

3.38 If the Commission continues to persist with the scorched earth approach, it must also capture realities that would be faced by a new entrant. The network and cost structure of such an entrant would clearly differ from that of established operators. However Optus contends that regardless of any other costs, the deployment issues previously mentioned would mean that a new entrant would face much higher costs. It is clear that the current WIK model does not adequately account for this issue.

3.39 In summary Optus contends that as a result of the WIK model's approach to hypothetical network modelling discussed in this section, the model underestimates the efficient cost of supplying the MTAS.

**Assumptions in the WIK model**

3.40 Optus submits that the WIK model uses a number of assumptions which substantially underestimate the cost to a hypothetical mobile network operator of providing the MTAS service which means that it cannot be relied upon as an estimate of the efficient cost of the supply of the MTAS.

3.41 The WIK model fails to take into account a range of practical realities that would confront a real world Australian mobile network operator. As a result, an efficient mobile network operator that wished to deliver the standards of service required of a mobile network in Australia would be compelled to deploy a considerably more extensive and more costly network than the WIK model deploys. Accordingly it would be unreasonable to draw significant conclusions about the design of an efficient mobile network in Australia using the WIK model.

3.42 Unrealistic assumptions occur in a number of areas of the WIK model, including conceptual issues, network design issues, traffic and demand issues and the model's financial parameters.

3.43 Optus originally set out its criticisms of the WIK model in its February 2007 submission on the WIK model. The Commission has considered and responded to many of these criticisms. In some cases the Commission has accepted the criticisms and made adjustments to the WIK model. In other

cases the Commission has dismissed Optus' criticisms, often because it considers that the criticisms relate to Optus' specific business, rather than to the network of an efficient operator. For example, the Commission states:[20]

> The Commission considers that many of the submissions provided by interested parties relate to the actual experience of mobile network operators and their actual networks... For example, Optus makes submissions on how the Cell Deployment Module is unable to model a realistic number of BTSs as the WIK model fails to account for complexities such as buildings. It is the Commission's view that the WIK model adopts a reasonable approach and only requires a sufficient approximation of Australia's topology. The WIK model employs a scorched-earth approach and is not designed to generate the exact numbers, types and locations of BTSs specific to a mobile network operator such as Optus or to reflect an actual network of any mobile network operators operating in Australia.

3.44 The Commission's response reveals that it has misunderstood the nature of Optus' criticism, and more generally, than it is misinterpreting the nature of a scorched earth model. Optus' point was *not* that the WIK model should generate the exact numbers, types and locations of BTSs in Optus' network. Our point is that an efficient mobile network operator that wished to deliver the standards of service required of a mobile network in Australia would be compelled to deploy a considerably more extensive and more costly network than the WIK model deploys, because the WIK model fails to take into account a range of practical realities that would confront a real world Australian mobile network operator – and "complexities such as buildings" are an example of these practicalities that should not be so lightly dismissed. For example, penetration of radio signal into buildings is a significant issue in urban areas which appears to have been overlooked in the WIK model. To state that the WIK model is a scorched earth model is not an answer to this criticism (or similar ones). In designing a scorched earth network the modeller is free to disregard the "technology, systems, and architectural decisions of the past"[21] – however to retain credibility the modeller *cannot* disregard real contemporary constraints on the feasibility of network design.

3.45 Generally speaking, we consider that many of our criticisms are of broader application than the Commission has recognised, and that they relate to issues that would apply to any mobile network operator in the Australian market. Optus considers that its chief criticisms of the WIK model continue to apply, notwithstanding the Commission's adjustments to the WIK model, and despite the Commission's dismissal of many of Optus' criticisms.

3.46 In the remainder of this section we set out the outstanding issues we have identified with the WIK model in more detail, and consider the Commission's discussion of these issues.

[20] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 71.
[21] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 33.

2G or 3G Operator

3.47 Optus submits that given the rising demand for 3G services, the WIK model's assumption that a new entrant would supply only 2G services is not realistic, and as a result of this assumption, the WIK model will underestimate the cost of provision of the MTAS.

3.48 With regard to the relative costs of 2G and 3G, Optus made the following submissions in its March submission on the WIK model:[22]

- There is a higher average cost in providing 3G services (as compared to 2G and 2.5G) due to both the technology used and the small (although increasing) subscriber base.
- the current WIK model would not allow 3G operators to receive an appropriate return on their investment… At best this inadequacy provides a disincentive to invest in new 3G technology, and at worst it does not allow operators to recover their costs of providing voice termination over the 3G network.

3.49 The Commission considers that the relative costs of operating either service would be similar as they would operate in the same spectrum and therefore costs would be unchanged.[23]

3.50 Optus submits that despite the sharing of spectrum, a 3G network still has significantly increased capital and O&M costs compared to the 2G service, particularly in the early years of operation while the transition from 2G to 3G is still taking place. Further to move from the 2G to 3G sphere, mobile network operators must still alter and upgrade their equipment.

3.51 These changes are currently increasing costs for mobile network operators, a fact that has been recognised in the financial market where it is forecast that as 3G migration accelerates, higher 3G subscriber acquisition costs are expected to negatively impact mobile margins in 2007 and beyond.[24]

3.52 Turning to the assumption that a new entrant would supply only 2G services, Optus made the following submissions in its March submission on the WIK model:[25]

- the migration of traffic to a 3G-based network has not been adequately addressed in the WIK model… This is an area of concern as 3G subscribers will represent an increasing proportion of the mobile market as evidenced by the increased numbers of subscribers each

[22] Optus, (2007) Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia, March 2007,page 12.
[23] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 11.
[24] JP Morgan Asia Pacific Equity Research (2007),.*Australian Mobile market - CY06 mobile market review*, 05 March 2007
[25] Optus (2007) Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia, March 2007, page 12.

year. In December 2005 3G subscribers represented only 4% of the total mobile market, however this increased to 15% only a year later.[26]

- Given current and forecast market demands it is likely that a new entrant would design a network based upon supplying a 3G service…
- All carriers have announced network upgrades to the 3G standard…

3.53 In response, the Commission has maintained that the efficient cost of delivery of the MTAS "should not be impacted by the network over which it is carried".

3.54 Optus observes that no mobile network operator has launched a new 2G mobile network in the Australian market since March 2000. Optus, Telstra and Vodafone all launched their GSM service in 1993 and Telstra and Hutchison launched their CDMA service in 1999 and 2000 respectively. Since March 2000 all new mobile networks have been based on 3G technology. In 2002, Telstra launched 3G services to business customers and similarly Hutchison launched in 2003, followed by Optus and Vodafone in 2005. Optus is unaware of an intention by any mobile operator to build a new 2G mobile network in Australia in the future.

3.55 The table below shows the date on which each mobile service was launched.

**Table 1: Network entry into the Australian mobile market**

| | **3G** | **GSM[27]** | **CDMA[28]** |
|---|---|---|---|
| **Optus** | 2005[29] | 1993 May | n/a |
| **Telstra** | December 2002 (business customers)[30] | 1993 | September 1999 |
| **Vodafone** | October 2005[31] | 1993 October | n/a |
| **Hutchison** | 2003[32] | n/a | March 2000 (shut down Aug 2006) |

3.56 Given that 100% of the network operators in the Australian mobile market are deploying 3G technology and that no mobile network operator has launched a new 2G mobile network in the Australian market in the last seven years, Optus

[26] JPMorgan Asia Pacific Equity Research,(2007), *Australian Mobile market - CY06 mobile market review*, 05 March 2007
[27] AMTA, Ten Years of GSM in Australia, www.amta.gov.au
[28] AMTA, Ten Years of GSM in Australia, www.amta.gov.au
[29] Optus (2005), Optus breaks 3G boundaries, 14 November 2005, www.optus.com.au,
[30] Telstra (2002), Telstra launches Australia's first 3G wireless service, December 2002, www.telstra.com.au
[31] Vodafone (2005), *Vodafone launches 3G in time for Christmas wish lists, October 2005*
[32] Hutchison (2003), CEO Speech, 14 April 2003

submits that any new entrant in the Australian market is highly likely to deploy 3G technology, and that the WIK model's assumption that the cost of mobile termination for a hypothetical operator can be adequately modelled based on a 2G-only operator is patently unrealistic.

