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ACIF Submission to the ACCC's Discussion Paper:

"A Strategic Review of the Regulation of Fixed Network Services: December 2005"

1. Introduction

ACIF is pleased to have this opportunity to make a submission to the ACCC Discussion Paper '*A strategic review of the regulation of fixed network services*'.

ACIF's membership comprises carriers/carriage service providers, business and residential consumer groups, industry associations and individual companies. Its mission is to provide leadership through a neutral forum, independent of individual interests, in which all Australian communications industry stakeholders cooperate in the development of initiatives that foster the effective and safe operation of competitive networks, the provision of innovative services and the protection of consumer interests.

ACIF operates on the central premise that the best outcomes for all stakeholders in Australian telecommunications can be achieved by co-operation. In this context, ACIF supports the policy objective of the *Telecommunications Act 1997('the Ac')* to promote the greatest practicable use of industry self-regulation without imposing undue financial and administrative burdens on industry.

The objective of ACIF's submission is to reinforce that policy underpinning of the Act and to outline examples of where industry-led solutions dealing with operational aspects of systems using the ULLS have to date enabled the efficient and effective utilization of ULLS in Australia.

Commission staff were involved in the early ACIF activity and have remained informed of ACIF developments over time.

2. Co-operative industry outcomes on ULLS through ACIF

The Commission's discussion paper in paragraph 7.4 identifies a number of potential and likely implications of the transition to a FTTN network.

These implications of a FTTN network have been under discussion within ACIF for some time as part of its work in leading the industry to define the technical and operational aspects of the ULLS. The work has included consideration and discussion of numerous areas, including customer equipment requirements, the management of network interference, and operational arrangements for the ordering and provisioning of broadband services.

Through co-operative processes, industry agreements on many relevant topics have been reached and are reflected in industry documents which were developed. The most significant of the documents are:

(i) **The ULLS Network Deployment Rules** (*ACIF C559:2005 Unconditioned Local Loop Service (ULLS) Network Deployment Rules Industry Code*).

This Code defines the performance requirements for DSL and other technologies on a copper access network. The Code offers a coordinated approach to reduce the risk of interference between (broadband) services deployed over such an access network. In general terms there are two key rules – not to operate with excess power (a bit like not talking too loudly in a crowded room) and not to cause interference into other systems (analogous to ensuring one's speech volume in the crowded room allows everyone to hold a conversation).

Associated with these basic requirements are the technical parameters for a number of Deployment Classes, with each Deployment Class corresponding to a "typical technology" e.g. ADSL, SHDSL at various data rates, E1. These technical details form the "rules" that have the effect of maximizing the opportunity for end users to enjoy the benefits of broadband.

This is because without this Industry Code the operation of systems using the ULLS would have occurred in a more ad hoc and less coordinated manner. This would have led to inefficient and ineffective utilisation of access networks for such services. Instead Australia has a more predictable and reliable framework for the operation of broadband services than in many other countries. Indeed the interest from other countries (e.g. New Zealand, Malaysia) in the network deployment rules and associated interference modelling is an indicator of the success of the Australian approach.

(ii) **Ordering, Provision and Customer Transfer** (ACIF C569:2005 Unconditioned Local Loop Service - Ordering, Provisioning and Customer Transfer Industry Code).

This Code describes the minimum processes between Access Seekers (AS) and Access Providers (AP) for the ordering, provisioning and customer transfer of the Unconditioned Local Loop Service. This includes:

- **a)** the need for a carrier or CSP to obtain customer authorizations prior to any transfer and retain the authorisations
- **b)** the minimum information that is to be provided as part of a customer authorisation
- **c)** the maximum timeframes for carriers or CSPs to perform various steps in a transfer of a ULLS
- **d)** what information is to be provided to customers as part of the transfer process
- **e)** the types of orders for a ULLS that can be made
- **f)** the maximum timeframes for carriers or CSPs to perform various steps in an order for a ULLS
- **g)** the activities in provisioning a ULLS
- **h)** the timeframes for carriers or CSPs to perform various steps in provisioning a ULLS

These agreed industry processes and timeframes for the operational aspects of ULLS ensure operators have a complete framework for the lifecycle of a ULLS. That is, it addresses aspects from the initial request for a service, through the checking of availability for and supply of a service, a range of possible changes to a service, to the handing back or termination of a service. This results in a consistent, reliable experience for end users in obtaining, updating and ending a ULLS.

