

# INGENIOUS CONSULTING

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Director, Communications Group  
Australian Competition and Consumer Commission  
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Mr Fadi Metanios  
Assistance Director, Communications Group  
Australian Competition and Consumer Commission  
Email: fadi.metanios@accc.gov.au

Dear Mr O'Leary and Mr Metanios,

## **Response to the ACCC discussion paper reviewing the declaration of the Domestic Transmission Capacity Service**

My name is Peter Ingram, I was Chief Technology Officer (**CTO**) at Ofcom from 1 January 2004 to 31 December 2009. As you will be aware, Ofcom is the regulator and competition authority for the United Kingdom's converged communications industry, with responsibilities covering television, radio, telecommunications and the management of the radio spectrum.

As CTO, I was responsible for ensuring that Ofcom remained at the forefront of understanding the impact of technology developments in the communications industry that Ofcom regulates. I played a leading role in a number of Ofcom's strategic reviews of telecommunications, broadcasting, and the radio spectrum: in particular, Ofcom's Strategic Review of Telecommunications which led to the functional separation of BT Openreach, and Ofcom's strategy for Next Generation Access (**NGA**)/Superfast Broadband.

Among other responsibilities, I was a member of Ofcom's Policy Executive (**PE**) and Ofcom's Fixed Telecommunications Steering Group (**FTSG**) which had oversight of the application of regulation to wholesale Ethernet transmission services. As from 1 January 2010, I have been working as an Advisor to Ingenious Consulting in London.

Telstra has approached me for advice and assistance in identifying the United Kingdom (**UK**) and European Union (**EU**) experience relating to the regulation of Ethernet-based transmission services.

Telstra have indicated to me that the Australian Competition & Consumer Commission (**ACCC**) is intending to, in effect, expand the scope of regulation of SDH/PDH transmission services to include services using an Ethernet interface protocol. I understand that Telstra has serious concerns regarding the potential breadth of the proposed service description.

In the limited time available, Telstra has asked me to:

- (a) Write a brief letter to you identifying whether or not I consider that Telstra's concerns on this issue are legitimate in light of the UK experience;
- (b) Assist Telstra to draft material in its submission relating to the UK and EU experience and to confirm to you in my letter whether or not that material is accurate;
- (c) Briefly summarise in my letter the extent to which Ofcom has concluded that wholesale Ethernet transmission services should be regulated in the UK;
- (d) Identify the key points in Ofcom's reasoning behind these conclusions; and

(e) Identify how Ofcom's conclusions and approach may be relevant to Australia

I undertake each task in turn below.

**(a) Legitimacy of Telstra's concern**

I have read the Discussion Paper of the ACCC titled "*Domestic Transmission Capacity Service: An ACCC Discussion Paper reviewing the declaration for the domestic transmission capacity service, November 2009*". I have also read Telstra's submission.

After reviewing the proposed amended service description for the domestic transmission capacity service in Australia, I believe that Telstra does have legitimate concerns on the potential breadth of regulation resulting from the proposed amendment. Those concerns are documented in Telstra's submission and include, for example, that the proposed amendments could regulate:

- Both Layer 2 and Layer 3 services, resulting in overlapping regulation of wholesale Ethernet services supplied over the same infrastructure; and
- Ethernet services supplied over local access infrastructure, including wholesale DSL, Ethernet 'bitstream' access tails, and Ethernet private network services.

The application of regulation to Ethernet services in the UK was regarded as a major industry issue and was the subject of significant analysis and consultation.

Specifically, a 'Business Connectivity Market Review' was carried out in accordance with the requirements of the EU regulatory framework for electronic communications networks and services which came into force on 25 July 2003. The regulatory framework is based on five EU Communications Directives and is aimed at reducing entry barriers and fostering effective competition to the benefit of consumers. Ofcom also took account of the European Commission (EC) Recommendation on relevant product and service markets, an updated version of which came into effect in November 2007, and the EC Guidelines on market analysis and the assessment of significant market power (SMP).

