Mobile Services Review
International inter-carrier roaming

A final report on the provision of international inter-carrier roaming services

September 2005

1. Introduction

Since 2003, the Australian Competition and Consumer Commission (the Commission) has conducted a wide ranging review of a number of issues associated with the regulation of the mobile services industry in Australia. As part of this review, the Commission:

- released a Discussion Paper (April 2003);
- held two public forums in Melbourne (August 2003) and Sydney (September 2003);
- declared a mobile terminating access service (MTAS) (June 2004);
- made a pricing principle determination in relation to the MTAS (June 2004);
- allowed a declaration in relation to the mobile originating access service (MOAS) to expire (June 2004); and
- made a decision not to declare a domestic inter-carrier roaming service (December 2004).

A final aspect of the Mobile Services Review relates to whether the Commission should regulate an international inter-carrier roaming (international roaming) service. International roaming can be described as ‘a facility, supported by commercial arrangements between operators or service providers, which enables a mobile phone subscriber to use his/her mobile phone in another country on any other network which has entered into a roaming agreement for both outgoing and incoming calls’.[1]

The Commission is aware that there has been increasing global and local interest in international roaming services in recent years. The Commission has received complaints and representations from Australian consumers and user associations such as the Australian Telecommunications Users Group (ATUG) about the level of retail prices and lack of transparency associated with retail pricing structures for international roaming.

In recognition of this interest and the complaints made to the Commission, the Commission indicated in the Discussion Paper that it will consider:

- whether regulation of international roaming services is appropriate under the *Trade Practices Act 1974* (the Act); and
- if so, what form regulation of these services should take.

For the most part, the review of international roaming services has been carried out having regard to Part XIC of the Act, which sets out a telecommunications access regime. To a lesser extent, the review has had regard to Part XIB of the Act, which sets out telecommunications-specific anti-competitive conduct provisions. The

[1] based on Commission of the European Communities, *Towards the Personal Communications Environment: GREEN PAPER on a common approach in the field of mobile and personal communications in the European Union, COM (94)145 final*, 27 April 1994, p. 225.

review is also informed by paragraph 28(1)(c) of the Act, which confers on the Commission the power to conduct research into matters affecting the interests of consumers, being matters with respect to which the Parliament has power to make laws.

1.1 Structure of this report

The remainder of this Report is structured as follows:

- **Chapter Two** of this Report provides a background to the provision of international roaming services, defining the service and detailing its functional aspects and the current arrangements for the supply of such services;

- **Chapter Three** discusses the views of interested parties provided to the Commission during the course of this inquiry;

- **Chapter Four** examines the current prices paid by consumers of international roaming services, and identifies factors that may underlie current price levels;

- **Chapter Five** sets out the regulatory options the Commission has considered as possible measures to address concerns about international roaming services;

- The **Conclusion** of the Report sets out the Commission's assessment of the current situation with respect to the provision of international roaming services and outlines actions the Commission will take in relation to these services;

- **Appendix A** contains a list of those interested parties who provided submissions to the Mobile Services Review Discussion Paper; and

- **Appendix B** contains a list a those interested parties who provided submissions to the Discussion Paper that directly addressed matters relating to the supply of international roaming services.

2. Background

2.1 International inter-carrier roaming

As noted in Chapter One, international roaming can be described as 'a facility, supported by commercial arrangements between operators or service providers, which enables a subscriber to use his/her mobile phone in another country on any other network which has entered into a roaming agreement for both outgoing and incoming calls'.[2]

From a functional perspective, international roaming has both retail and wholesale levels.

At the retail level, the provision of international roaming services consists of mobile network operators selling the service to end-users to allow these users to take their mobile handset to another country where it can be used to make and receive voice calls or voice messages, send and receive short message services (SMS) and multimedia message services (MMS), or for General Packet Radio Switch (GPRS) services.[3] Carriage service providers and mobile virtual network operators (MVNOs)[4] also provide retail international roaming services.

At the wholesale level, the provision of international roaming services consists of mobile network operators in different countries buying and selling roaming rights to each other to enable the provision of international roaming services in the retail market. That is, before mobile network operators can provide the international roaming service to their domestic subscribers, they first need to establish roaming agreements with mobile network operators in other countries. As these agreements are bilateral arrangements and subject to negotiation between participating operators, there is no universal set of agreed terms and conditions for the provision of international roaming services. However, GSM Association[5] arrangements such as the Inter-Operator Tariffs (IOT) and Standard International Roaming Agreements (STIRA) may provide much of the basis for these agreements. In addition, wholesale service providers such as roaming brokers[6] operate in the wholesale market.

For the purposes of this inquiry, 'inbound roaming' refers to the situation where subscribers of foreign mobile network operators (operators of the 'home network') visit Australia and roam on a domestic Australian mobile network (the 'visited network').

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[2] ibid.

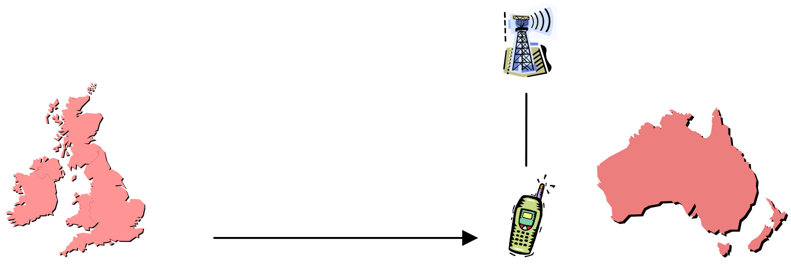
[3] GPRS services are packet-based wireless services providing faster data rates and new end-user services such as Internet access from mobile handsets. GPRS is based on the GSM standard.

[4] An MVNO is a mobile operator that does not own spectrum and usually does not have its own network infrastructure. Instead, MVNOs have commercial arrangements with licenced mobile network carriers to buy minutes of use for sale to their own customers.

[5] See Section 4.1 of this Report for a discussion of the GSM Association, IOT and STIRA.

[6] Roaming brokers manage access and billing between mobile network operators. They are also members of the GSM Association and are bound by the same framework for roaming agreements. Because a large operator can have a large number of bilateral roaming agreements with other operators, it can reduce billing management and overhead costs by dealing with a single roaming broker and connecting to several operators immediately. See Rautopuro, Lasse, *EU Regulation for Interconnection and Roaming, Helsinki University of Technology*, 2004.

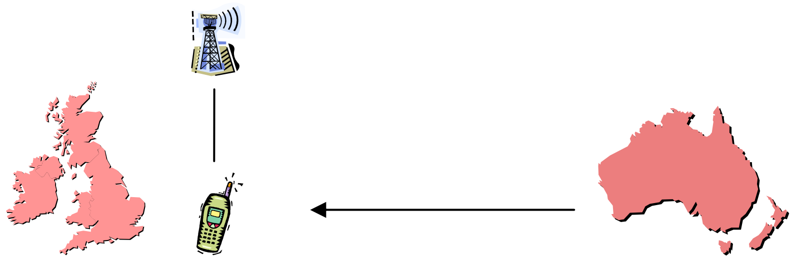
Figure 1 – Inbound international roaming



e.g. UK mobile subscriber travelling in Australia,
temporarily connected to Telstra's network

'Outbound roaming', on the other hand, refers to the situation where subscribers of Australian mobile networks (operators of the 'home network') travel overseas and roam on the network of a foreign mobile operator (the 'visited network').

Figure 2 – Outbound international roaming



e.g. Telstra subscriber travelling in the UK,
temporarily connected to a UK network

For the purposes of this inquiry, the Commission will examine the nature of the functional markets (wholesale and retail) generally, rather than focus on separate product/service markets for inbound and outbound roaming.

2.2 Availability and usage of international roaming services

2.2.1 Use of international roaming services by Australian subscribers

During the course of the Mobile Services Review, the Commission found there was little up-to-date data on the level of usage of international roaming services by Australian mobile consumers. That said, data collected by the Australian Communications and Media Authority (ACMA) (previously the Australian Communications Authority) shows that the number of residential and small business consumers using international roaming services increased from 4 per cent and 14 per cent, respectively, in 1999-2000 to 9 per cent and 17 per cent, respectively, in 2000-01.[7]

[7] Australian Communications Authority, *1999-2000 Telecommunications Consumer Satisfaction Survey Miscellaneous Data*, September 2000, p. 51; Australian Communications Authority, *Consumer Satisfaction Survey 2000-01, Special Report No. 8*, January 2002, p. 16. at www.acma.gov.au.

Information provided to the Commission during the course of the Mobile Services Review suggests that the number of mobile phone subscribers who use international roaming services represent only a small proportion of all mobile phone subscribers. For example, Optus indicated in its submission that less than 2% of its total mobile subscriber base used international roaming services as at June 2003.[8] This is significantly lower than the level of take-up observed in European jurisdictions where, for example, the United Kingdom had 19 per cent of residential mobile phone users and 60 per cent of business mobile phone users using international roaming services as at February 2002.[9]

The figures reported to the Commission during the course of the Mobile Services Review appear to be significantly lower than those reported by the ACMA in 1999-2000 and 2000-01. However, discrepancies may be explained by the exclusion of 'businesses other than small businesses' from the ACMA survey and the likelihood that those who had taken up mobile phone services between 1999 and 2001 were likely to be users with specific demands for mobile services.[10]

A relatively low take-up of international roaming services by Australian subscribers is reflected in the revenue Australian carriers receive from such services. Data provided by Vodafone in its submission to this inquiry shows that revenue from international roaming services represents [c-i-c] of its total revenue.[11] Telstra's Annual Report for 2003-04 shows that its revenue from international roaming services made up about 5 per cent of its mobile services revenue and 0.84 per cent of its total operating revenue for the 2003-04 financial year.[12] Telstra's Annual Reports also shows that revenue from international roaming services is increasing over time – revenue increased by 18.1 per cent during the 2001-02 financial year, by 7 per cent during 2002-03, and by 13.7 per cent during 2003-04.[13]

2.2.2 Availability of international roaming services

Handset compatibility

In Australia, second generation (2G) mobile services are provided on terrestrial networks using GSM (Global System for Mobiles) and CDMA (Code Division Multiple Access) technologies, and third generation (3G) mobile services are provided on a network using the WCDMA (Wideband CDMA) technology. These networks operate on the 900 MHz and 1800 MHz frequencies for 2G GSM services, the 800 MHz frequency for 2G CDMA services and the 2.1 GHz frequency for 3G

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[8] SingTel Optus, *Submission to ACCC on Mobile Services*, June 2003, paragraph 9.9.
[9] Ofcom, *International benchmarking study of mobile services–4 June 2003*, paragraph 3.6, available at http://www.ofcom.org.uk/static/archive/oftel/publications/research/2003/benchmob0503.htm.
[10] Australian Communications Authority, *1999-2000 Telecommunications Consumer Satisfaction Survey Miscellaneous Data*, September 2000, p. 51
[11] Vodafone, *Supplementary submission to the Australian Competition and Consumer Commission Mobile Services Review Discussion Paper*, 2 July 2003, paragraph 3.30.
[12] See Telstra Corporation Limited and controlled entities, *Annual Report 2003-04*, Operating and Financial Review and Prospects, p. 81. In this calculation, 'mobile services revenue' excludes mobile handset sales, and 'operating revenue' excludes 'other revenue' and 'interest income'.
[13] ibid., p. 81; Telstra Corporation Limited and controlled entities, *Annual Report 2002-03*, Operating and Financial Review and Prospects, p. 75.

WCDMA services.[14] As mobile phone handsets are manufactured to work on particular frequencies, an individual roaming in overseas jurisdictions will only be able to utilise international roaming services in those countries where mobile telephony services are provided on the same frequency as that for which the individual's mobile handset is configured.

The Commission understands that, initially, GSM handsets used in Australia were either single-band or dual-band. A single-band GSM handset will only operate on one frequency band and can only be used to make and receive calls in countries that operate within the 900 MHz frequency. A dual-band handset can switch automatically between the 900 MHz and 1800 MHz radio frequencies used by Australian GSM mobile networks. Both types of handsets can be used in many countries, as many mobile end-users worldwide are connected to GSM networks operating on these frequencies.[15]

In recent years, handset manufacturers have commenced producing and selling tri-band handsets that can operate on three different radio frequencies (900 MHz/1800 MHz/1900 MHz) over GSM networks. Before the advent of these new handsets, Australian travellers bringing their own (dual-band) handsets could not use overseas roaming services due to mobile networks in such countries operating on a frequency other than one of the frequencies used in Australia. For example, Canada and Chile mobile networks operate on the 1900 MHz frequency.[16] With a tri-band handset, a roaming Australian end-user can connect to a network operating within the 1900 MHz radio frequency.

Further, Vodafone reports that mobile handsets are now 'multi-mode' – that is, capable of switching between 2G and 3G networks – and therefore capable of roaming on any European GSM network. This allows 1800 MHz (2G) and 2 GHz (3G) network operators to provide services that are fully substitutable with those offered by 900 MHz or 900/1800 MHz operators (both 2G networks).[17]

At present, the majority of the world's mobile phone subscribers use GSM technology. The GSM Association points out that GSM technology is used in more than 200 countries.[18] Hence, in most cases an Australian subscriber will be able to use international roaming services in overseas jurisdictions.