(ii) Customer equipment requirements *(AS/ACIF S043.2:2005 Requirements for Customer Equipment for connection to a metallic local loop interface of a Telecommunications Network - Part 2: Broadband Standard*).

This Standard defines the technical parameters for Customer Equipment (CE) that has a broadband capability and connects to a Telecommunications Network via a copper access network. Typical examples of such CE are DSL modems (both symmetric and/or asymmetric DSL technologies).

This Standard is a complementary document to the Deployment Rules Industry Code. The Standard addresses the requirements for equipment at the customer end, while the Deployment Rules address the performance of equipment at the network end and on the copper wire. This helps ensure that broadband services are able to operate with minimal risk of interference into one another.

The particular issues with which paragraph 7.4 is concerned – that is the transition from deployment of services from a traditional exchange to a FTTN architecture - were identified in the course of industry's work at ACIF

For a number of reasons the issues were not resolved at the time of developing the documents detailed above. In particular, there appeared to be an understanding in the industry at the time that:

(i) the benefits from finalizing the ACIF outputs in order to enable the rollout of DSL services exceeded the anticipated resources to reach resolution on the matter;
(ii) the low number of DSL services that were likely to be affected at the time could be handled on a case-by-case basis; and
(iii) the processes for a transition to a FTTN network would benefit from learning obtained from field experience.

3. The experience of the Telecommunications Access Forum (TAF)

In the context of the encouragement of industry-led solutions to deal with the issues related to FTTN and Next Generation Network issues, it is relevant to learn from the experience of the Telecommunications Access Forum (TAF) – as much for the lessons of why it was not successful, as for the lessons of the processes and safeguards to build into any potential future industry forum dealing with access issues.

In 1998, in accordance with powers under s 152AI of the Trade Practices Act, the Commission declared an industry body to be the Telecommunications Access Forum (TAF). The TAF was composed of carriers and carriage service providers. Its role was seen as performing the co-regulatory component of decision making under Part XIC - its roles were to produce a Telecommunications Access Code and to generate recommendations in relation to declared services. Decisions of the TAF were to be unanimous. The expectation was that the TAF would provide a streamlined approach for declaration and the development of access codes, with a more limited role for the ACCC. In 2001 the Productivity Commissioned explained the role as follows:

> *"Such co-regulation was intended to make the access regime more light-handed by either providing binding terms or limiting areas of dispute. The regulatory hurdles for implementing a TAF access code or declaration are lower than alternative procedures. At the time of introduction, the Government argued that this lower hurdle was appropriate given that the TAF represents all groups in the industry (including access seekers and access providers). As the TAF represents the interests of the industry generally, the ACCC has the flexibility to accept that recommendation without itself undertaking an inquiry into the service's declaration (Explanatory Memorandum, Trade Practices (Telecommunications) Bill 1996, p. 46)"*[1]

By the time of the Productivity Commission report, the TAF had produced a Code but had not recommended any services for declaration. The Commission recommended its closure:

> *'While the TAF has the power to make decisions, its incentive structure obstructs their realisation. This is a major defect in institutional design. There are two major reasons for these incentive problems. First, the requirement for unanimity is a hard test to pass. It implies that for the TAF approach to succeed no party is worse off than it would be if it were to use regulatory arrangements outside the TAF The difficulty of finding an area of common ground that leaves no party worse off is bigger because access seekers and providers are heterogenous. They have differing degrees of sophistication, market power, vertical and horizontal integration and operate in diverse markets. A forum that brings together such diverse stakeholders is less likely to achieve a practicable and consensual code for access compared with bilateral negotiations between particular access seekers and providers. Further, the scope of negotiations is not broad enough to involve trading off one issue for another, as in, say, multilateral trade negotiations.*
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> *Second, the fact that any TAF code must pass some additional tests by the ACCC— albeit weaker ones than usually applied — is presumably*

[1] Productivity Commission Report on Telecommunications Competition Regulation, December 2001

anticipated by participants. This further narrows the possible set of conditions on which they can negotiate.

In this context, the failure of the TAF is a reflection of the fact that self-regulation typically fails in circumstances where the stakeholders do not share a sufficient common interest. It is notable that, in another arena, technical aspects of the telecommunications network, the ACIF has been widely regarded as successful, precisely because of such common interests.

There are no obvious solutions to the incentive problems of the TAF that would not have other adverse effects. For example, the consent of the access provider might not be required, nor unanimity among the remaining access seekers. This would lead to more rapid processes, but it would do so by tilting the bargaining power to access seekers, with a substantial risk of over-regulation and under-pricing of access. The implication is that in the absence of workable alternative forums for dispute resolution, a body like the TAF will lead to outcomes that are inimical to the purpose of Part XIC.

A body such as the TAF is better suited to parties that have more common interests and more equal bargaining power. This might emerge in time as carriers develop rival facilities to the main incumbents and more parties need to negotiate two-way access agreements. As noted in the previous chapter, the TAF might also have a role in allowing the easier revocation of expired or minor services. However, there are alternative mechanisms for achieving this. The task of maintaining the TAF access code could also be undertaken by another body, such as ACIF.'

Since the TAF was wound up in 2002 no industry body has performed an equivalent function, although an industry alternative dispute resolution has been established: resolution@span.

4. Additional issues raised by next generation networks

ACIF is pro-actively working to identify emerging issues in the move to next generation IP-based networks and to lead the industry in collaborative responses to those issues. For example, in relation to the rollout of VoIP services, ACIF has held public forums to identify the issues and has Working Groups focused on developing outcomes. A current focus is the development of a Discussion Paper, to be widely disseminated, on IP Interconnect and Quality of Service. Further details about ACIF's VoIP work can be found on the ACIF website at http://www.acif.org.au/projects/voip.

From its work with industry, ACIF is able to make some general observations on issues raised by next generation networks.

4.1 Alternative Technologies – general observations

4.1.1 Wireless

The various forms of IEEE 802.16[2] (also referred to as WiMAX[3]) are a wireless technology getting attention from the industry media at present. IEEE 802.16 / WiMAX has the potential to be an alternative means of supplying broadband access services that offer comparable data rates to some DSL technologies. However there remain a number of uncertainties related to services that use the technology including:

- the number of networks likely to be deployed;
- the location and coverage of the networks;
- the timeframe for deployment of any given network; and
- the pricing of any competing services offered over the networks.

Deployments of networks offering carriage services based on IEEE 802.11 (also referred to as Wi-Fi[4]) technology have tended to target specific locations (commonly referred to as "hotspots") for *ad hoc* use rather than ongoing access and have not approached the mass market scale seen for other technologies.

A variation on the Wi-Fi hotspot is the deployment of municipal access networks based on Wi-Fi technology (also known as Muni Wi-Fi). The deployment of such networks in Australia is probably dependent on an alliance between an organisation with the geographic coverage (e.g. a local council) and an organisation with the understanding of the technology (e.g. a communications services company). The likelihood of deployment of such networks in capital cities in Australia is low given the range of alternative networks using wireless access technologies that are either available or planned.

GPRS and EV-DO are not direct substitutes for broadband services such as ADSL because of their lower data rates, although they offer benefits of portability and/or mobility.