After undertaking this review, Ofcom concluded that only limited Ethernet services should be regulated.

Such an analysis does not appear to have yet been undertaken by the ACCC in Australia. Rather, the ACCC appears to be characterising its review as having a narrow focus in the context of an amendment to an existing service description.

**(b) Accuracy of Telstra's submission**

I have assisted Telstra to draft material in its submission relating to the UK and EU experience with the regulation of wholesale Ethernet services. I have subsequently reviewed the 'international experience' part of Telstra's submission for accuracy.

I confirm that the material contained in Telstra's submission relating to the UK and EU experience is accurate.

**(c) Scope of regulation of wholesale Ethernet transmission in the UK**

Ofcom completed its most recent review of the leased lines market in 2008,<sup>1</sup> imposing charge controls on BT in 2009.<sup>2</sup> These reviews were based upon an earlier review of the leased lines market in 2003/04. The Leased Lines Charge Control is currently the subject of a formal appeal.

In undertaking its review, Ofcom applied the 'European Framework'. Under the European Framework, market reviews involve first defining the markets under consideration (first at the retail level, and then at the wholesale level), then an analysis to consider whether any communications providers (**CPs**) have significant market power (**SMP**) in any relevant markets, and then finally the imposition of appropriate regulatory obligations (**remedies**) on those CPs found to have SMP.

OFCOM ultimately concluded in respect of wholesale Ethernet transmission services that:

- Only low bandwidth wholesale Ethernet leased line services (at speeds up to and including 1 Gbit/s) should be subject to regulation; and
- Such regulation should only apply to the 'terminating segments' of wholesale Ethernet leased line services.

In the UK, the wholesale leased lines comprise trunk and terminating segments, with the trunk segments being the long distance component of the circuit (between core aggregation nodes), and the terminating segments being at each end of the circuit which connect to the customers sites.

I understand from Telstra that Ofcom's conclusion, if directly translated to Australia, would apply regulation only to lower bandwidth ( $\leq 1\text{Gbit/s}$ ) symmetric wholesale Ethernet transmission tail services supplied over the customer access network, plus some limited backhaul services.

To further clarify, OFCOM excluded from regulation:

- All high bandwidth wholesale Ethernet 'leased line' services (at speeds over 1Gbit/s); and
- All wholesale Ethernet 'trunk' leased line services.

I understand from Telstra that Ofcom's conclusion, if directly translated to Australia, would exclude from regulation all lower bandwidth ( $\leq 1\text{Gbit/s}$ ) inter-exchange wholesale 'Ethernet' transmission services currently supplied by Telstra, except some limited backhaul services. The conclusion would also exclude from regulation all higher bandwidth ( $> 1\text{Gbit/s}$ ) wholesale Ethernet services.

**(d) Key reasons for Ofcom's conclusions**

As summarised in its Business Connectivity Market Review, the key reasons for Ofcom's conclusions on the appropriate scope of regulation of wholesale Ethernet transmission in the UK were as follows:

- To a large extent, Ofcom's findings in relation to wholesale product markets reflected its findings for retail product markets, except for high-bandwidth wholesale Ethernet leased line services.

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<sup>1</sup> See <http://www.ofcom.org.uk/consult/condocs/bcmr08/> - 8th December 2008