Australian operators offering roaming services

Telstra, Optus and Vodafone each provide inbound roaming and outbound roaming

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[14] Australian Communications Authority, *Telecommunications Performance Report 2003-04*, p. 70.
[15] Australian Communications Authority, *Telecommunications Performance Report 2000-01*, p. 81.
[16] Telstra Mobile, International Roaming User Guide, available at: www.telstra.com.au/mobilenet/introam/outbound/outbound.cfm .
[17] Vodafone Group comments on 'ERG common position on the co-ordinated analysis of the markets for wholesale international roaming', July 2005, footnote 3, available at http://erg.eu.int/documents/index_en.htm#ergdocuments.
[18] GSM Association, GSM Association Brochure, p. 3. See also Australian Communications Authority, *Telecommunications Performance Report 2000-2001*, p. 81.

services on their GSM networks.[19] With CDMA networks, roaming is much more limited. For outbound CDMA roaming, Hutchison does not offer the service and Telstra offers the service only to its CDMA subscribers travelling to New Zealand. For inbound CDMA roaming, only Telstra offers the service, and only to visitors from a limited number of countries. With Hutchison's 3G network, outbound roaming is available to Hutchison 3G customers roaming on overseas GSM networks. Although there are few reciprocal inbound 3G roaming services available at present due to the limited number of 3G (WCDMA) international networks, the number of reciprocal agreements is growing. Hutchison has indicated that it provides reciprocal inbound roaming services for two networks, SingTel and Starhub, and is negotiating inbound and outbound arrangements with a number of 3G operators overseas. Inbound roaming on Hutchison's 3G network is available to the Hutchison group's 3G subscribers from '3' branded networks, including Hong Kong, UK, Sweden, Italy, Denmark, Austria and Ireland.[20]

Telstra provides a 'Telstra Mobile International Roaming' service, which allows Telstra customers to use their Telstra MobileNet ® GSM Digital Mobile Services in over 100 countries around the world.[21] Telstra also offers inbound roaming services on both its GSM and CDMA networks for visitors to Australia. However, and as indicated above, the availability of inbound roaming on its CDMA network is limited to visitors who are subscribers to operators in Hong Kong, Japan, Korea, China, Indonesia, Thailand, Taiwan, Israel and New Zealand that have roaming agreements with Telstra.[22]

Optus' international roaming service, called 'AutoRoam', enables customers to use their Optus Mobile Digital service with overseas networks in over 130 countries worldwide. However, this service is not available to Optus CDMA customers.[23]

Vodafone's international roaming service is known as 'Vodafone World'. Vodafone has roaming agreements with networks in 90 countries around the world and preferred network agreements with 30 mobile network operators.[24] In some countries where Vodafone Australia does not have roaming agreements, Vodafone UK may have roaming agreements with operators in these countries. In these instances, Vodafone Australia can provide customers with a Vodafone UK subscriber identity module (SIM) card. This service is known as 'plastic roaming'. While this allows customers the ability to use their own handset, they are assigned a different mobile number.[25]

For outbound roaming, Australian end-users will usually need to arrange with their

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[19] Optus, *Optus Submission to ACCC on Mobile Services*, June 2003, p. 74-75; Telstra, *Telstra Supplementary Submission to Mobile Services Review*, July 2003, pp. 5-7; Vodafone, *Supplementary Submission to the ACCC Mobile Services Review Discussion Paper*, 2 July 2003, paragraphs 3.1-3.12.
[20] Hutchison Telecommunications (Australia) Limited, *Submission to the ACCC Mobile Services Review 2003*, June 2003, p. 36; Correspondence with ACCC, 22 August 2005.
[21] See http://www.telstra.com.au/mobile/help/userguides/roaming.htm.
[22] See http://www.telstra.com.au/mobile/products/overseas/roaminginbound.htm.
[23] See http://www.optus.com.au/Vign/ViewMgmt/display/0,2627,1038_36590-3_5463--View_354,FF.html.
[24] See http://www.vodafone.com.au/rep/coverage/vodafone_world.jsp?gs=foryou&hd=coverage&st=going_os.
[25] vRoam, *vRoam Australia's submission to the ACCC on the Mobile Services Review 2003*, 12 June 2003.

service provider for the provision of the international roaming services prior to leaving Australia to ensure they have access to the overseas network(s) they need. A lead time of around three days is usually required for mobile network operators to arrange access to the overseas network(s).[26] Telstra, however, does automatically approve international roaming for some customers.[27] On arrival at their destination, customers turn their handset on and wait about 30 seconds until it automatically connects to the visited network. Alternatively, some handsets may need to be manually logged on to the visited network.[28]

Information about making and receiving calls, the use of voicemail and other mobile services is usually provided by mobile network operators to end-users in the form of fact sheets or guides that can be obtained from retail outlets or from the mobile network operator's website.

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26 See for example, http://www.vodafone.com.au/rep/coverage/vodafone_world.jsp?gs=foryou&hd=coverage&st=going_os.

27 See Telstra, International Roaming: GSM Digital Mobile User Guide at http://www.telstra.com.au/mobile/help/userguides/roaming.htm.

28 Telstra, International Roaming User Guide, ibid; Optus, International calling Optus AutoRoam at http://www.optus.com.au/Vign/ViewMgmt/display/0,2627,1031_34818-3_34653--View_303,00.html; and http://www.vodafone.com.au/rep/coverage/going_os.jsp?gs=foryou&hd=coverage&st=going_os.

3. Views of interested parties

3.1 Australian Telecommunications Users Group (ATUG)

ATUG incorporated into its submission the International Telecommunications Users Group's (INTUG) May 2003 submission to the European Regulators Group (of the European Commission) entitled *The wholesale national market for international roaming: possible remedies*.[29]

The INTUG submission argues that international roaming prices are currently too high. INTUG cites the EC Director-General Competition[30] in arguing that the market for international roaming services currently displays the following characteristics:

- high concentration ratios;
- homogeneous service;
- similar cost structures;
- high barriers to entry;
- inelastic market demand;
- a general lack of incentives to reduce prices;
- greater variation from country to country than would be expected;
- dislocation from retail markets, located in another country;
- excessive and rising prices;
- almost identical prices;
- apparent co-ordination of pricing behaviour and/or tacit collusion; and
- agreements and activities of the GSM Association reinforcing the oligopoly.

INTUG argues that competition is restricted by two aspects of mobile network operator behaviour:

- the non-discrimination clause in GSM Association agreements, the application of which limits discounting of wholesale charges between operators; and

- the refusal of mobile network operators to deal with foreign operators that do not hold a mobile network operator licence.

INTUG argues that excessive pricing of international roaming services is leading, in particular, to several negative market effects:

- restricting the adoption of technical innovation, particularly the emergence of mobile data services; and

- stymieing moves towards convergence of fixed and mobile telephony.

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[29] INTUG, *The wholesale national market for international roaming; possible remedies – an INTUG submission to the European Regulators Group*, May 2003, available at http://www.intug.net/submissions/ERG_roaming.html

[30] See European Commission DG Competition, *Working Document on the Initial Findings of the Sector Inquiry into Mobile Roaming Charges*, 13 December 2000.

INTUG argues that the dominance of at least one operator in this market, a necessary prerequisite for regulation under European Union (EU) Law, exists in relation to international roaming. Specifically, INTUG argues that a situation of joint dominance exists. In this regard, INTUG argues that mobile network operators have both the opportunity and the incentive to engage in co-ordinated behaviour in relation to international roaming services.

INTUG notes several possible regulatory remedies, and concludes that regulation based on Long Run Incremental Cost (LRIC) was appropriate. INTUG argues that co-ordinated action by European regulators might prove particularly effective.

INTUG argues that for non-regulatory measures to be effective, they need to stimulate a much higher degree of competition than currently exists. Two remedies that might achieve this are:

- removing the apparent ban on MVNOs and service providers from offering roaming services to foreign operators to allow new players into the wholesale market; and
- removing the disjuncture between wholesale and retail markets, by allowing (or requiring) a foreign operator to buy only 'air time' – that is, a connection back to a point of interconnection with its own network.

3.2 Hutchison Telecommunications

Hutchison Telecommunications (Hutchison) argues that as the mobile services market becomes increasingly competitive, it would expect its inbound roaming rate to reflect this. Hutchison argues that there is likely to be more competition in the market for inbound GSM roaming services, which currently has three players, than in the market for inbound roaming CDMA services, which currently has only one player.[31]

Hutchison argues that there is little competition among overseas carriers to provide outbound roaming services to Australian carriers.[32]

Hutchison argues that its retail mark-up on outbound roaming reflects the premium nature of this service.[33]

Hutchison indicates that it does not specify to its consumers the way in which prices for overseas roaming are calculated. Consequently, consumers may be unaware of how these final prices are calculated.[34]

Hutchison argues that numerous substitutes exist for outbound roaming services which constrain the price of outbound roaming. Hutchison also argues that competition exists for the custom of frequent travellers, who base their choice of carrier on its outbound roaming charges.[35]

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[31] Hutchison submission, pp. 35-36.
[32] ibid.
[33] ibid., p. 37.
[34] ibid.
[35] ibid., p. 38.

Finally, Hutchison submits that inbound roaming rates charged by Australian carriers should not be regulated, given they must pay higher (unregulated) rates to overseas carriers for outbound roaming.[36]

3.3 Vodafone

Vodafone questions whether the ACCC has jurisdiction to regulate international roaming services.[37]

In relation to outbound roaming, Vodafone argues two sources of competition exist: from competing operators in the visited market, and from product/service substitutes.[38]

Vodafone indicates that the former source of competition is increasingly leading to bilateral agreements between operators that move away from the inter-operator tariff (IOT) regime[39] and the principle of non-discrimination.[40] Vodafone also argues that competition in Australia for mobile subscribers provides a constraint on retail prices for outbound roaming.[41] Vodafone also submits that extensive competition exists between Australian mobile network operators to provide inbound roaming services.[42]

Vodafone also details the information it provides to customers who acquire outbound roaming services.[43]

Vodafone considers regulation of this market is unnecessary. Vodafone argues that as this market matures and technology develops, competition will intensify, and carriers will increasingly negotiate bilateral deals outside the IOT arrangements.[44]

3.4 vRoam Global

vRoam Global (vRoam) favours greater disclosure of retail prices by carriers, rather than price regulation, as the best way to promote competition in the market for international roaming services.[45]

vRoam argues that the market for international roaming services is broader than described in the ACCC's Discussion Paper and encompasses:

- plastic roaming;
- SIM-only service providers;

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[36] ibid.
[37] Vodafone, *Supplementary Submission to the ACCC Mobile Services Review Discussion Paper*, 2 July 2003, p. 6.
[38] ibid., p. 7.
[39] See Section 4.1 of this Report for a discussion of inter-operator tariffs.
[40] Vodafone, loc. cit.
[41] ibid., p. 9.
[42] ibid.
[43] ibid., pp. 9-10.
[44] ibid., pp. 10-11.
[45] vRoam Global, v*Roam Australia's submission to the ACCC on the Mobile Services Review 2003*, 12 June 2003, p. 4.

- call-back operators;
- calling cards;
- phone rental companies; and
- inter-carrier roaming.[46]

vRoam argues that mobile network operators do not in general provide adequate information to consumers on the prices of international roaming services. As a result, many consumers are not aware of the prices for services such as:

- calls between, for example, two Australians travelling within the same overseas country at the same time; and
- voicemail services.[47]

vRoam also submits that carriers tend to provide indicative prices that are subject to change without notice. vRoam argues that carriers could, and should, provide more precise information on the charges of calls to various countries.[48]

3.5 Optus

Optus argues that regulation of international roaming charges would not be appropriate for the following reasons:

- Optus has little control over the international roaming charges paid by Australian consumers (because these depend mainly on wholesale charges by foreign mobile network operators);

- consumer information on international roaming charges is readily available;

- when roaming overseas, consumers can choose among different networks; and

- there are effective substitutes to international roaming, of which consumers are well aware.[49]

3.6 Telstra

Telstra argues that mobile network operators are unable to extract monopoly rents in relation to this service when it is considered in the broader context of the retail mobile services market.[50]

Furthermore, Telstra argues that even if these services are analysed separately, there are strong competitive constraints on mobile network operators.[51]

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[46] ibid.
[47] ibid., p. 10.
[48] ibid., pp. 5, 10-11.
[49] Optus, *Submission to ACCC on Mobile Services*, June 2003, paragraphs 9.1-9.11..
[50] Telstra, *Mobile Services Review – Supplementary response to the Discussion Paper of the ACCC,* July 2003, p. 6.
[51] ibid.

In relation to outbound roaming, Telstra contends that if it raised prices, it would risk losing retail subscribers.[52] Telstra also submits that regulating retail outbound roaming prices would expose local mobile network operators to margin squeezes, since they cannot control wholesale roaming charges, their most costly input.[53]

In relation to inbound roaming, Telstra argues that overseas customers who roam in Australia can choose among rival local mobile network operators to provide this service, which provides adequate competition.[54]

Finally, Telstra submitted that it provides full details to its customers in relation to international roaming charges.[55]

3.7 Conclusion

On the basis of the submissions described in this Chapter, it appears that concerns about international roaming services relate to relatively high prices for wholesale and retail international roaming services and the adequacy of information provided to consumers about prices for retail international roaming services.

[52] ibid.
[53] ibid.
[54] ibid., p. 7.
[55] ibid.

4. Pricing of international roaming services

The concerns expressed by interested parties in submissions to this inquiry in relation to international roaming services, as outlined in Chapter Three of this Report, mostly relate to the prices charged for these services and the adequacy of the information about these services provided by mobile network operators. This Chapter examines the institutional arrangements underpinning the prices charged for international roaming services, the prices observed for these services, the factors that may affect the levels of these prices and future developments that may influence prices for these services. The question of the adequacy of the information provided to consumers about international roaming services by mobile network operators is considered as part of the Commission's examination of the factors affecting retail prices for these services.

4.1 Institutional arrangements for international roaming prices

This section evaluates the institutional arrangements and other protocols that underpin the final prices paid by consumers for international roaming services. The final price paid by subscribers to a mobile network when they roam overseas depends in large part on the prices their home network operator is able to negotiate with mobile network operators in their destination country. A further mark-up by the subscriber's carrier is generally imposed on top of the wholesale price of the service. As there appear to be unique dynamics in relation to price setting for the wholesale and retail charges, the factors affecting these prices are evaluated separately.

4.1.1 Wholesale pricing structures

The wholesale pricing principles for international roaming services appear to be laid down by the GSM Association. This body is a global trade association representing the interests of GSM operators. Its inception resulted from a memorandum of understanding signed by mobile operators from thirteen countries on 17 September 1987. The GSM Association takes responsibility for the development, deployment, evolution and promotion of the GSM standard. The Association claims to be the world's leading wireless industry representative body, consisting of GSM network operators, key manufacturers and suppliers to the GSM industry, regulators and administrative bodies. Membership of the Association consisted of 660 second and third generation mobile operators and more than 150 manufacturers and suppliers at the end of 2004.[56]

Since 1998-99, the GSM Association has applied charging principles based on an Inter-Operator Tariff (IOT) in relation to bilateral wholesale roaming charges. However, the Association is not involved in the operators' bilateral arrangements. The IOT is formally defined as a tariff between mobile network operators, and it is charged by the visited network operator to the home network operator for the use of

[56] Information about the GSM Association is available at its website www.gsmworld.com.

the visited network.[57]

According to the European Commission Directorate-General Competition Working Document on the Initial Findings of the Sector Inquiry into Mobile Roaming Charges (the EC DG Competition Working Document), a mobile network operator will often apply a uniform IOT on a zonal basis – that is, it offers the same IOT to all its roaming partners within a particular zone.[58] However, the size of this zone may vary. Furthermore, mobile network operators might offer discounts to individual roaming partners, based on a range of criteria including:

- volume;
- average expenditure per subscriber;
- increase in the average expenditure per subscriber; and
- destination of calls.