EDGE, HSPA would increase data rates on wireless access networks but again the recent industry media reports of ADSL2+ indicate there will be a gap between what xDSL can offer and what is available on a 2.5G network.

4.1.2 Wireline

[2] IEEE Standards are available via http://ieee.org/web/publications/standards/index.html
[3] For more information refer to the WiMAX Forum (http://www.wimaxforum.org/home/) which promotes and certifies compatibility and interoperability of broadband wireless products.
[4] For more information refer to the Wi-Fi alliance (http://www.wi-fi.org/), which is a trade association devoted to promoting the growth of wireless Local Area Networks (WLAN).

Broadband over PowerLine (BPL) is a technology that offers alternative access to broadband services. At present ACMA is overseeing several trials of the technology in Australia[5].

At the second ACIF VoIP Forum in Sydney on 06 December 2005, the presentation by Joe Gorup of engin provided information on the BPL trial in Tasmania by Aurora Energy[6]. The presentation suggested that BPL technology offers a viable alternative access method for broadband services.

The presentation suggested commercial rollout of broadband services in Tasmania might occur in 2006. In the absence of detailed information on any plans to rollout services in other states and territories, this suggests the likely timeframe for deployment could be at least a year or two following a trial - through trial evaluation, business case development and approval, equipment installation and then commercial offering of services.

4.2 Possible impact of new technologies

One of the trends clearly identified in the ACIF's Next Generation Networks project[7] was towards the "delayering" of services and networks. This leads to the increased possibility for end users to have different providers of the physical connection (e.g. the ULLS), access (e.g. ADSL) and services and applications (e.g. VoIP). This contrasts with the "traditional" approach of one's (PSTN-based) telephone service being bundled with (PSTN) network access over the metallic wire that connects the end user premises to the exchange.

This trend to multiple layers suggests that there will be a range of alternatives available for end users in each of these areas e.g. access, networks, services, applications.

However the low level of take-up[8] and projected take-up[9] of VoIP services suggest that PSTN based voice services will continue to be the primary method for voice communications in Australia for some years into the future. This low adoption rate for alternative models of service suggests that there will continue to be demand for the PSTN originating and terminating access for several years to come.

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[5] For more information on the BPL trials refer to the ACMA website at: http://www.acma.gov.au/ACMAINTER.131180:STANDARD:1474384239:pc=PC_2845

[6] A copy of the presentation is available from: http://acif.org.au/projects/seminars

[7] Refer to the "Policy and Regulatory Considerations for New and Emerging Services" report available via http://acif.org.au/projects/previous/ngn

[8] 2.2% of Australians had made a VoIP call at Q3 2005 (Source: Roy Morgan Single Source Poll); VoIP services correspond to 1.5% of residential fixed lines ion 2005 (Source: based on IDC research). Presented by Telstra at the second ACIF VoIP Forum, 6 December 2005.

[9] VoIP services are projected to correspond to 8.1% of residential fixed lines in 2009 (Source: based on IDC research). Presented by Telstra at the second ACIF VoIP Forum, 6 December 2005.

As well, it seems reasonable to infer from the uneven geographic distribution of ULLS that the future adoption of VoIP services may occur at different rates in different parts of Australia.

5. Conclusion

There is a significant role for industry-led solutions in identifying the issues of emerging technology and network developments. ACIF has a history of successful responses to ULL issues, and is currently pro-actively working on issues in the emerging next generation IP networks.

There are lessons to be learnt from ACIF's experience, and the TAF experience, in developing collaborative industry outcomes – the processes to be employed, the outcomes sought to be achieved, and the timeframes for achieving them, and the substantial commitment of industry resources required to achieve them.

The policy of the Telecommunications Act 1997 is to promote the primacy of industry self-regulation. ACIF's lengthy experience and substantial involvement in the industry activity on the ULLS, and leading pro-active outcomes to next generation network issues, means it is well placed to play in role in leading industry solutions.

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