3.57 In summary Optus contends that the 2G benchmark is not a realistic assumption for a hypothetical future entrant, and that as a result the WIK model underestimates the efficient cost of supplying the MTAS.

Market share

3.58 Optus submits that having due regard to the directions given by the Australian Competition Tribunal (the Tribunal), as well as the landscape of the Australian mobile market it is not realistic for the WIK model to use a 25% market share (or a 31% market share) as a standard reference case.

3.59 The Tribunal's judgements cast doubt on the validity of applying the 25% standard for the market share of a hypothetical mobile operator.[33][34] The main reasons for the Tribunal stance were that it:

(a) was not convinced such a market share was achievable for a new entrant; and

(b) considered the standard fails to account for issues relating to market behaviour. For example the legitimate business case of niche providers (by service or location) that may allow them to operate on a limited scale with much less than 25% market share.

3.60 Optus considers that it is not clear that the 25% standard would necessarily be achievable by a new entrant. Optus disagrees that the Tribunal has given any indication that the relevant benchmark may be greater than 25%. The Tribunal considered a number of 'potential' outcomes. Moreover, Optus believes the Commission has no basis for establishing a 31% benchmark because it has no basis for assuming that Hutchison's market share potential is only 7%.

3.61 The current mobile market is extremely competitive with mobile network operators having to price aggressively to maintain market share. This is evidenced by all mobile network operators reporting significantly reduced mobile margins and ARPU in recent years.

3.62 Given the previously discussed higher deployment costs faced by a new entrant and the likely defensive action of the current mobile network operators, an entrant would likely find it extremely difficult to attract market share as high as 25%.

3.63 Optus contends that a more reasonable estimate of an achievable market share would be based on the market share of the most recent entrants into the Australian mobile market (Vodafone and Hutchison).

[33] *Application by Vodafone Network Pty Ltd & Vodafone Australia Limited* [2007] ACompT 1.
[34] *Application by Optus Mobile Pty Limited & Optus Networks Pty Limited* [2006] ACompT 2.

3.64 In summary Optus contends that a 25% market share is not a realistic assumption for a hypothetical future entrant, and that as a result the WIK model underestimates the efficient cost of supplying the MTAS.

*Network design*

3.65 Optus considers that the WIK model's network design is unrealistic. That is, in its network design, the WIK model fails to take into account a range of practical realities that would confront a real world Australian mobile network operator. As a result, an efficient mobile network operator that wished to deliver the standards of service required of a mobile network in Australia would be compelled to deploy a considerably more extensive and more costly network than the WIK model deploys. Accordingly it would be unreasonable to draw significant conclusions about the design of an efficient mobile network in Australia using the WIK model.

3.66 The flaws of the WIK model may be illustrated by considering aspects of network design by the WIK model's Strategic Network Planning Tool. Our discussion of these aspects is set out below under headings corresponding to network layers defined by WIK, beginning with base station deployment.

Base station deployment

3.67 Optus notes the Commission's acceptance of Optus' submission that most of Australia's mobile network operators do not have Australia-wide access to spectrum in the 1,800 MHz band.[35]

3.68 Optus considers that an efficient new entrant mobile network operator which wished to deliver the standards of service required of a mobile network in Australia would be compelled to deploy a considerably greater number of base stations than the WIK model deploys. The reason for this difference is that a real world mobile network operator must take into account a range of practical considerations which impact on base station deployment decisions, which the WIK model, being a hypothetical model, is able to ignore.

3.69 In its March submission on the WIK model, Optus submitted that the WIK model appears to neglect some important drivers of base station deployment. For example in rural areas this population-based approach neglects the need for continuous coverage along highways including highways running through very sparsely populated areas. [36]

3.70 In response, the Commission stated that it was of the view that a hypothetical mobile network operator would not provide coverage to highways that are located outside of the areas covered by the WIK model without being subsidised for such an activity.[37]

[35] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 74.
[36] Optus (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia*, March 2007, page 17.
[37] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 74.

3.71 Optus considers that coverage is an important factor in the competitive dynamics between mobile network operators, as demonstrated by the recent Telstra advertisements highlighting the difference in coverage between Telstra's and Optus' 3G mobile networks. Accordingly, Optus submits that a new entrant operator would provide coverage to highways without being subsidised, and that the Commission's assumption that a hypothetical mobile network operator would not provide coverage to highways is unrealistic.

3.72 The Commission referred to subsidies that had been received by existing mobile network operators in the past. Optus considers that these subsidies are irrelevant. The fact that previous operators have received subsidies for highway coverage has no bearing on the question of whether a new entrant would provide highway coverage. Further, reference to these subsidies is inconsistent with the Commission's view that the WIK model "employs a scorched-earth approach and is not designed to… reflect an actual network of any mobile network operators operating in Australia."[38]

3.73 In its March submission on the WIK model, Optus submitted that WIK's model does not appear to take sufficient account of the impact on base station siting decisions of terrain features such as deep valleys and bay-side suburbs, which can often cause quality problems which can best be managed by siting additional base stations (and TRXs). [39] A desktop model such as the WIK model is unable to handle such uncertainties, and thus employs a standard design with base station locations pre-determined.

3.74 In response, the Commission stated that the location of BTSs may not be confined to technical specification and terrain issues… and may relate to specific operational strategies which may or may not reflect an optimised outcome… the WIK model is an optimised network of a hypothetical efficient operator, and do not necessarily reflect the network of an actual operator.[40] Optus submits that the terrain-induced quality issues it has noted are real contemporary constraints on the feasibility of network design, and to state that the WIK model is an optimised network is not an answer to this criticism.

3.75 It is worth noting the Commission's use of the term "specific operational strategies". This appears to be code for saying 'if the carrier chooses to supply a higher level of quality MTAS to itself and to access seekers than is assumed in the WIK model, such a choice is that carrier's operational strategy and it should not be reflected in cost'.

3.76 Optus submits that this position is unreasonable, and demonstrates the irrelevance of the cost benchmark calculated using the WIK model. The WIK benchmark is not relevant because it does not represent an equivalent service to that being provided by mobile network operators, and it does not represent a service that would be offered by a new entrant because such an entrant would not be competitive in the market (it would not acquire customers to terminate calls to). If the Commission is defining a particular strategy that a new entrant

[38] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 71.
[39] Optus (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia*, March 2007, page 17.
[40] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 72.

would follow, then it is the Commission that is adopting "specific operational strategies" that are inconsistent with market reality and do not appear to be consistent with reasonableness. Optus submits that since the WIK model estimates the cost of a service provided according to an unrealistic operational strategy, it underestimates the efficient cost of supplying the MTAS.

3.77 Optus notes that the WIK model does not recognise the practical inability of mobile network operators to locate network elements in any desired location. This is a significant weakness of the WIK model. Optus submits that the Commission has failed to adequately consider the complexity of base station deployment. Optus strongly contends that hypothetical new entrant would face significantly greater deployment costs than those predicted by the WIK model.

3.78 As noted above, gaining approval for base station sites is difficult and costly due to a stringent regulatory regime, required (and elusive) approval of the local Council, and stringent environmental planning requirements. The rights of operators to deploy base stations are often heavily constrained. These issues make securing sites a complex task, and often preclude optimal base station location. Optus submits that a hypothetical new entrant is likely to face both an increased deployment cost (through higher rental costs) as well as an increased number of base stations (due to difficulty in securing locations).

3.79 Optus observed in its March submission that "the total number of TRXs reported by the model in the 25% scenario is 20,536, and the total number in the 31% scenario is 24,155. These figures are indeed substantially lower than the number of TRX in Australian mobile network operators' networks."[41]

3.80 In reference to this point, the Commission stated that it "has already outlined the difficulty in assessing the submissions made by Optus in relation to the number of network elements deployed in the WIK model compared to Optus' own network."[42] Optus assumes that this is a reference to the Commission's statement three pages earlier in the paper that "Optus has, in its March submission on the WIK model, compared in all cases its own network (which has been deployed and meets the capacity of a market share of around 33 per cent) to the network of a hypothetical with a market share of 25 per cent."[43]

3.81 Optus disputes the Commission's misleading statement that Optus has made this comparison in all cases. Even in the Commission's example (the quote noted above), Optus referred to the number of TRXs in the 31% scenario as well as number in the 25% scenario. Optus submits that the vast majority of the points made in its March submission and all of the points made in this submission do not rely for their validity on a comparison between Optus' network and the WIK model's 25% market share scenario. Consequently it would be improper for the Commission to rely on this point to disregard Optus' submissions on the WIK network.