However, according to the EC DG Competition Working Document, discounting is only slowly emerging.[59]

The Commission understands that the IOT pricing regime laid down by the GSM Association does not deal with international roaming agreements between licensed mobile network operators, on one hand, and organisations that are not licensed network operators, such as retail service providers and MVNOs, on the other hand.

Access to the wholesale roaming market had been initially restricted to licensed network operators. By 2004, roaming brokers – who are not licensed operators – were operating in the wholesale market. According to Rautopuro, roaming brokers are also members of the GSM Association and are bound by the same framework for roaming agreements,[60] i.e. the Standard International Roaming Agreements (STIRA) and the IOT regime.

4.1.2 Retail pricing practices

The pricing principles of the GSM Association do not govern the pricing of retail international roaming services. In the absence of specific regulation by governments in specific countries, therefore, each operator is free to set the level of its end-user tariffs without any restrictions. Typically, the home network operator will add a mark-up on top of the wholesale roaming price charged by the operator of the visited network to arrive at a final price for the retail service. This mark-up is arrived at by the home operator adding a percentage of the IOT onto the IOT amount to arrive at the price to be paid by the end-user. This is consistent with the pricing information provided by Optus, Vodafone and Hutchison during the Mobile Services Review.

[57] European Commission DG Competition, op.cit., p. 8.
[58] ibid..
[59] ibid., p. 8.
[60] Rautopuro, Lasse, *EU Regulation for Interconnection and Roaming, Helsinki University of Technology*, 2004.

These carriers indicated that their mark-ups were [c-i-c] per cent,[61] [c-i-c] per cent[62] and [c-i-c] per cent,[63] respectively.

Based on information from Telstra's website, Telstra applies a 30 per cent mark-up over the charge levied by the overseas network operator (for GSM international roaming outgoing calls or for transfer of packet data using GPRS).[64]

Therefore, the final retail price for the end-user of the international roaming service is the sum of:

(a) the visited network's IOT charge;

(b) fluctuations in currency exchange rates (the current system requires the conversion of the price for use of the service from the visited network's currency to Special Drawing Rights equivalence and finally to the home network's currency);[65]

(c) after converting the visited network's IOT charge to the home network's currency by the method above described, the home operator adds its mark-up over the visited network's charge.

Unlike a domestic mobile call where only the calling party pays for the call, a mobile user using an international roaming service also pays for incoming calls. For example, when receiving a mobile call from Australia, the calling party pays for a normal mobile call within Australia, and the receiving party pays for the international leg where the call is re-directed from Australia to the country the receiving party is visiting.

Voicemail arrangements (i.e. when end-users miss incoming calls and the calling party opts to leave a voice message, which the end-user can afterwards retrieve for a price) also have a different charging structure when the end-user is roaming overseas as compared to when he/she is in the home country and not roaming. End-users who travel and maintain their usual voicemail arrangements will have their missed calls normally diverted to an answering service while they are overseas. This means that the end-user will have to pay for the initial international leg of the call, as well as the leg of the call back to Australia to his/her message service. Retrieval of the message will incur another charge, at the rate for an international call to Australia. In contrast,

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[61] Optus, op. cit., p. 80.
[62] Vodafone, op. cit., paragraph 3.18.
[63] Hutchison, op. cit., p. 38.
[64] Telstra, *Our Customer Terms Telstra Mobile Section Part I – Heading Overseas (International Roaming)*, at http://www.telstra.com.au/customerterms/docs/introaming.doc
[65] According to Optus, the SDR is the exchange factor used by all member carriers of the GSM Association to enable all call records to be changed correctly from the overseas carrier's currency into the home carrier's currency. Due to exchange rate fluctuations, roaming charges can vary from month to month. See Optus, op. cit., p. 75. The SDR is an international reserve asset created by the International Monetary Fund in 1969 to supplement the existing official reserves of member countries; its value is based on a basket of key international currencies, today consisting of the euro, Japanese yen, pound sterling and US dollar. More information on SDRs can be obtained from the IMF website at www.imf.org/external/np/exr/facts/sdr.HTM

end-users who are not travelling or roaming pay only for retrieving messages left by callers.

4.2 Prices for international roaming services

Submissions received during the Mobile Services Review from the Australian Telecommunications Users Group (ATUG) indicate that end-users have long complained about high prices for international roaming services. ATUG contends that for corporate and business end-users, the international roaming service is a significant value-added service that they find necessary to use. Since business users have found prices too high, they have generally responded in two ways: (1) they have used alternatives and substitutes such as prepaid calling cards, SMS or fixed lines and (2) many have simply switched off their mobile phones and stopped using the roaming service when travelling overseas.[66]

4.2.1 Methodology for assessing price levels

Telstra, Optus and Vodafone currently provide considerable information on the prices their subscribers can expect to pay when they roam overseas. The Commission has used this publicly available information to gauge the current level of prices for this service. Based on information provided by mobile network operators on the level of retail mark-ups, the Commission then discusses what proportion of these final consumer prices represent wholesale prices (that is, bilateral prices negotiated between the Australian and overseas mobile network operator), and what proportion represent retail mark-ups. The Commission then analyses the market(s) in which wholesale and retail international roaming services are provided, and what factors might be causing the price trends observed.

4.2.2 Final prices paid by Australian consumers for international roaming services

Australia-UK roaming charges

In order to assess whether adequate competitive forces currently exist in the market(s) in which international roaming services are provided, the Commission has compared the prices paid by Australians travelling overseas for roamed calls with the prices paid for similar non-roamed calls. As an example, Table 4.1 below compares the total price of a roamed mobile-to-mobile call from Australia to the United Kingdom (UK) with a non-roamed mobile-to-mobile call from Australia to the UK. It also compares the roaming prices charged by the Australian carriers with the prices they charge their Australian subscribers for (non-roamed) calls from Australia to the UK.

In this example, international roaming services are provided when an Australian mobile subscriber visits the UK and chooses to roam on a UK mobile network. This allows him/her to make and receive mobile calls to and from a variety of destinations. For example, he/she could call a fixed-line or mobile number within the UK. He/she could also receive from, and make calls to, Australia. Additionally, he/she could make and receive calls to and from other countries, access voicemail services, and

[66] ATUG 2003, Presentation at the ACCC Mobile Services Public Forum, Melbourne, 29 August 2003.

send and receive SMSs. As MMS[67] and GPRS services are emerging services, prices for these developing services are not examined in this Report.

When an Australian mobile subscriber roams in the UK, use of any of these mobile services attracts a different charge, and a different charging structure, compared to that which would apply if that customer were to make mobile calls in Australia using their home mobile network. In this example, the Commission has focused on roamed calls from Australia to the UK, and from the UK to Australia.

It is useful to compare the price of a roamed call with a comparable non-roamed call. While there are different billing and marketing arrangements to provide a roamed call as compared to a non-roamed call, the physical infrastructure required to provide the call should be similar. Hence, the underlying cost of providing these calls should be similar. In this regard, Stumpf states:

> The provision of a roamed call to a foreign mobile operator's subscriber is technically similar to providing a non-roamed call to a domestic subscriber; it requires little extra functionality other than the signalling between the visited and home network. What is largely different, however, are underlying contracts and the marketing and billing relationships.[68]

Therefore, significant differences between the prices of roamed and non-roamed calls may indicate the existence of above-cost pricing of the service.

The EC DG Competition did not establish the underlying costs of international roaming services as faced by operators in European countries. This Report similarly does not seek to determine the level of costs underlying inter-operator tariffs. However, the question as to why the prices of roamed calls differ significantly from those of non-roamed calls remains.

When comparing the relative prices of roamed and non-roamed calls between two destinations, the comparison will be more accurate if roamed and non-roamed calls between subscribers of the same carriers are compared. Consider, therefore, Table 4.1 below.

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[67] Multimedia Messaging Service (MMS) is a communications technology that allows users to exchange multimedia communications (e.g. text, images, audio, video clips, streaming video) between capable mobile handsets.

[68] Stumpf, Ulrich (WIK Wissenschaftliches Institut fur Kommunikationsdienste GmbH), *Prospects for improving competition in mobile roaming*, 2001, p. 2. (Paper prepared for the 29th TPRC 2001, 27-29 October 2001, Alexandria, Va. USA)

Table 4.1: Comparison of 5-minute roamed and non-roamed calls between Australia and the UK *

Call type	Price of call ($A)
Telstra roamed call (from UK to Australia)[1]	$13.70
Telstra roamed call (from Australia received in UK)[2]	$7.80
Optus roamed call (from UK to Australia)[3]	$15.35
Optus roamed call (from Australia received in UK)[3]	$5.85
Vodafone roamed call (from UK to Australia)[4]	$16.75
Vodafone roamed call (from Australia received in UK)[4]	$9.05
O2 roamed call (from Australia to UK)[#5]	$6.12 (£3.00)
O2 roamed call (from UK received in Australia)[#5]	$5.10 (£2.50)
Telstra non-roamed mobile call to UK[+6]	$4.31
Optus non-roamed mobile call to UK[+7]	$2.07
Vodafone non-roamed call to UK[+8]	$2.04
O2 non-roamed mobile call to Australia[#9]	$3.06 (£1.50)

Source: Telstra, Optus, Vodafone, O2 websites

1 Telstra, GSM International Roaming Prices, viewed 17 August 2005, <http://telstramobile.custhelp.com/cgi-bin/telstramobile.cfg/php/enduser/std_adp.php?p_faqid=6&p_created=1066272915&p_sid=rWUoUcNh&p_lva=&p_sp=cF9zcmNoPSZwX3NvcnRfYnk9JnBfZ3JpZHNvcnQ9JnBfcm93X2NudD03MTQmcF9wcm9kcz0mcF9jYXRzPSZwX3B2PSZwX2N2PSZwX3BhZ2U9MQ**&p_li=&p_topview=1>.

2 Telstra, UK O2 (BT Cellnet) Incoming Call Charges at peak time, viewed 18 August 2005, http://www.telstra.com.au/mobile/products/overseas/countryinfo.cfm?countryid=215&operatorid=34017.

3 Optus, AutoRoam charges, viewed 17 August 2005, <http://www.optus.com.au/portal/site/personal/menuitem.9b38bb3dfffbeae30f7416058c8ac7a0/?vgnextoid=2c8c1308f0054010VgnVCM10000029a67c0aRCRD>.

4 Vodafone World call charges, Zone 3, viewed 17 August 2005, <http://www.vodafone.com.au/rep/coverage/going_os/prefnetworks.jsp?gs=foryou&hd=coverage&st=going_os&ss=vodafone_world>.

5 O2, Pay Monthly call charges, International Traveller Service, viewed 18 August 2005, <http://www.o2.co.uk/personal/abroad/prices/callingwhileabroad/0,,133,00.html>.

6 Telstra, Our Customer Terms Telstra Mobile Section, Part D-Other Call Types, viewed 17 August 2005, <http://www.telstra.com.au/customerterms/docs/othercalltypes.doc>. The price shown in the table is for a Telstra non-roamed mobile call to a UK mobile. A call to a UK fixed line incurs a much lower charge.

7 Optus, 'yes' international charges, viewed 17 August 2005, <http://www.optus.com.au/portal/site/personal/menuitem.9b38bb3dfffbeae30f7416058c8ac7a0/?vgnextoid=c18c1308f0054010VgnVCM10000029a67c0aRCRD>.

8 Vodafone International Calling Rates, viewed 17 August 2005, <http://www.vodafone.com.au/foryou/services/idd_rates.jsp>.

9 O2, Calling From the UK charges, viewed 18 August 2005, <http://www.o2.co.uk/personal/abroad/prices/callingfromuk/0,,132,00.html>. This example is based on O2’s ‘International Traveller Service’ for frequent travellers, which requires a monthly payment of £2.99 but offers a 40% discount of postpaid Standard Call Charges.

*	Prices are for published call charges only. These exclude subscription, handset and other costs. These additional costs relating to use of a mobile phone are assumed to be roughly equal for customers using roamed and non-roamed services. All four carriers surveyed have international roaming rates that are flat rates (i.e. same rates for calls 24 hours x 7 days).
#	Prices paid by UK consumers are converted to $A on the basis of purchasing power parity (PPP) estimates provided by the Productivity Commission, "Purchasing Power Parity Conversion". This takes into account differences between Australia and the UK in the cost of living generally, i.e. the differences in the cost of a broad ranging basket of goods and services between the two countries.
+	Non-roamed prices are for postpaid mobile-to-mobile calls at flat rates.

Table 4.1 compares roamed and non-roamed mobile-to-mobile calls between Australia and the UK. For accuracy, call costs are compared in relation to a single UK mobile carrier, O2. All prices are converted to Australian dollars ($A), using purchasing power parity (PPP) estimates provided by the Productivity Commission. The estimates relate to a 5-minute call (including a flagfall or connection charge when applicable).

The first item in Table 4.1, 'Telstra roamed call (from UK to Australia)', refers to the price of a call made by an Australian, roaming in the UK on the O2 network, back to Australia. The second item, 'Telstra roamed call (from Australia to UK)', refers to the price of a mobile-to-mobile (MTM) call received by a Telstra subscriber, roaming in the UK, from someone in Australia. The price of this call includes both the price paid for the call by the party in Australia initiating the call, and the price paid by the Australian subscriber roaming in the UK for receiving that call.

Similar calculations are made for calls made by and to roaming customers of Optus and Vodafone.

The final four items are the prices of non-roamed MTM calls. The first three are for MTM calls from Australia to the UK, while the last is for a MTM call made by an O2 subscriber to Australia.

It is particularly instructive to compare, using this table, the prices of roamed calls with their non-roamed equivalent, where the two calls:

- travel in the same direction (e.g. Australia to the UK); and
- are between subscribers to the same networks (e.g. O2 and Telstra).

For example, it costs a Telstra subscriber roaming on O2's network $A13.70 to make a 5-minute call to a Telstra mobile subscriber in Australia. By contrast, it costs an O2 subscriber just $A3.06 to make a 5-minute call to the same mobile subscriber. The roamed call is therefore roughly 4.5 times the price of the non-roamed call.

Likewise, when a Vodafone subscriber roaming in the UK on O2's network receives a mobile call from Australia, both the calling and receiving parties are charged for the call. While the calling party pays a per-minute rate equivalent to the price of a local MTM call made in Australia, the receiving party (in the UK) pays a price that reflects a roaming charge. The total price paid by both parties (who can be regarded as joint consumers of the call) is $A9.05.

By contrast, when a Vodafone mobile subscriber calls an O2 mobile subscriber in the UK, the calling party bears the full price of $A2.04 for a 5-minute call. The total price paid for the roamed call is, accordingly, approximately 4.4 times as much as its non-roamed equivalent.