<sup>2</sup> See <http://www.ofcom.org.uk/consult/condocs/llcc> - 2nd July 2009

- Ethernet symmetric transmission and traditional symmetric transmission (SDH/PDH) services exist in separate product markets in the UK. Although there is evidence of increasing substitution between SDH/PDH and Ethernet products, the evidence on relative pricing and patterns of demand does not suggest that the degree of substitutability is sufficient to place them in the same market. The services should also be regarded as existing in different product markets because of different end user equipment requirements.
- Low bandwidth Ethernet transmission services exist in a separate market to high bandwidth Ethernet transmission services because of insufficient product substitutability between high and low bandwidths. Ofcom's analysis was based on identifying the combination of circuits of various bandwidths that would provide the cheapest way of delivering a particular total bandwidth requirement. Ofcom's calculations also indicated that BT's share of the wholesale high bandwidth 'Ethernet' market was 38 – 40%, compared to 73% for low bandwidth, reflecting the much greater investment in competing infrastructures that had taken place in the high bandwidth market.
- Virtual Private Networks (**VPNs**), ADSL services and Wave Division Multiplex (**WDM**)-based retail services do not fall within the market for leased lines because of insufficient product substitutability.
- Unbundled Local Loop and Radio Base Station backhaul circuits do fall within the related Ethernet and traditional interface markets for terminating transmission services, respectively.
- In relation to Ethernet 'trunk' transmission services, Ofcom concluded that the market is not yet sufficiently mature in the UK to warrant the application of regulation. A separate market for Ethernet trunk is unlikely to emerge until the roll-out of Carrier-Class Ethernet in the UK.
- In relation to Ethernet 'terminating' transmission services, BT does not have SMP in relation to the supply of high bandwidth Ethernet services. While still relatively high at around 38% to 40%, BT's market share has been falling and there is no evidence to indicate that this trend will reverse in the near future. In addition, there has been significant entry in the market in the recent past, and Ofcom were aware of likely future entry. The evidence suggests that the very high revenues that can be earned from these circuits mean that communication providers are generally willing to sink the high fixed costs required to provide them.
- In relation to Ethernet 'terminating' transmission services, BT still has SMP in relation to the supply of low bandwidth Ethernet services. This conclusion was based primarily on BT's persistently high market share (73% by volume in 2006); the high profitability of the relevant services (around 30% Return on Capital Employed in 2007/08); the advantages enjoyed by BT due to its much more extensive network infrastructure; and the barriers to entry and expansion in this market, which are associated with high sunk costs and the availability of economies of scale and scope to BT.

**(e) Relevance of OFCOM's conclusions and approach to Australia**

I have identified above how Ofcom's conclusions would be directly translated to Australia with assistance from Telstra.

I note that Telstra's submission opposes the regulation of Ethernet altogether at this time for reasons unique to Australia, including imminent amendments to the regulatory regime, in conjunction with uncertainty regarding the extent and nature of Australia's proposed National

Broadband Network rollout. Accordingly, it is not necessarily the case that Ofcom's conclusions can be translated directly to Australia.

However, I do wish to make the following key points:

- The UK experience suggests that the ACCC should undertake a comprehensive market analysis to identify the particular wholesale Ethernet markets (if any) at which regulation should be appropriately directed. Regulation should then be directed only at those markets.
- The UK approach remains 'technology neutral'. What causes Ethernet and SDH/PDH services to be regulated differently in the UK is the lack of direct substitutability between those products and the implications of those differences for market and competitive conditions.
- The UK experience suggests that the ACCC's current proposed service description is too broad. Again, the ACCC should consider defining its service description to reflect the relevant product markets and should ensure, for example, that its transmission service description does not apply to VPN products or wholesale ADSL (which are likely to exist in separate markets).
- The ACCC should be wary of applying regulation to wholesale inter-exchange Ethernet transmission until such time as such markets have sufficiently matured. I understand from Telstra, for example, that 'Ethernet over fibre' services still remain in their relative infancy in Australia and are largely supplied on routes on which significant competition exists in any event. Importantly, ACCC should be mindful of the risk that any regulation may stifle investment and innovation in that market.

I do hope that this contribution assists ACCC with your deliberations on this matter.

Yours sincerely,

A handwritten signature in black ink that reads "Peter Ingram". The signature is written in a cursive style with a horizontal line underneath the name.

Eur Ing Peter Ingram BSc(Hons), CEng, FIET