[41] Optus (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia,* March 2007, page 20.
[42] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 73.
[43] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 70.

3.82 The Commission also made a more substantive response to Optus' submission that the number of TRXs in the 31% scenario (24,155) was substantially lower than the number of TRX in Australian mobile network operators' networks.[44] The Commission stated that:[45]

> The reason for the difference between the WIK model's estimation and Optus' deployed network could be due to one or a combination of the following reasons that may or may not reflect an optimised network:
>
> - Optus provides a higher geographical coverage than in the scenario estimated in the WIK Report;
> - Optus also counts the TRXs from the BTSs at highways and national roads;
> - Optus uses a lower blocking probability; and/or
> - Optus has built-in higher capacity than required to meet current traffic demand.

3.83 Optus considers that the factors listed relate to the quality, reliability and coverage provided by the network, and also the capacity of the network to respond to growth in demand. Optus submits that all of these are factors that would be taken into account by an efficient new entrant in designing its network. To assume a new entrant would neglect factors like quality and reliability is an unrealistic assumption. If it did neglect these factors then its ability to attract customers would be compromised.

3.84 Whilst it may be reasonable for the Commission to consider the cost that a new entrant would incur in providing the MTAS, it must consider whether the new entrant cost reflects a capacity to provide the declared services as provided by existing carriers. An analogy is provided by the case of local loop pricing. It may be reasonable to consider the cost of a new entrant providing access to the local loop. However, it would not be reasonable to consider the cost to a new entrant of providing access to a network that was not capable of supplying the same service – to the same homes, with the same quality, or over a facility that was not comparable to the actual declared services or those demanded by access seekers.

3.85 In the case of the MTAS, a carrier is required to provide the declared service in all areas in which it operates the service (as required by the SAOs). If however the price of the MTAS is regulated to reflect the cost of a service provided in fewer areas (outside buildings), or at lower quality (not allowing for terrain differences) then it is not reasonable. Optus submits that since the WIK model estimates the cost of a service provided in fewer areas or at lower quality than the service provided by mobile network operators, it underestimates the efficient cost of supplying the MTAS.

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[44] Optus (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia*, March 2007, page 20.

[45] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 73.

3.86 In summary Optus contends that as a result of the WIK model's assumptions about base station deployment, the WIK model underestimates the efficient cost of supplying the MTAS.

Aggregation network

3.87 Optus noted in its March submission that the WIK model does not take into account practical constraints on BSC location.[46] For example, BSC locations are restricted by the availability of infrastructure such as roads and power. The WIK model appears simply to assume away these serious practical constraints. The Commission does not appear to have addressed this point.

3.88 Optus noted in its March submission that the WIK model makes unrealistic assumptions about network elements typically used in the aggregation network, including on the use of microwave links. In response, the Commission stated in its draft Pricing Principles determination[47] that it considers that the exclusive use of microwave links for a hypothetical non-integrated mobile network operator is a reasonable approach. Optus submits that it is not technically feasible for a mobile network to use microwave links only in the BTS – BSC aggregation network. The reason for this is that radio links have a limited throughput capacity and accordingly cannot aggregate traffic from all upstream sites. Optus' radio links have a maximum capacity of **CiC**. By contrast, the capacity of fibre links is much greater, eg, 10 Gbps. With a growing demand for data transmission, required throughput is growing rapidly. Optus submits that WIK's radio-only assumption is outdated and unrealistic, and does not reflect the nature of the contemporary mobile market.

3.89 In summary Optus contends that as a result of the WIK model's assumptions about the aggregation network, the WIK model underestimates the efficient cost of supplying the MTAS.

Backhaul network

3.90 Optus notes the Commission's acceptance of submissions by Optus and others that has resulted in the Commission increasing the number of switching machines from five to nine for both the 25 per cent and 31 per cent scenarios.

3.91 Optus notes the Commission's discussion of network resilience features in the backhaul network according to the WIK model. However Optus remains unconvinced that WIK fully understands network reliability and the network features that are used to achieve it in Australian mobile networks.

3.92 Optus, as a mobile carrier and service provider, maintains at all times 'Carrier class' annual network availability of 99.95% for backhaul transmission, and this standard of availability is typical of Australian mobile carriers and service providers. To achieve such availability, it is standard practise to employ path protection with equipment interface protection on every backhaul segment in the transmission network, which provides full geographical diversity for

[46] Optus,(2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia,* March 2007, page 21
[47] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 77.

backhaul transmission. It appears that the WIK model does not incorporate such service protection mechanisms for its backhaul network (since discussion of any such mechanisms has not been presented) and consequently Optus considers that its concerns about the resilience of the design of WIK model's backhaul network remain. Optus submits that as a result, the WIK model does not appear to be capable of designing a mobile network capable of meeting typical Australian availability standards.

3.93 In summary Optus contends that as a result of the WIK model's assumptions about the backhaul network, the WIK model underestimates the efficient cost of supplying the MTAS.

*Traffic and demand issues*

Busy hour

3.94 In its March submission, Optus submitted as follows:[48]

> Estimating the BH for entire network can be highly misleading, particularly in planning the radio layer of the network. This is because viewing the whole network as a single entity smooths and averages out the traffic to a large extent, and ignores the reality that carriers need to dimension individual sites to cater to local traffic peaks.

3.95 Optus has also advised the Commission that:[49]

> Optus has concerns about the use of any average measure of the proportion of daily traffic in the busy hour to dimension the network. This is because less peaky cells are not likely to require a lower level of capacity investment compared to the median cell (since the minimum level of investment required for each mobile network cell is likely to be sufficient for median traffic demand). This means that the greater investment requirements in peakier cells will not be 'balanced out' by those in less peaky cells. Consequently, using a median or any average figure to dimension the network would result in an under-provisioned network in which half the cells would have insufficient capacity to manage busy hour traffic demand.

3.96 The Commission has responded as follows:[50]

> The Commission is of the view that the application of an average milli-Erlang demand per consumer in the WIK model to estimate busy-hour traffic is reasonable. This is due to:

[48] Optus, (2007) *Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia,* March 2007, page 26

[49] Optus (2007), Letter to R. Wright *Mobile Termination Cost Model: Busy Hour Statistics, 24 April 2007*

[50] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 126.

> the actual milli-Erlang demand per consumer in rural areas is likely to be below the average milli-Erlang demand per consumer;
>
> in suburban and urban areas the milli-Erlang demand per consumer is expected to be above the average milli-Erlang demand per consumer;
>
> as BTS units located in rural areas are further away from BSC locations than suburban or urban areas, using an average milli-Erlang demand per consumer results in an over-estimation of the capacity required for transmission; and
>
> the impact from overestimating milli-Erlang demand in rural areas has a greater impact on cost than the underestimation in suburban and urban areas due to the longer transmission links required in rural areas.

3.97 Optus considers that the Commission's view is incorrect, and that application of an average milli-Erlang demand per consumer in the WIK model to estimate busy-hour traffic is not reasonable, since:

- It is not necessarily true that the actual milli-Erlang demand per consumer in rural areas is likely to be below the average milli-Erlang demand per consumer (or that in suburban and urban areas the milli-Erlang demand per consumer is expected to be above the average milli-Erlang demand per consumer). Optus knows of many rural sites that carry as much traffic if not more traffic than many metro sites, so these assumptions seem flawed at best.
- A-bis transmission has a minimum fixed size (one E1 or 2 Mbps) regardless of carried traffic, and this is not impacted by the milli-Erlang demand per customer at that site. The assumption that as BTS units located in rural areas are further away from BSC locations than suburban or urban areas, using an average milli-Erlang demand per consumer results in an over-estimation of the capacity required for transmission, in general, is incorrect.
- The cost of microwave links has little dependency on the transmission path length, so the assumption that the impact from overestimating milli-Erlang demand in rural areas has a greater impact on cost than the underestimation in suburban and urban areas due to the longer transmission links required in rural areas is not generally correct.

3.98 In its March submission, Optus submitted as follows:[51]

> It is Optus' experience that the relationship between billable minutes and the BH is localised and therefore radio planning is done at a more disaggregated level than that undertaken by the WIK model. This means that the WIK model is likely to be biased towards under provisioning network elements, particularly in the radio layer.