Roaming prices in other destinations

The Commission has performed similar analysis in relation to the final consumer prices paid by Australian consumers who roam in the US, New Zealand, Singapore, Israel and Mexico. This analysis indicates that final consumer prices for roamed services generally exceed the prices of their non-roamed equivalents by factors of between 2 and 5.

Current magnitude of retail mark-ups

Based on Telstra's publicly available information,[69] the Commission understands that its retail mark-up for outbound roaming services is 30 per cent. Assuming that other Australian mobile network operators have an approximately similar retail mark-up, then, in general, wholesale roaming charges make up roughly 75 per cent of the final retail price of an outbound roaming service. That is, if the final price paid by the Australian consumer is, for example, $A6.00 per minute of use, about $A4.50 of that would represent the amount paid to the overseas mobile network operator, and the remaining $A1.50 would represent the retail mark-up by the Australian carrier.

Conclusion on current international roaming prices

Based on the information it has gathered and the analysis it has performed, the Commission considers that the final prices for international roaming services lie significantly above the final prices charged for their non-roamed equivalents. This suggests that the prices of international roaming services may exceed their underlying cost of provision by a significant amount. That said, the Commission notes that it has not estimated the cost of providing an international roaming service.

4.3 Reasons underlying current prices for international roaming services

Having concluded that prices for international roaming services may be significantly greater than their underlying cost of provision, the Commission now examines the factors which may be behind these relatively high prices. As already noted in section 4.1 above, the Commission will consider the factors affecting prices for international roaming services at the wholesale and retail levels separately, owing to the apparent unique dynamics of each functional market.

4.3.1 Possible causes of excessive roaming prices

Wholesale prices for international roaming services

Given the conclusion that the price of a roamed call appears to be well above the price of its non-roamed equivalent, the next issue is to examine possible factors underlying

[69] Telstra, *Our Customer Terms Telstra Mobile Section Part I – Heading Overseas (International Roaming)*, at http://www.telstra.com.au/customerterms/docs/introaming.doc

this disparity. As wholesale charges account for around 75 per cent of the total price paid by end-users for international roaming services, an examination of the factors affecting wholesale prices for these services will go a considerable way to elucidating the reasons for high international roaming prices.

Wholesale international roaming prices should be viewed in the context of the agreements and standards established by the GSM Association. The GSM Association has produced several documents that remain important to the agreements made between mobile network operators in relation to international roaming. In 1996, the GSM Association notified its Standard International Roaming Agreement (STIRA) to the EC DG Competition for clearance from the EC cartel prohibition under Article 81(3) of the EC Constitution. Additionally, in 1998, the GSM Association notified its Inter-Operator Tariff (IOT) to the European Commission. In both instances, the GSM Association received a conditional comfort letter from the EC.[70]

As noted previously, the IOT is formally defined as a tariff between mobile network operators, charged by the visited network operator to the home network operator for the use of the visited network.[71]

The IOT forms the basis for wholesale agreements between mobile network operators in relation to international roaming services. It is noteworthy that the framework provided by the GSM Association did not, initially, deal with international roaming agreements between mobile network operators, on one hand, and organisations that are not licenced mobile network operators (such as service providers, MVNOs, or fixed network operators), on the other hand.[72]

In its initial findings, the EC DG Competition concluded:

> The GSM Association's standard international roaming agreement (STIRA) and the Infocentre operated in the framework of that agreement foster price transparency and reinforce the existing oligopolistic market structure. Use of the STIRA also induces operators not to conclude unilateral roaming agreements with any market parties other than licenced mobile network operators; and
>
> The standard non-discrimination obligations introduced by the GSM Association appear to remove incentives to introduce pro-competitive roaming services, e.g. based on preferential wholesale roaming agreements and transparent one rate retail tariffs.[73]

The rules, standards and agreements formulated by the GSM Association should be taken into account when considering the current high levels of wholesale international roaming prices.

Several interested parties argued that competition among mobile network operators to secure the custom of travellers roaming on their networks should provide an incentive

[70] EC DG Competition, loc. cit.
[71] ibid.
[72] EC DG Competition, op. cit., p. 10. This initial framework may have changed by 2003-04, allowing roaming brokers – who are non-licenced operators but who are members of the GSM Association – to enter into wholesale agreements. See section 4.1.1 of this Report.
[73] EC DG Competition, op. cit., p. 4.

for carriers to negotiate lower wholesale prices in roaming agreements. For example, Telstra argued:

> There is significant competition for inbound roaming services. The majority of foreign mobile providers have non-exclusive commercially negotiated international roaming agreements with each major network in Australia and their customers can choose which network they roam on in Australia based on these negotiated charges. This implies that there is healthy competition at the wholesale level, as they would have all commercially negotiated their charges knowing there are substitutes for the service.[74]

Information provided on the websites of Telstra, Optus and Vodafone indicates that Australian travellers can often choose among competing networks in many of the countries they visit. In theory, competition between these rival network operators to secure end-users on their own networks should provide the incentive to negotiate lower wholesale international roaming charges.

However, the Commission's empirical observations of the current prices charged for international roaming services indicate this does not currently appear to be occurring. Reasons for this apparent lack of wholesale price competition warrant further consideration.

Some answers emerge from examining the EC DG Competition's Working Document. This paper examined the conduct of mobile operators under Articles 81 and 82 of the Treaty establishing the European Community. The EC DG Competition commented on similarities among mobile operators in European countries in respect of IOTs. Further, the EC DG Competition noted:

> Given the limited number of mobile licensed operators and the fact that the cost structures, at least for the GSM 900 network operators with full coverage, are symmetrical, the market can be conducive to parallel behaviour by the oligopolists. The fact that the product offered (roaming services) is homogeneous, and that the market is characterised by a rather low price elasticity of demand (foreign mobile operators need roaming agreements to offer the service to their clients) while being transparent in terms of price to those seeking wholesale roaming agreements with operators in a particular country further reinforces the high oligopolistic interdependence of the market.[75]

Similarly, Stumpf argues that a high degree of transparency of competitors' IOTs – through notification of changes in IOTs through the GSM Infocentre (operated under the auspices of the GSM Association), and the immediacy of this information – reduced incentives for competitive price undercutting.[76] Stumpf also suggests that as mobile network operators have little control over their subscribers' network selection in a visited country, operators can be largely insensitive to price changes, which reduces the incentives for these operators to seek lower IOTs. However, Stumpf did note that this may change with over-the-air SIM programming, which allows a home

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[74] Telstra, *Mobile Services Review: Telstra's Submission to the Discussion Paper of the Australian Competition and Consumer Commission*, July 2003, p. 7.
[75] EC DG Competition, op. cit., p. 20.
[76] Stumpf, op. cit., p. 13.

mobile network operator to direct its customers to the visited networks with the lowest IOTs in the visited country, at the time of visiting.[77]

The EC DG Competition also observed that the economic characteristics of the market(s) for international roaming gave mobile operators the incentive to align their prices, possibly using a strategy of collusive price leadership.[78] These market characteristics are: oligopolistic market structure; products which are close substitutes; rather (price) inelastic market demand; similar cost structures of suppliers; and high barriers to entry.[79]

Similar supply and demand side market characteristics were also identified by Stumpf as factors which give rise to oligipolistic interdependency and a lack of incentives for competitive IOT undercutting in the wholesale market for international roaming services.[80]

In evaluating the conduct of mobile operators under Article 82, the EC DG Competition examined whether the conditions for joint dominance exist among mobile operators. In this context, the EC DG Competition noted that numerous economic links exist between mobile operators within a particular EC Member State. These include:

- membership of the GSM Association;
- identical obligations of mobile network operator licences, which require co-operation in order to implement;
- membership of national groups and committees where mobile operators act together; and
- membership of other industry related forums such as the WAP forum and the UMTS forum.[81]

Furthermore, the EC DG Competition continues to investigate possible collusion between mobile network operators in respect of roaming charges. In July 2001, the EC's spokesperson for competition policy confirmed that EC inspectors, along with officials from national competition authorities, had carried out simultaneous unannounced inspections at the premises of nine European mobile operators located in the UK and Germany. These inspections were part of the sector inquiry into mobile roaming charges and were carried out for two purposes:

- to ascertain whether there is evidence of collective fixing of consumer (retail) prices by mobile operators in both countries; and

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[77] Stumpf, op. cit., p. 14. Recent developments in network selection technology, and global alliances among mobile network operators which enable the end-user's network selection to be directed towards alliance members, are discussed in section 4.4 of this Report.
[78] EC DG Competition, op. cit., p. 21.
[79] ibid.
[80] Stumpf, op. cit., pp. 7-14.
[81] EC DG Competition, op. cit., p. 24.

- to verify whether German operators have illegally fixed the (wholesale) prices they charge to other operators, and whether these prices are excessive or discriminatory.[82]

It appears the EC DG Competition's inquiry into mobile roaming charges set by German operators is ongoing.

On 26 July 2004, the EC issued two 'statements of objections' to UK mobile operators, O2 and Vodafone. In these statements, the EC concludes that each operator had a dominant position in the supply of wholesale international roaming services on their respective networks between 1997/98 and the end of September 2003, and exploited these positions in charging unfair and excessive IOTs to European mobile network operators during this time. In reaching this conclusion, the EC stated its investigation revealed the pricing of roaming calls exceeded by far the prices Vodafone and O2 had applied during the same period for similar calls made on their respective networks by UK subscribers of 'Independent Service Providers' (equivalent to carriage service providers or CSPs under the Australian regulatory regime) to whom these network operators supplied wholesale airtime access.[83] Vodafone and O2 will now have the opportunity to respond to the EC's preliminary view in written and oral submissions.

The EC issued another two 'statements of objections' on 10 February 2005, this time to German mobile operators, Vodafone and T-Mobile, with regard to the roaming prices they charged in the German market during the period 1997 to 2003. As in the 2004 issuances, the EC statements of objections in 2005 argue that Vodafone and T-Mobile have abused their dominant position in the German market and charged unfair and excessive IOTs to other operators, in breach of Article 82 of the Treaty of Rome, which concerns competition rules in the common market. Vodafone and T-Mobile are being provided the opportunity to respond to the EC.[84]

Ovum observes that, since the 2001 inspections of the UK and Germany mobile operators, there have been no further publications from the EC DG Competition. Ovum is of the opinion that some market observers believe that the EC DG Competition will report soon, while the large mobile operators believe that it will choose to wait and see whether the market and technical developments will deliver a solution. Ovum further opines that it is generally agreed that the EC DG Competition has established the existence of the problem but has not been able to decide on a course of legal action that would not be open to legal challenge by the mobile operators.[85]

The Commission notes, however, the recent action by the European Regulators Group (ERG) of the EC, which effectively follows up on the initial work accomplished during the EC DG Competition's sector inquiry into mobile roaming charges. From

[82] European Commission Press Release, 'Statement on inquiry regarding mobile roaming', 11 July 2001.
[83] European Commission Press Release, 'Commission challenges UK international roaming rates', 26 July 2004.
[84] Ovum, '*The EC challenges Vodafone and T-Mobile over roaming rates*', 16 February 2005.
[85] J Green, P Trotter and H Aben, *Mobile regulation: international roaming*, Ovum, May 2004, p. 22.

December 2004, the ERG[86] has intensified its efforts to find a harmonised approach to *ex ante* regulation of international roaming services. In this regard, the ERG commenced a European Union-wide investigation into wholesale prices for international roaming with the sending of questionnaires to mobile network operators in Member States. The questionnaire aimed to collect information to assist national regulatory authorities in defining the relevant market(s) and formulating any regulatory remedies that should be imposed. In May 2005, the ERG announced their draft conclusions resulting from the questionnaire study, adopted a common position on international roaming wholesale market definition and market analysis, and commenced the analysis of their respective national markets. The ERG also established a project team to identify measures to be put in place in order to improve transparency of roaming tariffs. [87]

As a concrete result of the ERG's work, the EC announced in July 2005 that it will start publishing, from autumn 2005 onwards, a special website listing samples of international roaming retail tariffs of operators in the 25 EU Member States. This is to enhance competition in the international roaming markets and increase price transparency for consumers.[88]

The Commission does not propose to examine the conduct of either Australian or overseas mobile network operators in relation to international roaming charges as part of this inquiry. However, the Commission notes that the market characteristics and opportunities for co-ordinated behaviour identified by the EC DG Competition (2000) might provide an explanation why competition between within-country mobile network operators to negotiate inbound roaming agreements has not put downward pressure on wholesale roaming charges.

Finally, other structural characteristics of the market(s) in which wholesale international roaming services are provided may result in high prices.

Firstly, wholesale prices might be highest where there is least competition among home network operators to obtain international roaming traffic. To elaborate, where there are only one or two mobile operators in a particular country, travellers to that country have a limited choice of mobile operators on whose network to roam. For example, New Zealand currently has two mobile network operators: Telecom New Zealand and Vodafone. This might partially account for the current high charges the Commission has observed that Australian mobile subscribers incur when they roam in New Zealand. These charges are significantly higher than the charges for Australian mobile subscribers roaming in Hong Kong or Taiwan, both of which currently have six 2G mobile networks. For example, at rates quoted on Telstra's website at the time of writing, a Telstra subscriber roaming in New Zealand on Vodafone NZ's network

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[86] The European Regulators Group (ERG) for electronic communications networks and services was set up by the European Commission (EC) to provide a suitable mechanism for encouraging cooperation and co-ordination among national regulatory authorities (NRAs) and the EC. This is in order to promote the development of the internal market for electronic communications networks and services and to seek to achieve consistent application in all Member States of the provisions set out in the Directives of the new regulatory framework. The ERG, created by an EC Decision on 29 July 2002, is composed of the heads of the relevant NRAs and acts as an interface between them and the EC in order to advise and assist the EC. For further information about the ERG, see http://erg.eu.int.

[87] <http://erg.eu.int/whatsnew/index_en.htm>

[88] European Commission, Press Release IP/05/901, 11 July 2005.

would pay $A19.00 for a 5-minute call to Australia. By contrast, if the subscriber roamed in Hong Kong on SmarTone's network he/she would pay $A13.70 for the same call; if he/she roamed in Taiwan on Chunghwa Telecom's network, $A4.05 would be paid for an analogous call.[89]

Furthermore, even where there are multiple network operators in a particular country, one network might have clearly superior geographic coverage to the others. This would make that network particularly attractive to travellers to that country, who are more likely to wish to utilise coverage across the length and breadth of the country during their visit. This is likely to be reflected in a premium to mobile operators who can boast national coverage. In its Working Document, the EC DG Competition noted instances in which the second and third largest suppliers of wholesale roaming in a particular EU Member State applied similar IOT rates, but the largest operator's rates were significantly higher.[90] This argument is also consistent with Stumpf's reasoning that second-mover disadvantages in European countries have meant that later entrants to the mobile market may not have national coverage they can offer to overseas mobile network operators for international roaming services and are therefore unlikely to get preferred roaming status from foreign mobile network operators. These newer entrants are therefore unlikely to compete effectively with the major mobile network operator(s) to drive IOTs down.[91]

There may be other advantages accruing to dominant mobile network operators. These might include first mover advantage, greater brand recognition, and greater bargaining power in negotiating bilateral agreements to supply wholesale roaming services.

In the case of Australian mobile network operators, they may feel no pressure to reduce wholesale roaming charges owing to the relatively small revenues they derive, at present, from providing international roaming services. As noted in section 2.2.1 of this Report, Telstra, for example, derived only 5 per cent of its total mobile services revenue and only 0.84 per cent of its total operating revenue during the 2003-04 financial year from providing international roaming services.[92] These operators are likely to compete more vigorously to secure new subscribers rather than users of their outbound roaming services. This is because new subscribers can be expected to supply a constant stream of revenue over an extended period, whilst many roaming travellers would only acquire roamed services for a period of days or weeks, perhaps months at most. An Australian travelling through many European countries on a holiday might only stay a few days in any given country. These short stays, together with the relatively small numbers of Australian travellers, would diminish the bargaining power of an Australian carrier negotiating bilateral agreements with its European counterparts.

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[89] Telstra, viewed 18 August 2005, <http://www.telstra.com.au/mobile/products/overseas/countryinfo.cfm?countryid=147&operatorid=33891>; <http://www.telstra.com.au/mobile/products/overseas/countryinfo.cfm?countryid=89&operatorid=33833>; <http://www.telstra.com.au/mobile/products/overseas/countryinfo.cfm?countryid=147&operatorid=33891>.

[90] EC DG Competition, op. cit., pp. 21-22.

[91] Stumpf, op. cit., pp. 14-16.

[92] This may not be true for European mobile network operators, which, according to Ovum are estimated to derive around 10 to 15 per cent of their total revenues from the provision of international roaming services. See J Green et. al., op. cit.

Retail prices for international roaming services

An examination by the Commission of the retail prices for international roaming services paid by Australian subscribers indicates that the retail prices charged for making calls when in a particular country can vary significantly amongst the Australian mobile network operators. For example, Table 4.1 shows that a 5-minute call to Australia from the UK when roaming in the UK on O2's network is between $A13.70 to $A16.75 depending on which mobile network operator an Australian traveller subscribes to. When roaming in other frequent destinations such as New Zealand, USA, Indonesia and Fiji, subscribers of Telstra, Optus and Vodafone making a 5-minute call to Australia would incur the following ranges of charges: $A16.75 to $A19.00 from New Zealand, $A11.50 to $A15.40 from the USA, $A27.65 to $A32.25 from Indonesia, and $A13.10 to $A16.75 from Fiji.[93]

It appears, from submissions by vRoam[94] and ATUG (in the form of an INTUG submission),[95] reports prepared by regulators in European jurisdictions,[96] and the Commission's own analysis in this chapter, that high retail prices for mobile roaming services can be largely explained by high wholesale rates charged by visited networks in the form of the IOT. As noted in section 4.2 above, wholesale roaming charges make up roughly 75 per cent of the final retail price.

The EC DG Competition notes that although the charging and accounting principles of the GSM Association do not formally restrict the pricing of retail roaming services, the tariff principles that have evolved over time are 'remarkably similar'. The EC DG Competition also notes that the home network operator usually adds a handling charge of 10 to 35 per cent to the IOT it pays to the visited operator. Accordingly, the EC DG Competition opines that this resulted in the structure of the visited mobile network operator's IOT also determining the structure of the home operator's retail roaming prices.

This assessment appears to also reflect the retail pricing policy of Australian mobile network operators. In response to the Discussion Paper, the mobile network operators in Australia indicated that retail prices they charge for international roaming services are arrived at by applying a percentage mark-up to the IOT they pay to the visited network operator. The Australian operators indicated these mark-ups were in the range of [c-i-c] per cent to [c-i-c] per cent (as already noted in section 4.1 of this Report).

However, the structure and level of IOT charges do not explain the absolute levels of the mark-ups being applied by Australian mobile network operators. For example, assuming an average mark-up of 35 per cent and using the data set out in Table 4.1 of this Report, it would appear that for a 5-minute Optus roamed call from UK to

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[93] Telstra GSM International Roaming Prices (country-specific prices), www.telstra.com.au; Optus AutoRoam rates, www.optus.com.au; Vodafone, Vodafone World rates, www.vodafone.com.au, viewed 18 August 2005.

[94] vRoam, op. cit., p. 6.

[95] ATUG, op. cit., p. 64.

[96] See European Commission DG Competition, op. cit., p. 21 and Oftel, *International benchmarking study of mobile services*, June 2003, p. 31.

Australia with a final price of $A15.60, made by an Australian subscriber roaming in the UK, Optus earns a retail mark-up of $A4.05. Given that origination, termination, transmission and exchange rate fluctuations are accounted for in the IOT charged (i.e. $A11.55 in this example) to the home mobile network operators, it is difficult to see how such things as administration, bad debts, marketing and consumer education could require a retail mark-up of this magnitude.

An examination of the EC DG Competition's findings in relation to international roaming charges can shed some light on the possible reasons for these apparently high retail mark-ups.

From the EC DG Competition's initial findings, it appears that possible causes of ineffective competition in the retail market within which international roaming services are supplied could be: the limited range of product/service substitutes; a lack of consumer information about international roaming services and the prices for such services; the inability of resellers and MVNOs to effectively compete with mobile network operators; and scope for collusive behaviour by mobile network operators.

The EC DG Competition considered, in the 2000 preliminary findings, that the relevant retail market is a market for retail roaming services. The market is defined as such because the EC considered that subscribers take separate decisions regarding the use of international roaming services based on several factors: (i) the availability of partial substitutes such as international call cards, (ii) the existence of special subscriptions for international roaming services for the business community and (iii) the availability of unbundled roaming offers[97] (similar to plastic roaming offers such as those of vRoam).

In analysing the retail prices for the international roaming service and the apparently high levels of prices for the services, the Commission has also examined the various substitutes to the service, and the extent to which consumer demand for these substitutes may or may not provide sufficient competitive constraint on the prices set by mobile network operators for the international roaming service.

Substitutes for international roaming services

A number of parties who made submissions during the Mobile Services Review argued that the availability of alternatives such as calling cards, SIM-only plans from overseas mobile network operators, data services like SMS, mobile phone hire offers for an overseas country, facsimiles and hotel room phones provide a competitive constraint on operators providing international roaming services.

The Commission notes that international calling cards for use overseas can be purchased by Australian consumers prior to going abroad, whilst similar cards can also be purchased in many overseas jurisdictions for calls back to Australia. For example, the Commission is aware of well over 25 prepaid international phone cards available in Australia alone, as well as a number of companies that sell prepaid international phone cards in many overseas jurisdictions.

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[97] EC DG Competition, op. cit., p. 15.

Prepaid SIM-only plans can also be purchased by Australian subscribers travelling abroad, for use in a mobile handset obtained in Australia, from any mobile telecommunications service provider operating in the visited jurisdiction. In many jurisdictions, for example the United Kingdom, a visitor will be able to choose from at least four providers of mobile services. The only limitations for the Australian subscriber using a mobile handset acquired in Australia will be the use of the technology in the visited jurisdiction and the radio frequency on which mobile services are carried in the visited country. The GSM technology used by Telstra, Optus and Vodafone to provide mobile telephony services operates largely on the 900 and 1800 MHz frequencies. The majority of the world's mobile phone subscribers use GSM technology – the GSM Association points out that GSM technology is used in more than 200 countries.[98] Hence, in most cases, an Australian subscriber will be able to use SIM-only mobile phone plans as an alternative to international roaming services.

A similar alternative for Australian subscribers travelling abroad is to hire a mobile phone handset and service for use within a visited jurisdiction from a provider in the overseas jurisdiction. The availability of these mobile hire services appears to be growing. The Commission notes, for example, that a number of car hire companies are now starting to also offer mobile phones for hire for visitors.[99]

Service providers, such as vRoam, offer services that can be categorised as a form of 'plastic roaming'. vRoam provides the Australian subscriber with a SIM card for use when visiting overseas locations. This provides the subscriber with a local number which allows the subscriber to make calls within the visited country at local mobile rates, receive calls without being charged (in countries where there is a 'calling party pays' system) and it allows two or more Australian subscribers travelling together to call each other without paying for international roaming calls. In addition to the provision of the SIM-card hire, vRoam also offers its 'Follow me service' which allows the customer to remain contactable on their Australian mobile phone number in addition to the foreign mobile number.

The Commission notes that alternatives such as hotel phone and facsimiles will be available to Australians travelling overseas to the extent that Australian visitors use accommodation that includes the availability of these services with accommodation packages. The Commission notes, however, that the use of hotel phone services often comes at a premium price. The Commission also believes it is unlikely the use of hotel phone services will constrain the pricing of international roaming services.

With respect to the use of SMS rather than voice call services, the Commission considers SMS to be one of a variety of services available to subscribers who choose to utilise the international roaming services offered by mobile network operators. The Commission considers that the use of SMS instead of voice services is a way a subscriber can potentially minimise the costs of international roaming services, rather than this use being a substitute for international roaming services. During the Mobile Services Review, the Commission formed the view that SMS does not provide the same basic characteristics present in a mobile voice call. The Commission considered

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[98] GSM Association Brochure, op. cit. ACA, *Telecommunications Performance Report 2000-2001*, op. cit.

[99] See for example, www.hertz.co.uk.

that the extent of substitution between SMS messaging and a voice call is limited, primarily because SMS messaging is a truncated form of communication that does not allow end-users to communicate simultaneously. Consequently, the Commission is of the view that, in the event of an increase in the price of mobile voice calls, the extent of substitution to SMS would be small.[100]

The availability of close substitutes (on both the demand and supply sides) constrains the ability of suppliers to profitably divert prices or quality of service from competitive levels. To the extent that the services identified above can be substituted for international roaming services provided by the mobile network operators, these services may act as a constraint on the pricing practices of the mobile operators.

Firstly, the Commission notes that services such as calling cards, facsimiles and hotel room phones do not provide the mobility and convenience of a roaming service. They also do not provide the same opportunity for immediate contact with the roaming party that international roaming services do.

These services, along with SIM-only mobile plans and hired mobile phones, also lack the convenience of the subscriber being contactable on the same mobile phone number regardless of which country the subscriber is in.

Further, with the exception of services such as those provided by service providers such as vRoam (which allows a subscriber to be contacted on their domestic mobile number as well as a local mobile number in the visited country), all the substitutes discussed above require the subscriber to acquire a new service and phone number for every overseas jurisdiction visited. This can be both costly and time-consuming when the subscriber is visiting a number of countries over a short period of time and needs to be contactable at all times.

Also, all substitutes require the subscriber to inform relevant persons of all his/her new contact details for the countries to be visited. As well as the inconvenience of contacting these persons, this is also likely to impose costs on the subscriber or the relevant persons.

Whether the services identified above will be viable substitutes for some travellers will depend largely on the nature of the travel being undertaken. For Australian travellers regularly travelling to a single destination, or a specific number of destinations, SIM-card hire or plastic roaming may be a highly suitable alternative. In contrast, a one-off visitor to a single jurisdiction may prefer to hire a mobile phone and service package for the visit, while a person travelling to a number of jurisdictions purely for recreation may choose to rely on using motel phones or facsimiles or an international phone card for the occasions when the person wishes to call others.

However, for the individual travelling to a number of destinations who needs to be contactable at all times, it is likely that none of the identified alternatives will be a fully practical substitute for international roaming.

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[100] Australian Competition and Consumer Commission, *Mobile Services Review Mobile Terminating Access Service, Final Decision on whether or not the Commission should extend, vary or revoke its existing declaration of the mobile terminating access service*, June 2004, p. 63.

Stumpf suggests that because possible alternatives to international roaming services are imperfect substitutes for international roaming services, this may be a factor contributing to the relatively high retail prices for international roaming services.[101]

Adequacy of information available about international roaming services

The Commission has observed during the course of this inquiry that the information provided by Australian operators about international roaming services and, in particular the pricing information, has greatly improved. As vRoam noted in its submission in June 2003, some information on carriers' websites dealing with international roaming provided prices only in the currency of the visited country.[102]

An examination of the information provided to consumers on Australian mobile network operators' websites, at the time of writing, indicates that Telstra, Optus, Vodafone and Hutchison ('3') all provide the following information to consumers about the international roaming services they provide:

- countries in which international roaming services are available;
- indicative prices, in $A, for each of the services available in each country in which international roaming services are available – this includes prices for receiving calls, making calls within a country, making calls back to Australia, sending SMS, flagfall and call setup fees (where applicable);
- how to activate international roaming services on a mobile phone; and
- subscriber eligibility for international roaming services.

For the four carriers, price information is provided in Australian dollars and in cases where rates vary between peak and off-peak times, this information is also included. Different prices for international roaming services may also be available where the home network operator has roaming agreements with a number of operators in the visited country. A number of the carriers provide pricing information by visited network, as well as by country visited and service used.

Some mobile network operators also provide information in hard-copy guides, information packs, brochures and via their customer call services. The Commission notes that Optus has also indicated its intention to identify alternative methods of informing subscribers about international roaming services, including SMS and pocket guides.[103]

Whilst Virgin Mobile Australia (Virgin Mobile) does not provide pricing information on its website in relation to international roaming services, the Commission expects that the proportion of Virgin Mobile's subscribers who use international roaming

[101] Stumpf, op. cit., p. 16.
[102] vRoam, op. cit., p. 9.
[103] Optus, op. cit., p. 74.

services to be much lower than the proportions observed for the mobile network operators in Australia, given Virgin Mobile's user profiles.[104]

The Commission notes that members of GSM Europe[105] must comply with certain requirements relating to the provision of information regarding international roaming services to customers under the 'GSM Europe Code of Conduct for Information on International Roaming Retail Prices' (the European International Roaming Code).[106] The Commission also notes that the information currently provided by Australian operators appears to be consistent with the requirements in the European International Roaming Code.