[51] Optus (2007) Submission to the Australian Competition and Consumer Commission on the WIK Mobile Network and Cost Model for Australia, March 2007, page 26

3.99 Optus has also advised the Commission that:[52]

> the average traffic per customer during the busy hour, measured at a single hour on a network-wide basis, is **CiC** milli Erlang. However the average traffic per customer, measured at each GSM cell during the busy hour for that particular cell, is **CiC** milli Erlang. This substantial difference illustrates that using network-wide measures to dimension a mobile network would inevitably mask investment required at individual cell sites.

3.100 The Commission has responded as follows:[53]

> It is the Commission's view that the WIK model addresses this issue through use of the assumption of a morning and afternoon busy hour in the Cell Deployment Module of the WIK model. The WIK model selects the busy-hour with the highest traffic to determine cell deployment. The busy-hour traffic in the morning is adjusted using the working population data and the busy-hour traffic in the afternoon uses the residential data. Therefore in the morning peak, higher traffic routed through the BTS units located in business districts are compensated by the reduced traffic from BTS units located in residential and/or rural areas. In the afternoon, the opposite occurs with higher traffic from BTS units in residential and/or rural areas being offset by the reduced traffic from BTS units located in business districts. The WIK model then uses either the morning or afternoon busy hours with the highest traffic to determine the capacity requirements for each link between a BTS unit and BSC location and subsequently the design of the other network elements.

3.101 Optus considers that the Commission's view is incorrect, and that the WIK model does not address this issue through use of the assumption of a morning and afternoon busy hour, since the size of the BTS to BSC transmission pipe (A-bis) is generally fixed at one 2 Mbps link. Diurnal variations in traffic between base stations and across the network provide no A-bis efficiency benefit to the network operator whatsoever. Any "unused" A-bis capacity on a specific site is inaccessible to other traffic.

3.102 In summary Optus contends that as a result of the WIK model's assumptions about busy hour parameters, the WIK model underestimates the efficient cost of supplying the MTAS.

Volume of minutes

3.103 The Commission has estimated the volume of minutes for the year ending June 2007 based on Telstra data at 43.5 billion minutes, and used this value to parameterise the WIK model.

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[52] Optus (2007) Letter to R. Wright, *Mobile Termination Cost Model: Busy Hour Statistics* 26 April 2007

[53] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 126.

3.104 Optus considers that the assumed volume of minutes (43.5 billion minutes) is likely to be an overestimate. Using alternative calculations based on recent Optus data and a range of assumptions, Optus has calculated alternative market total minutes values including **CiC** and **CiC**. These calculations are set out in the appendix. A further comparator is also included: 27.5 billion (ie the original WIK volume estimate from the February version of the model).

3.105 In summary Optus contends that as a result of the overestimate of the volume of minutes, the WIK model underestimates the efficient cost of supplying the MTAS.

*Financial parameters*

Asset values (Equipment prices)

3.106 In its March submission Optus submitted the WIK model has derived its equipment prices from international benchmarks which cannot be relied upon as equipment prices are determined largely by local factors such as land prices and labour costs and installation can be a significant share of cost. Optus observes the cost figures used by WIK are substantially lower than actual prices faced by mobile network operators in Australia.[54]

3.107 The Commission considers the equipment prices used in the WIK model are reasonable in the Australian market. Three out of four mobile network operators are subsidiaries within international telecommunications group and would be expected to either purchase equipment directly from global suppliers or offshore related party at a price negotiated at a group level.[55] The Commission believes 'Equipment prices have nothing to do with geographical features of a country' and '…in the absence of benchmark Australian data, the European benchmarks used in the WIK model provide a reasonable approach to estimating equipment prices…'[56].

3.108 The Commission further believes the relative value of construction and labour costs presented in WIK are reasonable. The site values used in WIK model incorporate land and construction costs are derived from Australian and European data. Comparing the values for macrocell, microcell and picocell sites with the cost figures submitted by Vodafone for the Netherlands, Sweden and UK, they are higher for both Netherlands and Sweden, but lower than for the UK. The higher site costs in UK can be explained by the material difference in the cost of land and the purchasing power parity between Australia and UK.[57] The Commission stated the analysis for land values could be used to support the relative value of construction and labour costs.[58]

3.109 Optus rejects the Commission's analysis of equipment prices. As mentioned elsewhere, the Commission maintains its proposition that the WIK model is

[54] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, p31
[55] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* p92
[56] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* p94
[57] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report*, p95
[58] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report*, p95

designed to estimate the costs incurred by a hypothetical efficient operator but at the same time the Commission is inconsistent in choosing between modelling a purely hypothetical operator and an actual operator. If the model is based on a purely hypothetical operator, the fact that three out of four mobile network operators are subsidiaries within international telecommunications group and their relative bargaining power will therefore be irrelevant to the equipment prices mobile network operators paid.

3.110 Optus notes the Commission's speculation that the analysis for land values could be used to support the relative value of construction and labour costs.[59] While this may be the case, Optus does not consider the Commission has adequately demonstrated that land values are the dominant factor behind international variation in site acquisition and construction costs. Optus considers that there is significant variation in international costs and the causes of that variation have not been adequately explained. The Commission has not demonstrated its international benchmark would apply in Australian circumstance. Optus submits that the best source of information in estimating the cost of an efficient model network operator is data from Australian sources.

3.111 Optus also notes an apparent inconsistency in that the Commission on one hand states equipment prices have nothing to do with the geographical features of a country and on the other hand relies on analysis of land values in various countries to support the variation in site acquisition and construction costs (which are a substantial element of BTS costs).

Risk-free rate

3.112 Optus has given some preliminary consideration to the calculation of the risk-free rate. Optus believes that the Commission should reconsider its use of a 10 year Government bond rate as the risk free rate for the purpose of estimating the cost of debt capital. Optus believes a reasonable alternative for the Commission to consider is to match the maturity of the debt instrument with the regulatory period.

3.113 If longer term rates are used to match the useful life of the asset (and there is an upward sloping yield curve) then the allowed cost of debt will compensate the access provider for risk that it is not taking. For example, the yield curve may be upward sloping because either the issuer may be expecting rates to rise, or it may simply be recognising the risk over the longer period. When regulation occurs in the next period, the access provider will be able to reset prices based on the new rates. If rates do actually rise during that first period then the provider will gain. Optus therefore considers that using a bond for a period longer than the regulatory period potentially allow access providers to be over-compensated (or under-compensate if yield curves are downward sloping).

3.114 Optus believes that the Commission should continue to use a longer bond maturity in setting the MRP. The relevant period for this purpose would be

[59] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* p95

one that is consistent with that used in the empirical studies used to estimate the MRP.[60]

3.115 Optus submits that in calculating the risk-free rate, the Commission should average Government bond rates for the at least 10 days leading up to the start of the regulatory periods. The Commission has used this methodology for many years and Optus believes it is suitably robust to address any potential concerns regarding day-to-day market volatility.[61]

3.116 Optus notes that Telstra has previously submitted that the method of calculation should be adjusted, removing the 10 day averaging requirement.[62] Optus continues to support the Commission's position that there is sufficient liquidity in the Australian bond market to justify the continued use of the averaging approach.[63]

Cost trends

3.117 In its March submission Optus expressed concerns where price trends are derived from international sources. Price trends are difficult to estimate without taking into account local factors such as demand for sites, saturation of readily available radio mast sites or increased environmental concern over radio installation[64].

3.118 The Commission has not specifically responded to this issue and Optus continues to believe local factors should be taken into account.

Site sharing

3.119 In its March submission Optus considered that the 50% sharing assumption for macrocell was too great and generally microcell sites are not shared with other carriers. The extent of cost reductions may also be overstated since in general

[60] Optus does not consider the GasNet case to be a relevant precedent for telecommunications regulation. This is because the Australian Competition Tribunal was critical that the Commission did not use a method that was consistent with the regulatory framework provided by the 'Gas Code'. In this decision the Tribunal decided that "the Commission erred in concluding that it was open to it to apply the CAPM in other than the conventional way to produce an outcome which it believed better achieved the objectives [of the Gas Code]". (Australian Competition Tribunal , Application by GasNet Australia (Operations) Pty Ltd [2003] ACompT, paragraph 47.) Optus notes that the Code directs the Commission to use a CAPM that "reflects standard industry structures for a going concern and best practice" (National Third Party Access Code for Natural Gas Pipeline Systems, November 1997, page 50.). GasNet were successfully able to argue that the use of different risk-free rates in the CAPM was not 'standard' practice. However the GasNet decision is not relevant to this review or telecommunications regulations generally. Optus submits that in the context of telecommunications and Part XIC of the Trade Practices Act 1974, the Commission has the flexibility to choose the method of calculation it finds most appropriate.