The Commission has received a number of complaints over several years from consumers regarding the information provided or made available to them by their mobile provider in relation to international roaming services. These have included allegations that information about the full prices of obtaining international roaming services was misrepresented prior to subscribing to a particular network, and that inadequate (if not incorrect) information was provided about the likely prices for international roaming calls and other international roaming services. To the extent that the Commission continues to receive complaints by consumers as to the information provided to them by mobile operators in relation to the provision of retail international roaming services, this may indicate that information provided to consumers is unlikely to be adequate.[107] However, the Commission is mindful of the recent improvements by domestic mobile network operators in relation to the information about international roaming services that they provide to consumers.

The Commission believes the mobile operators can do more to improve the range of information provided and to make information provided more 'user- friendly' – such as setting out the currency of the information included and providing basic information about the availability of, and indicative prices for (where appropriate), international roaming services at the time a person subscribes to a service. However, overall, the Commission considers the level of information currently provided by Australian mobile network operators allows consumers to make informed decisions about whether to use international roaming services, and gives consumers a reasonable idea of the prices they can expect to pay for these services.

The Commission notes that the ACMA published a consumer fact sheet in January 2004 providing basic information on what international roaming services are and how a subscriber can obtain them from his/her mobile provider.[108]

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[104] Virgin Mobile Australia, *Non-confidential submission on the draft decision of the ACCC on declaration of the mobile terminating access service*, 30 April 2004, pp. 2-3. (Virgin Mobile is considered a MVNO in Australia.)
[105] GSM Europe is the European interest group of the GSM Association.
[106] GSM Europe, *GSM Europe Code of Conduct for Information on International Roaming Retail Prices*, 14 June 2001.
[107] It may also be the case that information provided in such a manner as outlined is contrary to section 52 of the Act (which pertains to misleading or deceptive conduct by individuals or corporations in trade or commerce).
[108] Australian Communications Authority, *International Mobile Roaming*, Consumer Fact Sheet 53, 9 January 2004, at www.acma.gov.au

The fact sheet also includes a suggestion to remove any diversions to messaging or paging services provided by the subscriber's mobile network operator in order to prevent high charges being accrued. The fact sheet also recommends the use of SMS as an alternative to voice calls using international roaming services.

The Commission considers the development of this fact sheet was an important first step in government action to improve consumer awareness about international roaming services and the nature of charges for these services. However, the Commission notes there are some issues the fact sheet is silent on – for example, alternatives to using international roaming services – and considers the inclusion of further information and more detailed explanations may assist in improving consumer awareness about using international roaming and other communications services whilst travelling abroad. (This is discussed in greater detail in Chapter Five of this Report).

Competition in retail mobile services markets

In its 2001 report, the EC DG Competition notes that whilst independent service providers (similar to carriage service providers and MVNOs in Australia) also offer retail international roaming services, they cannot make competitive offers because they are wholly dependent on the conditions imposed by the domestic mobile network operators.[109]

Stumpf has suggested that a lack of competitive pressure in retail mobile markets due to high concentration levels, barriers to effective entry and second-mover disadvantages in acquiring high-value users has contributed to a lack of price competition in the supply of retail international roaming services.[110]

It appears that roamed calls are billed to the relevant home network operator by the visited network. The home network operator adds a 'handling charge' (retail mark-up) before billing the service provider for the calls along with other calls made by the provider's customers. The EC stated that the home network owner and the service provider share the handling charge and that in these circumstances the presence of competitive service providers in the retail mobile services market can influence the level of retail international roaming prices upwards rather than help to drive these prices down through stimulating competition.

Market inquiries by the Commission during the course of this inquiry suggests that international roaming services are acquired by MVNOs in Australia via the mobile network operator on whose network the MVNO provides its domestic mobile services.

Scope for collusive behaviour

The EC DG Competition also expressed concern that the excessive level of international roaming prices and the uniform mark-ups made by mobile network operators may reflect coordinated pricing behaviour or tacit collusion between

[109] EC DG Competition, op. cit.
[110] Stumpf, op. cit., pp. 14-20.

competitors within Member States.[111] The EC DG Competition sector inquiry also found that, since the introduction of the IOT in 1998-99, retail prices for international roaming had consequently increased while prices for other mobile services had generally fallen.[112]

To date, the Commission has not received complaints of collusive behaviour on the part of mobile network operators in relation to the pricing of international roaming services. Whilst Australian mobile network operators have provided the Commission with information during the course of this inquiry indicating that mark-ups of [c-i-c] per cent to [c-i-c] per cent are applied, this alone does not indicate that these operators have engaged in anti-competitive pricing behaviour. The Commission does not propose to examine the conduct of Australian mobile network operators in relation to mark-ups for international roaming services to determine if any enforcement action will be taken under Part XIB of the Act.

4.4 Developments in the markets in which international roaming services are provided

The EC noted in 2000 that developments in the market structure and the nature of retail offerings were leading to changes in the provision of international roaming services, as operators were beginning to offer and actively market flat rates for roaming in Member States belonging to the Euro zone. The EC also noted that operators in different Member States were merging or integrating networks, and preferential roaming agreements between operators that encouraged retail price reductions were envisaged.[113]

Stumpf suggested in 2001 that the introduction of the SIM-application toolkit and SIM over-the-air programming, the increasing availability of dual band (900 MHz and 1800 MHz) handsets and improved national coverage by late-entrant mobile network operators will all help to encourage price competition amongst mobile network operators in providing wholesale international roaming services. Stumpf also suggested that arbitrage and roaming brokers may also be demand-side developments that will encourage price competition in the wholesale market in which international roaming services are supplied.[114]

Vodafone states that whilst aspects of traditional IOT arrangements have dampened rather than facilitated the competitive dynamics of the market, mobile operators are starting to depart from the approach, resulting in greater competitive pressures that have begun to influence prices for international roaming services on a wholesale and domestic level. Vodafone indicates that it expects IOT arrangements to become increasingly marginalised as operators pursue discount arrangements outside of the ambit of the GSM Association framework or adopt bypass arrangements such as using callback platforms. Vodafone expresses the view that irrespective of the past constraints created by the GSM Association's IOT regime and the Mannesmann

[111] ibid., pp. 20-1.
[112] ibid., p. 18.
[113] ibid., pp. 28-29.
[114] Stumpf, op. cit., pp. 21-22.

undertakings,[115] roaming markets are now well placed to move to the next phase of competition.[116]

The Commission agrees that movement away from the GSM Association's IOT arrangements and the pursuit of bilateral discount arrangements may improve the level of competition in the supply of international roaming services and provide lower prices to consumers that may be more reflective of cost than those currently available. However, it is difficult to determine how effective such movement will be in encouraging retail price reductions, as well as how long it will take for such movement to take effect in the market.

That said, the Commission also notes that the UK telecommunications regulator Oftel (now Ofcom) observed in 2003 that operators in Europe are increasingly introducing simplified tariffs which may, for example, have a single flat rate for all calls from EU countries.[117] Of the 19 European operators included in Oftel's 2003 survey, almost all offered flat rates for receiving calls within the EU, and many offered flat rates for outgoing calls within the EU, both for postpaid and prepaid plans.

More recently, the Commission notes that Vodafone UK launched a new scheme for its roaming tariffs in July 2005. 'Vodafone Passport' customers using roaming services in European countries where Vodafone has a presence will pay a one-off connection fee of 75 pence per call, then pay the same rates as they would at home. Vodafone claims that this new scheme gives customers a clear idea of what their calls are going to cost and better value when calling from abroad. Vodafone argues this should lead to greater retail price transparency and simplicity.[118]

The Commission has observed similar behaviour by Vodafone for Australian subscribers in the form of its 'Vodafone World' pricing plan. [119] as well as by other domestic mobile network operators. Optus, for example, introduced its new international roaming ('AutoRoam') rates in June 2005, whereby subscribers will pay the same flat rate for each call type, 24 hours by 7 days, regardless of the network visited in the foreign country. Optus claims these new rates were designed to make things simple for its subscribers.[120]

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[115] In April 2000, the European Commission approved the acquisition by Vodafone Airtouch plc (UK) of Mannesmann AG (Germany), a telecommunications and electronics company that owned Orange plc, a UK mobile telecommunications company. In order to address the EC's concerns about the acquisition, Vodafone submitted undertakings to the EC, primarily (i) to de-merge Orange and (ii) to enable third-party non-discriminatory access to the merged entity's network, including access in relation to exclusive roaming agreements, third parties' access to roaming and wholesale arrangements, inter-operability standards and SIM cards. See EC Decision *Case No COMP/M.1795–Vodafone Airtouch Mannesmann*, 12 April 2000, at http://europa.eu.int/comm/competition/mergers/cases/decisions/m1795_en.pdf .

[116] Vodafone, op. cit., pp. 6-11.

[117] Oftel, *International benchmarking study of mobile services*, op. cit. paragraph 3.10.

[118] Vodafone, 'Passport to cheaper calls abroad", 15 July 2005 press release, at www.vodafone.com

[119] See http://www.vodafone.com.au/rep/coverage/going_os/vodafone_world.jsp?gs =foryou&hd=coverage&st=going_os&ss=vodafone_world.

[120] See http://www.optus.com.au/portal/site/personal/menuitem.9b38bb3dfffbeae30f7416058c8ac7a0/?vgnextoid=61dc1308f0054010VgnVCM10000029a67c0aRCRD

There have also been recent moves by major European mobile operators to form alliances to compete against Vodafone's European-wide 'footprint' and global presence. Two groups that are now competing for international traffic in roaming are:

- the FreeMove alliance – covering 21 countries (as of May 2004) and with key members such as Telefonica (Spain), T-Mobile (Germany, UK and the Netherlands) and Orange (France, UK and the Netherlands); and
- the Starmap alliance – with key members being O2 (Germany, UK and Ireland), Telenor Mobil (Norway) and Amena (Spain).

In November 2004, mobile operators in the Asia-Pacific region formed the Bridge Mobile Alliance to provide integrated services to over 64 million subscribers in nine countries. The operators include SingTel (Singapore), Optus (Australia), Telkomsel (Indonesia), CSL (Hong Kong), Airtel (India), Globe Telecom (Philippines), Maxis (Malaysia), Taiwan Mobile and Telkomsel (Indonesia).

It appears that operators have formed these alliances as part of their business strategy for international roaming services, in order to take advantage of geographical coverage to build economies of scale and scope. Their purported intention, as analysts such as Ovum believe, is to address what they see as the key drivers for international roaming – price reduction, price transparency, quality of coverage and service, and marketing.[121]

Furthermore, recent technological developments in network selection have been likely to change the incentives of mobile network operators in setting their IOTs and in negotiating their wholesale charges with other operators. Prior to these technical improvements, a mobile network operator had no incentive to direct its roaming subscriber to choose or prefer one visited network operator over another, because the wholesale charges were based on the visited country, not the particular visited network. Also, SIM cards previously had limited capacity to store details of an operator's partnered or preferred networks, and end-users were usually connected automatically when they arrive at a foreign country to a visited network with the strongest network signal. Technical developments, such as more powerful SIM cards, have allowed a mobile network operator to direct its subscribers' roaming connection and traffic to its partnered or preferred network.

The Commission believes that roaming flat rates that are simpler for the end-user to understand, global alliances of mobile network operators, and technical improvements in network selection are likely to lead to greater consumer choice and more effective competition in the wholesale and retail markets for international roaming. These in turn are likely to place downward pressure on the current levels of prices for international roaming services.

[121] J Green et. al., op. cit., p. 14.

5. Measures to address concerns about the provision of international roaming services

In Australia, the telecommunications industry is governed by three primary pieces of legislation and three principal government agencies.

The *Telecommunications Act 1997* sets out and provides for:

- the legal structure of the industry;
- the nature of services that are supplied by telecommunications operators and providers;
- licensing requirements for telecommunications carriers;
- a self-regulatory regime;
- technical and equipment standards for telecommunications infrastructure and equipment;
- a numbering scheme for telecommunications services;
- law enforcement and defence obligations of industry participants;
- international aspects of activities of the telecommunications industry; and
- the telecommunications-specific powers and responsibilities of regulatory agencies.

The *Telecommunications (Consumer Protection and Services Standards) Act 1999* (the TCPSS Act) sets out consumer protection standards and provides for the welfare of telecommunications consumers in Australia. These objectives are achieved through the TCPSS Act's provisions for a Universal Service Regime, the Customer Service Guarantee, the National Relay Service, emergency calls services, and price control arrangements for Telstra. The TCPSS Act also established the role of the Telecommunications Industry Ombudsman, a free and independent alternative dispute resolution scheme for small business and residential consumers in Australia who have a complaint about their telephone or Internet service.

The overall object of the *Trade Practices Act 1974* (the Act) is to enhance the welfare of Australians through the promotion of competition and fair trading and the provision for consumer protection. The Act also contains telecommunications-specific provisions that seek to prevent anti-competitive conduct in the telecommunications industry and to promote the long-term interests of end-users (LTIE) through an access regime to facilitate access to key telecommunications services.

The Department of Communications, Information Technology and the Arts is responsible for providing advice to the Government on Australian telecommunications policy and administering programs to improve telecommunications services and the welfare of telecommunications users in Australia. The Department reports directly to the Minister for Communications, Information Technology and the Arts. The Department also represents Australia in international forums where decisions are made that may affect national interests in telecommunications.

The Australian Communications and Media Authority (ACMA)[122] is responsible for the regulation of broadcasting, radiocommunications, telecommunications and online content, including promoting industry self-regulation (through voluntary industry codes of practice and technical standards) and managing the radiofrequency spectrum. The ACMA licenses telecommunications carriers, ensures compliance with carrier licence conditions and service provider rules, and monitors service performance and quality. The ACMA also administers legislative provisions relating to powers and immunities of carriers in the construction of telecommunications facilities and the protection of consumers through safeguards and service guarantees. The Universal Service Obligation is administered by the ACMA to ensure reasonable and equitable access across Australia to standard telecommunications services. The ACMA also manages the national *Telecommunications Numbering Plan 1997* and information programs on key issues affecting consumers.

The ACMA also monitors compliance with technical standards for communications equipment, cabling and electrical and electronic equipment – as well as being responsible for standards protecting the integrity and interoperability of communications networks.

The ACMA represents Australia's communications interests internationally through its membership of the International Telecommunication Union, the Asia-Pacific Telecommunity and other appropriate bodies.

For its part, the Commission administers the industry-specific provisions of the Trade Practices Act. Part XIB regulates anti-competitive conduct in the telecommunications industry. Part XIC establishes an industry-specific regime for regulated access to carriage services, and reflects policy interests in promoting any-to-any connectivity and reliance on commercial resolution of access issues as far as possible. The Commission has a number of other roles including considering access undertakings and arbitrating on terms and conditions of access. These parts apply in addition to the parts of the Act which regulate restrictive trade practices and unfair practices in general. The Commission also undertakes a public education role, providing the public with general information in relation to matters affecting the interests of consumers and providing guidance for consumers as to the rights and obligations of persons under provisions of Australian law.

In addition to these responsibilities, the Commission also undertakes international activities to promote and help develop effective competition and consumer protection regimes around the globe in the interests of developing competitive and fair markets and improving access for Australian exporters.

[122] On 1 July 2005, the Australian Communications Authority (ACA) and the Australian Broadcasting Authority (ABA) merged to become the Australian Communications and Media Authority (ACMA).

Of the regulatory tools or options available to Australian regulators, those most relevant to addressing concerns about the high (wholesale and retail) prices for, and a lack of information about, international roaming services are:

- enforcement of anti-competitive conduct provisions of the Act;
- regulatory intervention, particularly retail price controls under Part XIB of the Act;
- use of consumer protection enforcement and regulatory powers;
- monitoring of telecommunications charges paid by consumers, under Division 12, Part XIB of the Act ; and
- co-ordination with international regulatory agencies.

The Commission's view on the applicability of any of these measures to international roaming is considered in turn below.

5.1 Enforcement of anti-competitive conduct prohibitions

As indicated above, Part XIB of the Act contains telecommunications specific anti-competitive conduct provisions. These provisions prohibit a carrier or carriage service provider (CSP) from engaging in anti-competitive conduct – a prohibition known as the competition rule. The two circumstances under which a party contravenes a competition rule are:

- where an operator or provider takes advantage of a substantial degree of power in a telecommunications market with the effect, or likely effect, of substantially lessening competition in that or any other telecommunications market;
- where an operator engages in conduct in relation to a telecommunications market that contravenes the anti-competitive conduct provisions in Part IV of the Act, namely:
  - s.45 – contracts, arrangements or understandings that restrict or affect competition;
  - s.45B – covenants affecting competition;
  - s.46 – misuse of market power;
  - s.47 – exclusive dealing; and
  - s.48 – resale price maintenance.

To date, complaints to the Commission regarding the provision of international roaming services have largely related to the nature or inadequacy of the information provided by mobile network operators to consumers relating to prices for international

roaming services. These complaints fall under the Commission's general consumer protection responsibilities, rather than its telecommunications specific enforcement powers.

However, the Commission notes that both ATUG and vRoam, in their submissions to this inquiry, argue that wholesale prices for international roaming services (in the form of an IOT) are above cost, and contribute to high retail prices for international roaming services.[123] Both parties do not, however, claim there is anti-competitive conduct contrary to Australian law in the setting of wholesale prices for international roaming services.

The Commission notes that the EC DG Competition observed that the economic characteristics of the market(s) in which international roaming services are supplied gave mobile operators the incentive to align their prices, possibly using a strategy of collusive price leadership.[124] Furthermore, the EC DG Competition continues to investigate possible collusion between mobile network operators in respect of roaming charges.[125]

More recently, as discussed in section 4.3.1 of this Report, the EC issued 'statements of objections' to UK mobile network operators Vodafone and O2 in July 2004, and to German operators Vodafone and T-Mobile in February 2005. The EC made claims in the statements that the operators have abused their dominant positions in their respective markets, over specific periods covering several years, to charge unfair and excessive IOTs to other operators. The Commission understands that the process of providing the mobile network operators the opportunity to respond to the EC statements is ongoing.

The Commission is obliged to enforce the competition rule under Part XIB of the Act, regardless of any action taken by regulators in other jurisdictions in relation to a particular telecommunications service or particular conduct. Accordingly, the Commission will continue to undertake its normal market monitoring activities, and in the event that it believes there may be a contravention of the competition rule in the supply of international roaming services, it will undertake any necessary investigative and enforcement activities in accordance with the Act.

To date, however, the Commission's market observations have not led it to take enforcement action in relation to suspected contraventions of the competition rule. Further, the Commission has not been provided with any evidence that mobile network operators are acting in an anti-competitive fashion in breach of Part XIB or Part IV of the Act. Whilst it is not clear that the wholesale prices charged by carriers in Australia selling international roaming services are necessary to cover the underlying cost (including a normal profit) of providing the service, this does not mean these carriers are necessarily acting in a way that is in breach of the Act.

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[123] vRoam, op. cit.; ATUG, op. cit..7
[124] EC DG Competition, op. cit., p. 21.
[125] See discussion in section 4.3.1 of this Report.

5.2 Regulatory intervention and retail price controls

As noted above, the Commission administers Part XIC of the Act, which provides for a telecommunications access regime.

Of the parties providing comments on the international roaming aspect of the Mobile Services Review, only ATUG appears to suggest, through the INTUG submission, that regulatory intervention in the wholesale market for international roaming services is appropriate to address concerns about high prices for these services.[126] Such intervention would appear to involve declaration of the wholesale international roaming service by the Commission under Part XIC of the Act. Other interested parties submitted that regulatory intervention of this form was inappropriate in such an immature market and could well inhibit development of the market.[127]

In assessing whether to declare a service, the Commission must be satisfied declaration will promote the long-term interests of end-users (LTIE) of carriage services or of services provided by means of carriage services.

The Commission has not, to date, held an inquiry into whether declaration of a wholesale international roaming service would be in the LTIE. As indicated in previous sections of this Report, however, a significant proportion of the fee paid by Australian consumers travelling overseas results from the high IOT charges set by overseas mobile network operators. Accordingly, for the Commission to ‘declare’ a wholesale international roaming service, it must first be satisfied that it has the jurisdiction to regulate roaming charges set by operators in overseas jurisdictions, and that such regulation would be likely to promote the LTIE.

It is unclear to the Commission, however, that it does have jurisdiction over the setting of wholesale prices by foreign mobile network operators, or over telecommunications services provided by carriers established outside Australia.

Further, even if the Commission does have jurisdiction over the wholesale price-setting behaviour of foreign mobile network operators, it considers that it would be unlikely to be practical for it to separately seek to regulate the wholesale IOT rates set by the large number of foreign mobile network operators on whose networks Australian consumers could potentially roam while travelling overseas.

Accordingly, the Commission does not believe it would be appropriate for it to hold a declaration inquiry, or take regulatory action, under Part XIC of the Act in relation to international roaming services.

Further, the Commission considers, as noted in section 4.4 of this Report, that movement away from the GSM Association’s IOT arrangements and the pursuit of bilateral discount arrangements may well improve the level of competition in the supply of international roaming services, and provide lower prices to consumers that may be more reflective of cost than those currently available.

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[126] ATUG, op. cit.
[127] See for example, Vodafone, op. cit., pp. 10-12.

Another regulatory option that could be used to address concerns about high prices for international roaming services is the use of retail price controls. In the Discussion Paper, the Commission indicated it was interested in whether consideration should be given to including retail international roaming charges under retail price control arrangements in Australia. Those parties commenting on this specific issue all submitted that such direct intervention was neither appropriate nor justified.[128]

Since 1989, the retail prices charged by Telstra for certain telecommunications services have been subject to legislated price control arrangements. The current price control arrangements are set out in the *Telstra Carrier Charges – Price Control Arrangements, Notification and Disallowance Determination No.1 of 2002* (the Determination).

Under the Determination, mobile-to-mobile (MTM) services are no longer subject to price control arrangements, but were included in previous price control arrangements from July 1992 to June 2002. International roaming services are also not included in the price control arrangements.

Whilst the Commission has no powers to determine the retail price controls applying to Telstra, it has in the past advised the Minister for Communications, Information Technology and the Arts (the Minister) on retail price control arrangements.[129] Further, since 1997, it has reported to the Minister on Telstra's compliance with the price control arrangements.

In April 2004, the Minister directed the Commission to hold a public inquiry into the nature of price control arrangements that should apply to Telstra after the current arrangements expire on 30 June 2005.

In the Direction, the Minister required the Commission to consider, among other things, the form any such arrangements should take, how long they should apply, how they should be implemented and monitored for compliance, and whether any complementary arrangements are required.

In addition, the Commission was directed to have regard to the state of competition in relevant markets; the impact of price controls on the development of competition, on the availability, range, quality and price of services and on economically efficient investment; the short term and long term distributional effects of price controls; new and emerging technologies; and any appropriate protection for disadvantaged, residential and business consumers in both metropolitan and rural areas.

The Commission released a discussion paper on its review of the price control arrangements in June 2004.[130] In the discussion paper, the Commission did not explicitly raise the question of whether price control arrangements should be applied to international roaming charges imposed on subscribers to Australian providers using such services. However, the discussion paper sought comment on whether mobile services should remain outside the retail price controls, as well as comment on whether there are any telecommunications services that should be subject to price

[128] vRoam, op. cit., p. 10; Telstra, op. cit., p. 6; Optus, op. cit., p. 76.
[129] ACCC, *Review of Price Control Arrangements*, February 2001.
[130] ACCC, *Review of Price Control Arrangements*, June 2004.

controls that are not within the scope of the current arrangements, having regard to the level of competition.[131] Some parties in their submissions provided comment that domestic retail mobile services should be under price controls whilst other parties argued the contrary. However, no party provided comment on international roaming services or argued that these services should be under price controls.

In February 2005 the Commission released the final report on its review of Telstra's price control arrangements. In assessing the state of competition in the retail mobile services market, the Commission formed a view that, on balance, the structural and behavioural measures of competition in this market did not clearly indicate that this market was effectively competitive.[132]

That said, the Commission re-affirmed its draft recommendation that future price control arrangements should not apply to mobile services. It recommended that price caps should not be applied as it is not considered likely that retail price controls will assist in simulating effective competition in this market to a material extent.[133]

In reaching this view, the Commission took into consideration the following factors in respect of mobile services:

- As price control arrangements do not address the underlying reasons for competition being less than effectively competitive, the Commission's preferred course of action is to address the factors inhibiting effective competition and use price controls where other pro-competitive reforms cannot be implemented.

- There is some indication that competition is growing in some segments, although it is not clear whether this will extend to other segments or for what period this competition will be sustained.

Based on its recent review of price control arrangements in Australia, as discussed above, the Commission considers it unlikely that retail price controls are the appropriate regulatory response to consumer concerns about high prices of retail international roaming services.

5.3 Broad consumer protection measures

As already noted in several places in this report, a number of complaints have been made to the Commission over the years in relation to the provision of information by mobile network operators in relation to international roaming services. This has included allegations that information about the full prices of obtaining international roaming services was misrepresented prior to subscribing to a particular network and inadequate (if not incorrect) information about the likely costs for calls made using international roaming services was being provided.

There are two alternatives available to the Commission to deal with these problems

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[131] ibid., pp. 17-19.
[132] ACCC, *Review of Telstra's Price Control Arrangements – an ACCC report*, February 2005, p. 30.
[133] ibid., p. 44.

associated with information provided to consumers in relation to international roaming services:

- enforcement action under section 52 of the Act (which prohibits misleading or deceptive conduct) or other similar provisions in Part V of the Act; and

- provision of consumer information under section 28 of the Act.

The development of an industry code setting out the information to be provided to consumers about international roaming services is another option which could be provided under the broader Australian telecommunications regulatory regime.

5.3.1 Misleading or deceptive conduct

Section 52 of the Act prohibits a corporation, in trade or commerce, engaging in conduct that is misleading or deceptive.

A number of the complaints made by consumers to the Commission have alleged that a mobile network operator's conduct has been of such a nature that it would fall within the scope of section 52. However, the Commission could not reach a conclusive view in most cases due to the nature of disclaimers commonly provided by mobile operators in relation to these services. For example, most operators' websites state that prices quoted are indicative only or subject to change without notice due to, operators claim, fluctuations in exchange rates. Whilst these broad-ranging disclaimers are of some concern to the Commission, they may not be, of themselves, a breach of section 52 of the Act.

In this regard, the Commission has not undertaken enforcement action for a breach of Part V of the Act in relation to international roaming services to date.

The Commission also notes that action under section 52 of the Act is not a specific regulatory tool to address, in a pre-emptive manner, broad-based concerns about the provision of consumer information with respect to international roaming services.

5.3.2 Improving consumer information about international roaming services

Section 28 of the Act provides for the following functions of the Commission:

> (c) to conduct research in relation to matters affecting the interests of consumers, being matters with respect to which the Parliament has power to make laws;
>
> …
>
> (d) to make available to the public general information in relation to matters affecting the interests of consumers, being matters with respect to which the Parliament has power to make laws;
>
> (e) to make known for the guidance of consumers the rights and obligations of persons under provisions of laws in force in Australia that are designed to protect the interests of consumers.

This section considers the merits of the development of consumer information

campaigns, a price information accreditation system and the development of an industry code of practice as possible measures for improving consumer information about international roaming services.

Consumer information campaign

vRoam, in its submission to this inquiry, seems to suggest that mobile network operators should be required to inform customers of the wholesale IOT prices paid by them to overseas operators for the provision of international roaming services.[134] vRoam suggests that such a requirement would make it difficult for mobile network operators to justify the 'high' mark up rates they use for international roaming services.

The Commission notes that it is not usual for retailers to inform customers of the wholesale prices they pay for inputs into their end-products. The Commission is also concerned that provision of such information would be of limited value to consumers, given that the information provided would not inform consumers of the prices they will ultimately face, and could, in fact, create further confusion on the part of consumers.

However, another measure the Commission could take to improve the quality of information given to consumers in relation to the provision of international roaming services is to undertake a consumer information campaign, under section 28 of the Act, to draw consumers' attention to the different costs associated with using international roaming services (for example, the charges levied for receiving a call when roaming in an overseas jurisdiction). The campaign could also outline the measures consumers can take to minimise charges for international roaming services and the alternative services that customers may choose to utilise instead of international roaming services (even if such alternatives are imperfect substitutes).

The Commission notes, however, that the ACMA has specific responsibility for public information and education about telecommunications matters under section 6 of the *Australian Communications Authority Act 1997* (the ACA Act). The Commission also notes that the ACMA provides a consumer fact sheet on 'International Mobile Roaming', last updated on 9 January 2004, which is linked to the ACMA's Mobile Tool Kit, (an online guide to assist consumers in selecting mobile telephony services and products).[135] The ACMA's fact sheet provides consumers with important basic information about what international roaming is, when roaming is available, how roaming services can be activated, the types of international roaming services that may be available, and the prices associated with international roaming services.