[61] The ACCC first proposed and used this method in 1999 in regards to Telstra's PSTN Undertaking.

[62] Bowman R. G. (2005), *Report on the Appropriate Weighted Average cost of Capital for the ULLS Network*, December 2005, page 10.

[63] ACCC (2006), *Assessment of Telstra's ULLS monthly charge undertaking*, Final Decision (Public version), August 2006, page 104.

[64] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, March 2007, page 33

carrier must construct its own equipment shelter hut for reasons of operational flexibility, network security and expansion opportunities.[65]

3.120 The Commission considered that the site sharing assumptions made in the WIK model is reasonable. It is expected an efficient mobile network operator will share sites in order to minimise costs. With reference to Telstra's 2,000 shared sites and the 1,385 sites leased by Crown Castle Australia Limited, the Commission believes the WIK's model sharing assumption of a maximum of 1,270 BTS macrocell sites is reasonable.[66]

3.121 The Commission noted that Optus is silent on the site sharing assumptions made about microcell sites and by implication the WIK model may reflect an assumption close to reality for these BTSs.[67] Further, in relation to the shelter costs, the Commission apparently considers that shelter costs are negligible compared to overall site costs. It states that it is highly unlikely that the cost of a shelter on a site will exceed 60 per cent of the site value, and it considers that shelter costs are included in the 60% of the site value which is not shared on the site.[68]

3.122 The model has been developed based upon the assumption that the hypothetical mobile network operator is building the site rather than leasing the site and the Commission again reiterates the general proposition that the model is based on an optimal network design and it is not trying to emulate the specific design of the four mobile network operators in the Australian market.[69]

3.123 Optus disagrees with the statement that Optus is silent on the site sharing assumptions made about microcell sites as we explicitly stated that "microcell sites are generally not shared with other carriers…they are typically positioned at busy street intersections…street lightning poles, or shop awning. Neither Optus nor Telstra own or otherwise use these structures."[70] Optus never implicitly agrees with the WIK's site sharing assumption of microcell and in fact submitted that the rate of microcell site sharing is zero.

3.124 With respect to the site sharing assumptions for macrocells, Optus observes the WIK figure is high. Comparing to the Optus' network, the proportion of macro base stations including antennas located on a tower owned by another carrier or a specialist tower provider is approximately **CiC**. This is substantially lower than the site sharing assumption WIK uses. As the Commission indicated, the site sharing assumption for macrocells provides for

[65] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, March 2007 page 33
[66] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page114
[67] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 116
[68] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report*, page 116
[69] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 116
[70] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, March 2007, page 33

between a 0.1 cpm to 0.3 cpm reduction in the cost of the supply of MTAS which is significant. [71]

3.125 Turning to the costs of the equipment shelter, Optus submits that contrary to the Commission's apparent belief that shelter costs are negligible compared to overall site costs, shelter costs are in fact a substantial proportion of overall site costs. For example, in the in-principle agreement Optus has recently negotiated with Telstra, the annual site rental charged by Telstra for use of its PMTS mobile sites to place Optus mobile network equipment is around **CiC** By comparison, the annual cost of rental for Optus shelter huts at the same sites (which are placed on adjoining land) varies from **CiC - CiC.** Optus therefore considers that the Commission's view that shelter costs can simply be assumed to be included in the 60% of the site value which is not shared on the site is incorrect.

3.126 In summary Optus contends that as a result of the WIK model's assumptions about site sharing, the WIK model underestimates the efficient cost of supplying the MTAS.

Working capital

3.127 In its March submission Optus considered that the WIK model's approach to working capital is inadequate as it fails to capture the actual time difference between cash payments for inputs and cash receipts for output on account of current operations, and calculate the opportunity cost based on a relevant rate. WIK should base its working capital approach upon actual experience of mobile network operators in Australia.[72]

3.128 The Commission rejected Optus' view on the basis that there is a broad consensus on WIK's approach to working capital and an efficient operator would not face demand for working capital as it would organise business process such that there are no timing difference between cash payments for input and cash receipts for output on account of current operations[73].

3.129 Optus believes it is unrealistic to say an efficient operator would not face demand for working capital. Such a scenario could only exist in a text book. The demise of Onetel indicates the difficulties faced by new entrants in the mobile market in organising their cash flow. The market is constantly changing and unpredictable outgoings are expected from time to time. Mobile network operators incur substantial up-front costs for infrastructure and labour before receiving payments and unexpected turbulences occur from time to time. An example would be the > $1 million damage caused by an armoured personnel carrier at our western Sydney mobile base stations in July 2007.[74]

[71] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 116

[72] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, March 2007, page 34

[73] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* p95

[74] Sunday Age (2007), General News Tank 7, Tower O: it has the ring of a phoney war about it, 15 July 2007 page 3

3.130 In summary Optus contends that as a result of the WIK model's assumptions about working capital, the WIK model underestimates the efficient cost of supplying the MTAS.

Licence fees

3.131 In its March submission Optus submitted that the entire carrier licence fee should be allocated to network services rather than one third to network services and two thirds to retail. Mobile network operators are required to pay a licence fee before they can operate a network but companies offering retail mobile services are not required to pay a licence fee.[75].

3.132 The Commission believes WIK's allocation of the licence fee is a reasonable approach since the carrier licence fee is related to the entire mobile business of a mobile network operator and should therefore be treated in the same way as common organisational-level costs.[76]

3.133 Optus continues to hold the view that the entire carrier licence fee should be allocated to network services. According to the Australian Communications and Media Authority (ACMA), there are two types of organisations that can provide telecommunication services to the public – carriers[77] and carriage service providers (CSP)[78]. Carriers are required to hold a carrier licence but CSPs are not. Like other carriers in Australia, CSP provides retail services to the public but do not own a telecommunication network unit. Accordingly, the licence fee is not related to the entire mobile business of a CSP and Optus therefore submits licence fee should not be treated in the same way as common organisational-level costs.

3.134 In summary Optus contends that as a result of the WIK model's assumptions about licence fees, the WIK model underestimates the efficient cost of supplying the MTAS.

Spectrum

3.135 Optus considers that the WIK model raises issues with both the allocation and the amortisation of spectrum.

3.136 In the WIK model, one third of spectrum costs are allocated to the network, and two thirds to retail.

3.137 Optus submits that this allocation is incorrect, and 100% of spectrum costs should be allocated to networks, since possession of spectrum is required for a network operator, but not for a retailer. In any case, even if 100% of spectrum costs were allocated to the network, a proportion would de facto be allocated

[75] Optus (2007) Submission to the ACCC on the WIK Mobile Network and Cost Model for Australia, March 2007, page 35

[76] ACCC (2007) *MTAS Pricing Principles Determination 1 July 2007 to 31 December 2008 Report* page 108

[77] Carriers are defined as persons or organisations who own a telecommunications network unit to supply carriage services to the public. Examples of a network unit include a length of telecommunications cable or a radiocommunications base station.

[78] Carriage service providers are defined as those who use, but do not own, a telecommunications network to provide services to the public.

to retail services, since all mobile services other than termination are sold at retail.

3.138 The WIK approach is out of step with international practise. In the mobile network cost models employed by Ofcom and OPTA, 100% of spectrum costs are allocated to networks.

3.139 Regarding the manner in which spectrum costs are amortised, for determining the amount to be recovered for the 1,800 MHz spectrum, WIK assumes that a given initial outlay for the acquisition of the spectrum is required to be amortised over the years of the duration of the licence for this spectrum. Optus notes that the method of amortisation of spectrum costs in the WIK model applies a tilt such that any amount amortised in a given year reflects the assumed growth rate for mobile services.[79]

3.140 Optus considers that spectrum costs are likely to be better suited to a straight line amortisation method, rather than a tilted annuity method employing an output growth tilt. The use of a tilted annuity method employing an output growth tilt to amortise spectrum costs is likely to backload the recovery of those costs, which is inappropriate given the likelihood that 3G technology is likely to dominate and in a competitive market parties would only invest in 2G technology if they could accelerate the recovery of their spectrum costs.