The Commission considers it may be useful for it to liaise with the ACMA to determine ways in which the international mobile roaming fact sheet and/or other ACMA information products could be further developed in the future to provide additional information to consumers. The Commission considers, specifically, that consumer information that provides additional information about substitute services

[134] vRoam, op. cit., p. 5.
[135] See ACMA website at http://toolkit.acma.gov.au

available to consumers seeking to consume mobile telephony services while travelling overseas may, indirectly, encourage greater competition in the retail market within which international roaming services are provided.

Price information accreditation system

Another way to improve the quality of information provided to consumers in relation to international roaming services could be through the development of an accreditation system for mobile network operators. In the UK, Ofcom has a Price Assurance Standard (PASS) Code which requires websites to provide accurate and up-to-date information about prices of telecommunications services to allow price comparisons between different service providers.[136] The Code requires that the website must be independent of telecommunications suppliers. The Code also requires that where commission or other remuneration is earned from a telecommunications supplier, this must be clearly disclosed. PASS accreditation may be applied for, and if Ofcom finds that the website complies with the PASS Code, the website provider is entitled to display the PASS logo on the website. The Commission does note that the PASS Code relates to all telecommunications services, not simply international roaming services.

The Commission is not convinced such a measure would result in significant consumer benefit in relation to international roaming services. From the information available on Ofcom's website, it appears only one website has received PASS accreditation and, further, this website only provides price comparisons for fixed-line telecommunications services.[137] The Commission, therefore, does not recommend the development of such an accreditation system in relation to international roaming services information at this point in time.

Industry code of practice

vRoam suggested in its submission to this inquiry that the Commission should continue discussions with other regional regulatory authorities to encourage the implementation of a code similar to the European International Roaming Code in as many countries as possible.[138]

Industry self-regulation in Australia is encouraged through the development of voluntary industry codes of practice and technical standards under the Telecommunications Act. The Commission also notes that the Australian Communications Industry Forum (ACIF) was established by the telecommunications industry to support this process. ACIF membership is open and includes carriers, carriage service providers, and user and consumer groups.

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[136] See http://www.ofcom.org.uk/consumer_guides/comparative_20031214/?a=87101.
[137] See http://www.uswitch.com/ht/index.asp?ref=ofcom.
[138] vRoam, op. cit., pp. 10-12.

Under Part 6 of the Telecommunications Act, telecommunications industry bodies can develop and register industry codes to be registered by the ACMA. Industry codes may deal with matters such as telling customers about:

- goods and services on offer;
- prices of those goods or services; and
- other terms and conditions on which those goods or services are offered (among other things).

Once a code is registered, compliance with that code is voluntary, unless the ACMA directs a particular industry participant who is breaching the code to comply with it (whether that participant is a voluntary code signatory or not). The ACMA has the power to request an industry body to develop a code, as well as the power to develop a standard if there is not an appropriate industry code or if the relevant industry code is, in the ACMA's opinion, deficient.

The Commission is not required by legislation to be involved in the development or enforcement of a telecommunications industry code.[139] However, the Commission must be consulted during a code's development before it will be registered by the ACMA. Similarly, the Commission must also be consulted prior to the ACMA making or varying an industry standard under the Telecommunications Act.

That said, Commission representatives have sat on a number of ACIF Committees which have developed industry codes that have been registered by the ACMA. The ACMA and the Commission also regularly consult regarding telecommunications matters which can be considered the responsibility of both agencies.

As already noted in this Report, the Commission considers that information currently provided by Australian mobile network operators appears to be widely consistent with the requirements in the European International Roaming Code and also appears to fulfil most of the key code inclusions recommended by vRoam. On this basis, the Commission does not consider that the development of an industry code dealing with the information provided to consumers by domestic mobile network operators in relation to international roaming services would significantly improve the information currently available to Australian consumers.

In this regard, the Commission notes the currently existing ACIF industry code on Customer Information on Prices, Terms and Conditions (ACIF C521:2004). The code specifies the minimum requirements suppliers of telecommunications services must meet in informing customers about the prices, terms and conditions of goods on offer. Although the code does not contain specific provisions on consumer information requirements in relation to international roaming services, the code does have general requirements for telecommunications suppliers to better inform consumers about the industry and the products on offer, and to improve the fairness and accuracy of the information provided. The code seeks to ensure that consumers will be provided with

[139] Whilst the ACCC has powers relating to enforcing compliance with industry codes under Part IVB of the Act, these codes are set down by regulation and, to date, do not relate to the provision of telecommunications services.

clear, accurate and complete information on the products they intend to purchase, and that information is provided in a manner that is not confusing, misleading or deceptive.[140]

5.4 Monitoring of changes in average retail prices for international roaming

Another way the Commission could potentially concerns about high international roaming prices could be by way of periodic monitoring and reporting of changes in the average prices paid by Australian retail consumers of the service. This might improve consumer awareness and assist the Commission in formulating any further regulatory response in the future.

At present, the Commission is required, under Division 12 of Part XIB of the Act, to report each financial year to the Minister for Communications, Information Technology and the Arts (the Minister) on prices paid by Australian consumers for telecommunications services (the changes in telecommunications prices report).

This yearly report currently covers prices consumers pay for PSTN (public switched telephone network) services and mobile telephony services. For PSTN services, the report analyses prices paid by residential and business consumers for basic access service (or line rental) and for local, national long-distance, international and fixed-to-mobile calls. For mobile telephony services, the report covers prices paid by consumers for services on GSM and CDMA networks.

To determine price changes, the Commission uses a price index methodology and data and other information provided by domestic carriers and carriage service providers (CSPs). At present, the Commission collects data from Telstra, SingTel Optus, AAPT, Primus, Vodafone, Hutchison Telecommunications, MCI Worldcom and iiNet.

The above reporting carriers and CSPs are currently required to provide the relevant information to the Commission pursuant to a record-keeping rule (RKR) issued by the Commission in December 2004. Under Division 6 of Part XIB of the Act, the Commission may, by written instrument, make rules for requiring one or more specified carrier or CSP to keep and retain records. The Commission cannot exercise its powers to issue RKRs unless the required information is relevant to its responsibilities, including the operation of Parts XIB and XIC of the Act.

If the monitoring of changes in average prices paid by Australian consumers for international roaming services is implemented, the Commission will have to formulate an appropriate methodology for the inclusion of international roaming services in the index model being used for the yearly report to estimate the prices consumers pay for telecommunications services. The reporting carriers and CSPs would likely be required to provide the usual information on revenues and quantity usage relating to the service. An initial view by the Commission would be to collect revenue and quantity data on, say, only the top ten destination countries of Australians

[140] Australian Communications Industry Forum, *ACIF C521:2004 Industry Code – Consumer Information on Prices, Terms and Conditions*, December 2004.

travelling abroad, and then to measure the yearly changes in average prices paid for outbound roaming services by Australian subscribers travelling to this representative 'basket of countries'.[141] This basket would capture about 65 per cent of all Australians travelling every year.

The Commission considers that the monitoring and publication of changes in average prices paid by Australian consumers for international roaming services may help in improving consumer awareness and information, and may assist regulators in thinking about any further regulatory response if decreases in international roaming prices do not occur over time. The Commission will therefore discuss with mobile network operators the feasibility of developing methods to measure changes in the average retail prices paid for international roaming services.

5.5 International co-ordination

The Commission could also address the issue of high international roaming charges through international liaison and co-operation with a variety of government bodies, regulatory agencies and multilateral institutions.

National regulatory agencies (NRAs) are generally tasked with improving the welfare of consumers within their respective countries. For example, in the case of Australia, section 2 of the Trade Practices Act provides:

> The object of this Act is to enhance the welfare of Australians through the promotion of competition and fair trading and provision for consumer protection.

Given analogous mandates for each NRA worldwide, there normally exists a jurisdictional barrier for the NRAs in acting for the benefit of consumers or regulating businesses outside their respective countries. The jurisdictional barriers facing NRAs could possibly be overcome by co-operation and co-ordination between these agencies.

In relation to international roaming charges, as much as 75 per cent of the final price paid by Australian consumers is likely to reflect wholesale charges levied by overseas mobile network operators, as discussed in Chapter Four of this Report.

As indicated above, however, it is unclear to the Commission that it could have jurisdiction over the tariff-setting behaviour by foreign mobile network operators, or over telecommunications services provided by carriers/service providers established outside Australia.

Furthermore, even if the Commission could argue that it has jurisdiction over the tariff-setting behaviour of foreign mobile network operators, it considers that it would not be practical for it to deal with a large number of individual overseas mobile

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[141] For example, in 2002-03, these ten individual countries were the destinations of about 65 per cent of all Australians travelling abroad: New Zealand (19.6%), United Kingdom (9.2%), United States of America (8.7%), Indonesia (5.5%), Fiji (4.3%), Thailand (3.8%), Singapore (3.7%), Hong Kong (3.4%), China excluding HK (3.4%) and Malaysia (3%). Classified by the main purpose of the trip, about 69 per cent of all travellers travelled for holiday and about 20 per cent for business. See Australian Bureau of Statistics, Cat. 1301 International Outbound Tourism at http://www.abs.gov.au.

network operators located in each of several countries, in an effort to regulate or influence how each operator sets its respective wholesale charge.

The Commission considers a more practical way of approaching potential concerns associated with high wholesale charges for international roaming services is through co-ordination with other regulatory agencies and multilateral groups. This manner of international co-operation is likely to assist the Commission in overcoming jurisdictional problems by confining the attention of each NRA or group to the activities of mobile network operators within its own country or group of countries.

The Commission considers that, at this time, some of the options open to it for pursuing bilateral or multilateral solutions to the international roaming issue are to co-ordinate directly with the following overseas bodies:

- telecommunications regulatory counterparts, in particular, the New Zealand Commerce Commission, Ofcom (UK), and the Federal Communications Commission (USA);
- the European Commission's European Regulators Group (ERG);
- the Organisation for Economic Co-operation and Development (OECD), in particular, its divisions working on Competition or on Information and Communication Technologies; and the
- International Competition Network (ICN).

Each of the bodies above has functions in relation to competition policy or regulation involving telecommunications. The Commission will explore ways to co-ordinate a regulatory response with these bodies in order to find feasible measures to address the issue of high international roaming prices.

In particular, the Commission considers that dialogue and collaboration with overseas regulators in relation to the apparently high prices for wholesale international roaming services may assist in identifying a range of regulatory and enforcement actions that will assist in promoting price competition in the supply of these services.

Conclusion

While the Commission has not directly estimated the cost of providing international roaming services, observations of retail pricing structures raise suspicions that the prices paid by consumers for international roaming services may substantially exceed the underlying cost of providing these services. In this regard, the Commission has identified a number of factors which may be contributing to high wholesale IOT prices for international roaming services which, in turn, lead to high final prices for consumers.

That said, the Commission believes recent developments in preferred-carrier bilateral arrangements, network selection technology and flat-rate world zones may drive greater price competition between carriers and improve price transparency and simplicity for end-users. In turn, this may encourage greater consumer choice and take-up of these services. The Commission expects that it will see greater movement towards these and other innovative pricing practices by carriers in Australia and overseas in the future.

To date, the Commission has not considered it necessary to take enforcement or regulatory action in relation to pricing of wholesale or retail international roaming services. However, the Commission is concerned that prices for these services appear high and will continue its normal market monitoring activities to determine if it is appropriate for the Commission to take action in relation to international roaming services. The Commission will also undertake this monitoring with a view to determining opportunities for information exchanges with overseas regulators with respect to wholesale pricing practices, and co-ordinating enforcement or regulatory activity with them.

The Commission notes that, as international roaming services are increasingly taken up and worldwide demand increases, there may be greater and continuing focus by regulators and consumer groups on the practices of mobile network operators and industry bodies like the GSM Association in the future.

The Commission notes the level of information provided to Australian consumers regarding international roaming services has improved recently, with prices for available services normally quoted in $A and set out for each roamed country on the websites of Australian mobile network operators. The Commission expects to see further development in the level and type of information provided to consumers as demand for these services increases. The Commission does consider that the level of consumer awareness of alternatives for international roaming services could be improved, to facilitate greater competition among mobile operators and providers of alternative (albeit imperfect substitute) services. The Commission therefore proposes to work with the ACMA to augment the government information provided to consumers about international roaming services, in order to raise awareness about alternatives to these services. Whilst the Commission does not consider it necessary at this point in time, it notes the ACMA has the power to direct the development of an industry code should it become necessary.

Finally, the Commission proposes to discuss with mobile network operators the feasibility of augmenting its annual report on changes in average prices paid by

Australian consumers for telecommunications services, under Division 12 of Part XIB of the Act, to include monitoring and reporting of average retail prices paid for international roaming services. This measure would provide more information to consumers to improve their awareness of the service, and would assist the Commission in monitoring the international roaming market and considering any regulatory action in the future.

Appendix A – Submissions in response to the Discussion Paper

AAPT Limited (one public submission with a c-i-c version)

Adam Lucas Johns (one public submission)

Australian Consumers’ Association (ACA) (one public submission)

Australian Telecommunications Users Group (ATUG) (one public submission)

Charles River Associates (Asia Pacific) Pty Ltd (on behalf of Optus) (one public submission)

Competitive Carriers Coalition (CCC) (one public submission)

Convergent Communications Research Group, The University of Adelaide (one public submission)

Competitive Telecommunications Association (CompTel) (one public submission)

CoRE Research (on behalf of Hutchison) (one public submission)

Frontier Economics Pty Ltd (two public submissions and one c-i-c submission on behalf of Vodafone)

Hutchison Telecommunications (Australia) Limited (one public submission with a c-i-c version, and one c-i-c submission)

MCI WorldCom Australia Pty Limited (one public submission)

Network Economics Consulting Group Pty Ltd (on behalf of Telstra) (one public submission)

SingTel Optus Limited (one public submission with a c-i-c version, and two public submissions)

PowerTel Limited (one public submission)

Queensland Government, Department of Innovation and Information Economy, Sports and Recreation (one public submission)

Small Enterprise Telecommunications Centre Limited (SETEL) (one public submission)

Telstra Corporation Limited (two public submissions)

Vodafone Australia Limited (three public submissions with a c-i-c version for each)

vRoam Australia Pty Ltd (one public submission)

Appendix B – Submissions in response to the Discussion Paper directly addressing matters relating to international roaming services

Australian Telecommunications Users Group (ATUG) (one public submission)

Hutchison Telecommunications (Australia) Limited (one public submission with a c-i-c version, and one c-i-c submission)

SingTel Optus Limited (one public submission with a c-i-c version, and two public submissions)

Telstra Corporation Limited (two public submissions)

Vodafone Australia Limited (three public submissions with a c-i-c version for each)

vRoam Australia Pty Ltd (one public submission)