3.141 Optus submits that a more reasonable approach would be for the model to amortise spectrum costs according to a straight line method or with a front loaded tilt to reflect the technology obsolescence risk in 2G (from 3G). This would be necessary to maintain efficient investment in 2G consistent with a competitive market.

3.142 In summary Optus contends that as a result of the WIK model's assumptions about spectrum costs, the WIK model underestimates the efficient cost of supplying the MTAS.

[79] WIK Consult (2007) Mobile Termination Cost Model for Australia (WIK Report),January 2007, p41-3

## 4. Other corroborating information

4.1 The Commission's conclusion that the price of 12 cpm proposed in the Optus 2007 Undertaking is above the efficient cost of supply of the MTAS has been informed, in part, by other corroborating information including:

(a) international benchmarking; and

(b) a FL-LRIC+ estimate for the supply of the MTAS by Optus in Australia.

4.2 Optus considers that this corroborating information on which the Commission has relied in reaching its conclusions is not suitable for the purposes for which it has been used for the reasons set out below, and that it is not reasonable for the Commission to use it as a basis for the conclusion that the price of 12 cpm proposed in the Optus 2007 Undertaking is above the efficient cost of supply of the MTAS.

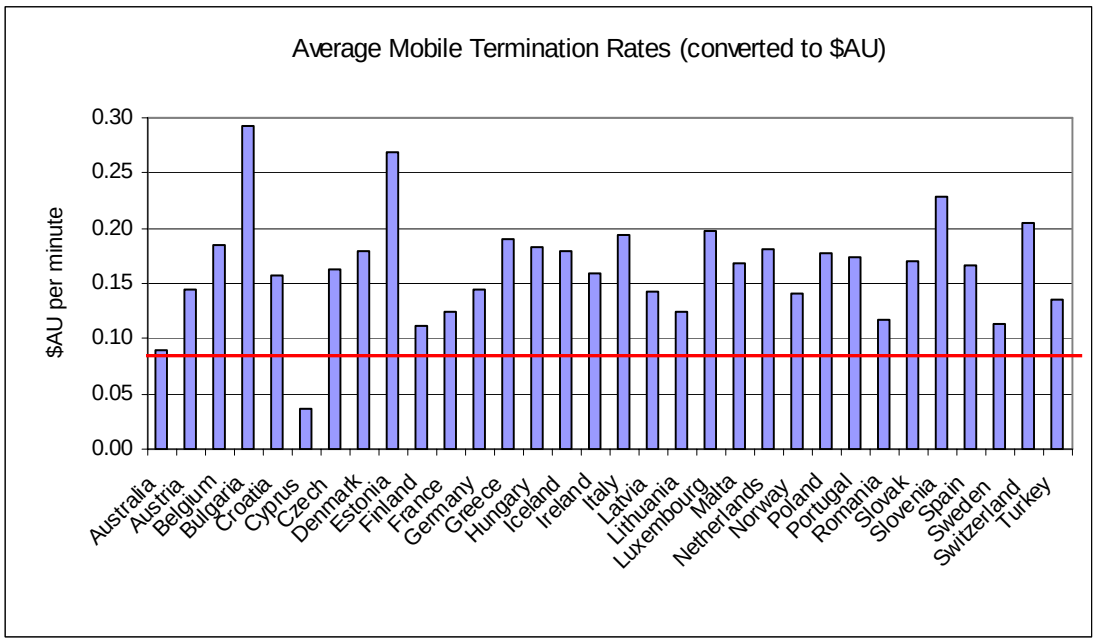
### International benchmarking

4.3 The Commission's conclusion that the price of 12 cpm proposed in the Optus 2007 Undertaking is above the efficient cost of supply of the MTAS has been informed, in part, by the development of comparable international cost models that can be used as benchmarks to corroborate the TSLRIC+ estimate range of 5 cpm to 12 cpm. For example, evidence from jurisdictions such as South Korea and Israel provide for efficient cost estimates of 4.49 cpm and 5.45 cpm respectively.

4.4 At the same time, however, Optus notes that according to a recent survey by the European Regulator Group the Commission's proposed 9 cpm termination rate is significantly lower than all but one of the countries of the European Union (refer to the figure below), and 12 cpm is not an unusually high rate compared to the rates listed.[80] The listed rates are the mean of on and off peak mobile termination rates (where applicable) for each country.

[80] ERG (2007), *Snapshot of MTR*, 8 June 2007.

**Average Mobile Termination Rates**




4.5 Given the above disparity, Optus considers that the Commission's international benchmarks are of limited use since efficient costs are influenced by many factors which vary between one country and another. The Tribunal has recognised this point, and accordingly has placed limited weight on international benchmarks. The Tribunal observed that in order to place reliance upon international benchmarking it would be necessary to possess more information about the jurisdictions from which the benchmark information was sourced, including the regulatory environment, the state of the relevant markets and the socio-economic environment in which the mobile services were operative.[81]

4.6 Optus submits that in the absence of such information it is not reasonable for the Commission to draw conclusions about the efficient cost of supply of the MTAS in Australia based on the South Korean and Israeli benchmarks.

## Top-down modelling

4.7 The Commission's conclusion that the price of 12 cpm proposed in the Optus 2007 Undertaking is above the efficient cost of supply of the MTAS has been informed, in part, by the FL-LRIC+ estimate for the supply of the MTAS by Optus in Australia derived from the Charles River Associates (CRA) Model to support Optus' 2004 Undertaking.

4.8 The Commission states that in assessing Optus' earlier undertaking, Analysys Consulting Pty Ltd provided advice to the Commission about the FL-LRIC+ estimates for the supply of the MTAS by Optus in Australia from the CRA Model. The Commission also states that the cost estimate for the supply of the MTAS was below 12 cpm in 2004. It concludes that the estimate confirms

[81] *Application by Optus Mobile Pty Ltd and Optus Networks Pty Ltd, [*2006] ACompT 8 para 297

that, even without adjustment for higher traffic volumes since that time which are likely to offset any rise in costs, the cost estimate would be below 12 cpm in an Australian context.

4.9 This data appears likely to be out of date, given that it applies to the period prior to 2004 and the Commission has no basis for rolling forward the cost estimate because it has not taken into account increasing costs that a new entrant would face or additional assets that have been replaced in the network. Nor has the Commission adjusted the estimate for economies of scale consistent with what a new entrant would be expected to achieve.

4.10 Optus considers that this data has not been demonstrated to provide any support for the Commission's indicative price. Optus submits that it is not reasonable for the Commission to draw conclusions about the efficient cost of supply of the MTAS in the relevant time period based on the FL-LRIC+ estimate for the supply of the MTAS by Optus in Australia derived from the CRA Model to support Optus' 2004 Undertaking and Analysys' advice.

## 5. Legislative criteria

5.1 The Commission's findings on the legislative criteria have been formed in reliance on the conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS. This conclusion has been informed by the results of the WIK model, based on the assumption that the WIK model accurately estimates the efficient cost of supply of the MTAS (and by other corroborating evidence).

5.2 It follows from the discussion in Sections 2 and 3 that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by the evidence, since:

- the efficient cost of provision of the MTAS cannot be estimated by reference to a hypothetical efficient mobile network designed by the WIK model, since the hypothetical MTAS cost that results from the WIK model is not practically achievable by any real world operator, either an existing operator or a new entrant;
- the WIK model does not accurately estimate the efficient cost of provision of the MTAS (rather, it is likely to underestimate) since the model makes unrealistic assumptions about network design that are not feasible for a real mobile network operator in Australia; and
- the other corroborating information on which the Commission has relied in reaching its conclusions is not suitable for the purposes for which it has been used.

5.3 Consequently, the Commission's findings on the legislative criteria formed in reliance on this conclusion are invalid, and it is not reasonable for the Commission to use the WIK model or other corroborating evidence in order to inform itself for the purpose of forming a conclusion on the legislative criteria.

### Relevant legislation

5.4 The function of the Commission in evaluating ordinary access undertakings is set out in Section 152BU of the Trade Practices Act (the Act). Section 152BU provides that the Commission, after considering the undertaking, must accept or reject it. Section 152BV, 152AH and 152AB contain the relevant legislation to be applied by the Commission in making a final decision on the Optus 2007 Undertaking. The Commission must decide whether it is satisfied that the terms and conditions specified in the undertaking are reasonable (s152BV(2)(d). In determining what is reasonable the Commission has regard to the criteria in s152AH of the TPA.

5.5 Under section 152BV, the Commission must not accept the Optus 2007 Undertaking unless the matters set out in the provision are satisfied:

i) The Commission has to publish the Optus 2007 Undertaking, invite people to make submissions and consider the submissions it received;

ii) The Commission is satisfied that the Optus 2007 Undertaking is consistent with the standard access obligations (SAOs) that are applicable to Optus;

iii) The Commission is satisfied that the Optus 2007 Undertaking is consistent with any Ministerial Pricing determination;

iv) The Commission is satisfied that the terms and conditions specified in the Optus 2007 Undertaking are reasonable;

v) The expiry time of the Optus 2007 Undertaking occurs within 3 years after the date on which the Undertaking comes into operation.

5.6 Section 152AH contains a list of matters the Commission must have regard to:

vi) Whether the terms and conditions promote the long-term interests of end users (LTIE):

vii) The legitimate business interests of the carrier or carriage service provider concerned;

viii) The interests of persons who have rights to use the declared service concerned;

ix) The direct costs of providing access to the declared service concerned;

x) Safe and reliable operation of the carriage service/a telecommunications network or a facility; and

xi) The economically efficient operation of a carriage service, a telecommunications network or a facility.

5.7 In considering the LTIE criteria, the Commission is required to have regard to the objects outlined in section 152AB:

xii) Promoting competition in markets for carriage services and services supplied by means of carriage services;

xiii) Achieving any-to-any connectivity; and

xiv) Encouraging the economically efficient use of, and economically efficient investment in infrastructure.

**Promotion of competition**

5.8 The Commission considers that since 12 cpm is in excess of the efficient cost of supply of the MTAS, by setting an MTAS price of 12 cpm Optus is:

- (in individual mobile network operator wholesale MTAS markets) extracting monopoly rents and earning economic profits from the provision of the wholesale MTAS by raising the price of this service above its underlying cost of production; and

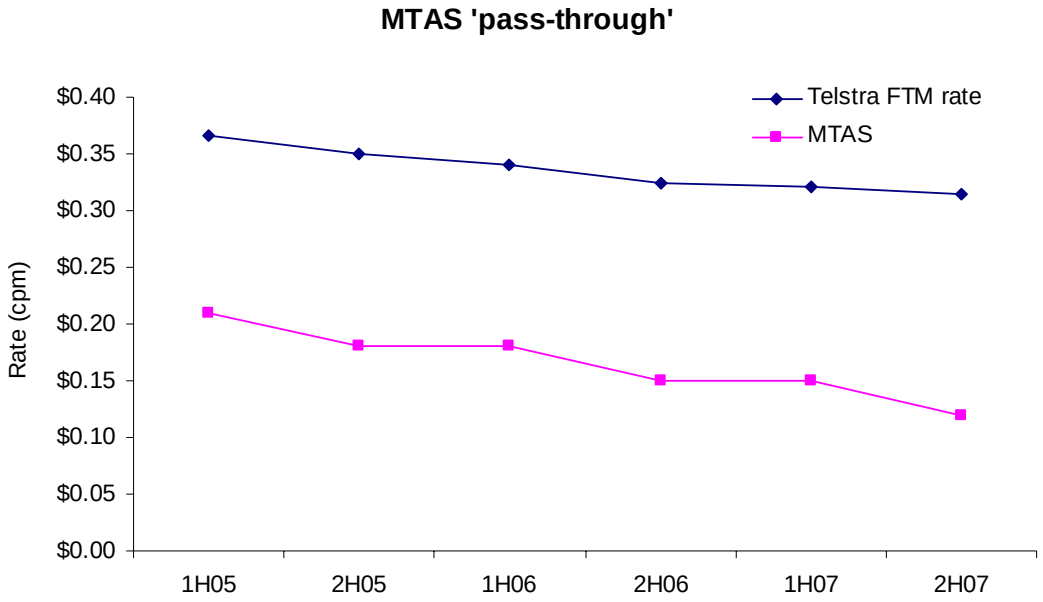
- (in the market within which FTM services are provided) increasing the cost to providers of FTM calls above the underlying efficient cost of the service and in turn may be causing higher prices for FTM calls.

5.9 As a result, the Commission has concluded that a 12 cpm MTAS price is in excess of a level that would promote competition in relevant markets.

5.10 However, as discussed above, Optus considers that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by either the WIK model or other corroborating evidence.

5.11 Turning to the evidence on promotion of competition, Optus notes that in its decision on Optus' undertaking, the Commission stated its expectation that lowering the MTAS price would improve the state of competition in the market within which fixed-to-mobile (FTM) services are provided, and help to ensure the level of FTM pass-through increases. [82] The Commission quoted data showing that Telstra's revenue from FTM services has fallen in recent years, while FTM call volumes have increased, in support of its conclusions.

5.12 Optus submits that Telstra has not completely 'passed-through' decreases in the MTAS to its pricing for FTM calls. Optus has analysed Telstra's public financial reports to investigate the relationship between the price of FTM calls and the MTAS. In the period January 2005 until end June 2007, the MTAS has decreased by 43%. Over the same period, FTM prices have been reduced by only 14%. Optus submits that although FTM prices have fallen to a limited extent as a result of a reduced MTAS, this is clear evidence that pass-through has not been complete.




[82] ACCC (2007) *The Optus 2007 Undertaking in relation to the Domestic Mobile Terminating Access Service* draft decision pages 17-18

5.13 Optus further notes that if Telstra were passing-through lower termination charges then one would expect the two prices to track relatively closely. However, the graph above highlights that in recent years the difference between the prices (i.e. Telstra's margin) has in fact increased. Optus contends that although Telstra's costs may have decreased over this period, the margin is still unjustifiably excessive.

5.14 The incomplete nature of the pass-through means that Telstra is able to gain a windfall in the fixed line market. Optus submits that this additional margin has negative implications for competition in wider markets.

5.15 Optus further submits that pointing to a simple decrease in FTM prices is not the same as demonstrating a promotion of competition in the FTM market.

5.16 In discussing the concept of promotion of competition in Sydney International Airport [2000] ACompT 1 (1 March 2000), the Tribunal noted: [83]

> … the notion of "promoting" competition in s 44H(4)(a) involves the idea of creating the conditions or environment for improving competition from what it would be otherwise….

5.17 The Tribunal discussed the legislative objective which lay behind the promotion of competition concept in the recent decision on the ULLS (Telstra Corporation Ltd (No 3) [2007] ACompT 3), where it noted:[84]

> …the Act aims to promote competition because of the benefits that result from the process of competition, such as lower prices for consumers and the displacement of inefficient suppliers by efficient suppliers of services.

5.18 Optus infers that the Commission has observed a reduction in prices for consumers (albeit limited) and has drawn the inference that this fact must have resulted from result the process of competition in the FTM market. Optus submits that the Commission's inference (that lower FTM prices prove increased competition in the FTM market) is not justified. There are other potential explanations. Even a monopolist with 100% market share will pass on a proportion of a cost decrease to consumers.

5.19 Optus considers that the Commission has demonstrated neither that its MTAS price reductions have created "the conditions or environment for improving competition" nor that they have resulted in "displacement of inefficient suppliers by efficient suppliers of services".

5.20 Optus concludes that the Commission has not demonstrated that previous reductions in the MTAS – from 21 to 12 cpm – have improved competition in FTM, and that it is not reasonable for the Commission to use the WIK model or its other corroborating evidence in order to inform itself for the purpose of forming a conclusion on whether the proposed 12 cpm MTAS price may or may not promote competition in relevant markets. Optus submits that the Commission's conclusions on the promotion of competition are not valid.

[83] *Sydney International Airport [2000]* ACT 1, para 106
[84] *Telstra Corporation Ltd (No 3) [2007]* ACompT 3, para 99

**Economically efficient use of, and investment in infrastructure**

5.21 The Commission considers that since 12 cpm is in excess of the efficient cost of supply of the MTAS, a 12 cpm MTAS price is in excess of a level that would encourage the economically efficient use of, and investment in infrastructure.

5.22 When an access provider is able to recover its cost of investment, it will have neither too great nor too little an incentive to invest. The central role of cost recovery in promoting efficient investment was confirmed by the Tribunal in the recent decision on Telstra's ULLS appeal (Telstra Corporation Ltd (No 3) [2007] ACompT 3).

5.23 A MTAS price that will allow Optus to recover the costs of its efficient investment in the mobile network (inclusive of a normal return on its investment), would promote productive and dynamic efficiencies by ensuring that Optus will continue to invest in the network as required (for example, in response to a desire for increased capacity), and make timely changes to its network in response to changes in consumer tastes and in productive opportunities.

5.24 As discussed above, Optus considers that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by either the WIK model or other corroborating evidence. Optus submits that the WIK model cannot provide the Commission with correct information on the level of a cost-reflective MTAS price. Consequently it cannot assist the Commission in determining whether or not Optus is able to recover its cost of investment, and so whether or not the 12 cpm MTAS price will promote efficient investment.[85]

5.25 Optus concludes that it is not reasonable for the Commission to use the WIK model or its other corroborating evidence in order to inform itself for the purpose of forming a conclusion on whether an MTAS price may or may not encourage the economically efficient use of, and investment in infrastructure, and that the Commission's conclusions on the economically efficient use of, and investment in infrastructure are not valid.

**The interests of access seekers**

5.26 The Commission considers that since a 12 cpm MTAS price is in excess of the efficient cost of supply of the MTAS, for Optus to set such a price would discriminate against equally-efficient access seekers in related markets.

5.27 As a result, the Commission has concluded that a 12 cpm MTAS price is in excess of a level that would be in the interests of access seekers.

5.28 As discussed above, Optus considers that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by either the WIK model or other corroborating evidence.

5.29 Consequently, Optus concludes that it is not reasonable for the Commission to use the WIK model or its other corroborating evidence in order to inform itself

[85] *Telstra Corporation Ltd (No 3) [2007]* ACompT 3, para 159

for the purpose of forming a conclusion on whether an MTAS price may or may not be in the interests of access seekers, and that the Commission's conclusions on the interests of access seekers are not valid.

**Legitimate business interests**

5.30 The Commission considers that since a 12 cpm MTAS price is in excess of the efficient cost of supply of the MTAS, it would cause Optus to earn monopoly profits.

5.31 As a result, the Commission has concluded that a 12 cpm MTAS price is in excess of a level that would be in the legitimate business interests of Optus.

5.32 As discussed above, Optus considers that the Commission's conclusion that 12 cpm is in excess of the efficient cost of supply of the MTAS is not properly supported by either the WIK model or other corroborating evidence.

5.33 Further, calculation of a regulated MTAS price by reference to a hypothetical efficient mobile network designed by a bottom up scorched earth model would prevent existing mobile network operators in Australia from recovering their prudent investments in their mobile networks. This is because:

- the WIK model is likely to underestimate the efficient cost of provision of the MTAS since it makes unrealistic assumptions about network design that are not feasible for a real mobile network operator in Australia; and
- the MEA prices used in the WIK model understate the capital investment of a mobile network operator in Australia today, since equipment prices have fallen in recent years. Consequently, the networks of existing mobile network operators in Australia are highly unlikely to be as cheap as the hypothetical networks designed by models such as the WIK model, even if those networks were designed efficiently at the time they were built. In this circumstance the existing mobile network operators are unlikely to have received appropriate compensation for past network investments because the falling price trends were not used historically to front load the return of capital invested.

5.34 In Telstra Corporation Limited [2006] ACompT 4 the Tribunal interpreted "legitimate business interests" as "a reference to the interest of a carrier in recovering the costs of its infrastructure and its operating costs and obtaining a normal return on its capital."[86] Accordingly a regulated MTAS price which does not allow mobile network operators to recover their prudent investments is not in the legitimate business interests of service providers.

5.35 Consequently, Optus concludes that it is not reasonable for the Commission to use the WIK model or its other corroborating evidence in order to inform itself for the purpose of forming a conclusion on whether a given MTAS price is or is not in Optus' legitimate business interests, and that the Commission's conclusions on the legitimate business interests of Optus are not valid.

[86] *Telstra Corporation Limited [2006]* ACompT 4 para 89

## Appendix: Market volume of minutes

*Summary*

The Commission has estimated the volume of minutes for the year ending June 2007 based on Telstra data at 43.5 billion minutes, and used this value to parameterise the WIK model.

This value (43.5 billion minutes) is likely to be an overestimate. Using alternative calculations based on recent Optus data and a range of assumptions, Optus has calculated alternative market total minutes values including **CiC** and **CiC.** A further comparator is also included: 27.5 billion (ie the original WIK volume estimate from the February version of the model).

*Introduction*

The assumed annual volume of minutes for the market is a key parameter in determining an MTAS charge based on LRIC since the fixed costs of the service (including network costs) are divided over this volume.

*Commission estimate*

The Commission has estimated the volume of minutes for the year ending June 2007 in the WIK model based on Telstra data. These calculations have produced an upper bound value and a lower bound value for the volume of minutes. The Commission's calculations were carried out as follows:

- begin with Telstra's originating minutes for the half year ending December 2006, as reported in Telstra's annual report (4.147 billion);
- (upper bound value only) adjust upwards by 16%[87] to account for the possibility that Telstra's annual report under-reports annual minutes (by comparison with the Commission Market Indicator Report, which is based on Telstra's RAF reporting);
- double to estimate Telstra's originating minutes for the year ending June 2007;
- double to estimate Telstra's end minutes (including both originating and terminating minutes) for the year ending June 2007 (9.621 billion);
- scale up (divide by Telstra's market share 43%) to estimate mobile market end minutes for the year ending June 2007;

[87] The Commission appears to have made an error in calculating the extent of the under-statement in the annual report in 2003-04 – this was only 14.5%, not 16% as reported – but it does not change the average of 16%.

- increase volume to account for the volume of data services (assumed 6% of voice services)

This procedure has resulted in estimated annual market volumes of 40.9 billion (lower bound) and 47.4 billion (upper bound) voice-equivalent end minutes for 2006-07. The Commission has used a mid-point value of 43.5 billion minutes to parameterise the WIK model.

*Discussion*

This volume is likely to be an overestimate. The assumption implicit in scaling up Telstra's minutes to market scale is that all carriers have broadly similar minutes to Telstra (after scaling to the appropriate market share). This assumption may not be correct. Telstra's minutes might also include transited minutes which would inflate the volume based on Commission calculations.

It may be the case that Telstra's volume was unusually high compared to other carriers. For example, it might be that the growth in minutes per subscriber of all carriers but Telstra has reduced, so an estimate based on Telstra minutes would be too high. Optus' growth in minutes has decreased. Optus' total minutes for FYE Jun 06 grew by **CiC** on FYE Jun 05 according to Division 12 reporting. This follows a similar rate of growth (**CiC**) in FYE June 05. But in the FYE June 07, the growth rate of Optus' total call minutes reduced significantly to **CiC.**

*Calculations*

According to the most recent Optus data, there were **CiC** minutes on Optus' network in the year ending June 2007. Assuming Optus has a market share of 33%, we can estimate a market volume of minutes by scaling up the combined Optus and Telstra minutes figures to market scale. This results in an estimated volume of **CiC** (using the Telstra upper bound figure), **CiC** (lower bound) or **CiC** (mid-point). The latter value is **CiC** below the Commission's 43.5 billion estimate.

Further, the Commission's upward adjustment by 16% is not necessarily correct, since Telstra's annual report and RAF figures may be more consistent this year than in previous years. If Telstra's annual report figure can be relied on then we can ignore the upper bound and focus on the lower bound estimate of **CiC**, which is **CiC** below the Commission's 43.5 billion estimate.

However, this calculation may still result in an overestimate since it assumes Vodafone and Hutchison have volumes between Optus and Telstra (proportionate to their market share). It may be the case however that the Telstra annual minutes value relied on by the Commission was large not just by comparison with Optus but also by comparison with Vodafone and Hutchison. Recent minutes data for Vodafone and Hutchison is not available. But if we assume that Vodafone and Hutchison have minutes volumes equivalent to Optus (proportionate to their market share), rather than between Optus and Telstra, then the market annual minutes estimate is **CiC**: **CiC** below the Commission's original mid-point estimate.