

G9 Submission to

Australian Competition and Consumer Commission

on

**The Proposed Variation of the Service Declaration for the
Unconditioned Local Loop Service**

June 2007

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1. Introduction

- 1.1 The Australian Competition and Consumer Commission (ACCC) has issued a discussion paper examining the possible variation of the service declaration for the unconditioned local loop service (ULLS). The G9 welcomes the opportunity to provide comments on this discussion paper.
- 1.2 The current ULLS description refers to the use of a communications wire between an end-user's premises and a potential point of interconnect '*located at or associated with a customer access module*'. Customer access modules are generally located at Telstra exchanges. However, in the event of a network modernisation, such as a hybrid fibre twisted pair (HFTP) fibre-to-the-node (FTTN) deployment, it is likely that interconnection at exchanges would no longer be feasible. In this event, interconnection would instead need to take place at some other point on the communications wire. However, it is uncertain if interconnection at other points on the communications wire falls within the current service description.
- 1.3 The proposed amendment of the ULLS description would ensure access to the ULLS is available at alternative potential points of interconnection along the communication wire, and in particular at a remote point such as a node. It also ensures that access to the ULLS continues to be available at the exchange. Such access will continue to be required until a fibre network is rolled out.
- 1.4 The G9 believes that the current service description is not sufficiently technology neutral to adapt to new forms of networks that use the communications wire. Amendment of the ULLS description will in this regard put the scope of the declared service beyond doubt.
- 1.5 In this submission we have provided answers to the ACCC's questions on:
 - The extent of the current service description;
 - Demand for the ULLS and sub loop access; and
 - The supply of sub-loop access.

2. Extent of current service description

2.1 The G9 will address the following questions in this chapter:

Do you consider that a pillar, node or other remote device is 'associated with a CAM' within the meaning of the current ULLS service description? Please provide reasons.

Do you consider that there is sufficient certainty around this issue? If no, what do you consider should be done to overcome this uncertainty?

2.2 Under the current ULLS service description, it is stated that,

“the unconditioned local loop service is the use of unconditioned communications wire between the boundary of a telecommunications network at an end-user’s premises and a point on a telecommunications network that is a potential point of interconnection located at or associated with a customer access module and located on the end-user side of the customer access module.”

2.3 The G9 considers that a digital subscriber line access multiplexer (DSLAM) port may be regarded as forming the CAM. It follows that a pillar, node or other remote device can be regarded as ‘associated with a CAM’, since a digital DSLAM port may be regarded as forming the CAM, and DSLAM ports may be located in nodes, pillars and other remote devices. Thus we believe that under the current ULLS service description:

- the pillar is ‘associated with a CAM’ since the DSLAM port located in the node adjacent to the pillar forms the CAM;
- the node is ‘associated with a CAM’ since the DSLAM port located in the node forms the CAM; and
- other remote devices are ‘associated with a CAM’ as the DSLAM port or other customer connection capability located in the node or other remote device forms the CAM.

2.4 However, the G9 does not consider there is sufficient certainty around this issue. For example an access provider may need to seek access at cable cross-connect points. Such points could be seen as currently not ‘associated with a CAM’.

2.5 A further issue arises from consideration of the definition of a customer access module (CAM) as a device that provides ring tone, ring current and battery feed to customer equipment. In the event that a fibre network was rolled out it is likely that some form of customer access device would be installed at the node. However it is not certain that such a device would necessarily provide ring tone, ring current and battery feed to customer equipment.

2.6 In a fibre to the node architecture, if an entirely IP based service is to be deployed, voice service could similarly be provided by VoIP and communication could be passed as data packets to the customers’ private equipment over the fibre and then via the twisted copper pair. The customer premises equipment (CPE) would then act as an advanced technology

attachment (ATA) or maintenance tracking administration (MTA) and perform the functions previously provided by a CAM. The term CAM as it is currently understood would then effectively become meaningless.

- 2.7 The G9 submits that it is not sensible for the ability to interconnect with Telstra's network to be tied to the location of the device that provides ring tone, ring current and battery feed to customer equipment, which is an engineering decision subject to the demands of the network technology.
- 2.8 It follows that the CAM is no longer a relevant network boundary point for a next generation network (NGN). To overcome this uncertainty. The current ULLS service description should be amended in a manner that adapts the NGN, such as the amendment suggested in the G9 proposal.

3. Demand for the ULLS and sub-loop access

Access the ULLS at RIM cabinet

To what extent have access seekers sought to access the ULLS at RIM cabinets and other remote access units?

Have you experienced difficulties in assessing RIMs or other RAUs? Please outline the nature of these difficulties. If there are commercial in confidence issues involved, provide a general discussion, if possible.

- 3.1 To date most access seekers have not sought to access the ULLS at locations other than at the location of Telstra's CAM (which today is generally located at Telstra exchange buildings). We are aware however that some access seekers have had difficulties in acquiring access to RIM cabinets.
- 3.2 The reason for the provision of this access at RIMs (in most cases) is the unavailability of exchange-fed copper. We consider that this avenue provides no certainty of service for customers and will in any case no longer exist in the event that a fibre network is rolled out.

Access to sub-loop

Have you sought access to the sub-loop? What were the terms of access, if any?

Do you plan to seek access to the sub-loop in the future? In what circumstances (if any) will you seek access to the sub-loop?

- 3.3 As mentioned elsewhere, under the current arrangements access to the ULLS is provided at Telstra exchanges and it has therefore not generally been necessary for access seekers to seek access to the sub-loop.
- 3.4 Further, it is our understanding that under the current ULLS service description Telstra has no obligation to provide ULLS access at locations other than where it is associated or co-located with the CAM.
- 3.5 The current access arrangement however will change in the event of a network modernisation such as the HFTP FTTN network. The proposal put forward by FANOC (commonly referred to as G9) illustrates that the most efficient way

to build a HFTP FTTN network would be to cutover all copper wires at each pillar (defined as **sub loop access**). This would involve taking all the copper wires currently coming into the pillar from the exchange side and connecting them to a single node located nearby the pillar. In this structure, it is not technically or economically feasible for competitors to build a separate node and fibre connection back to the exchange and interconnect at the pillar as there is no room to connect multiple hundreds of copper wires from more than one node to the pillar and all the 'space' is taken up with active connections.

- 3.6 It is true that cutover of copper wires can be done on a line by line basis (i.e. a technician would go out to the pillar and take a copper wire which previously went from the pillar to Telstra's node and swap it over each time a customer said he or she wanted to connect to the competitors' network) defined as **sub loop unbundling**. However, this would be an expensive and inefficient way to operate (in most areas at least). It would destroy much of the economic benefit which is achieved from moving to a FTTN network. This issue has been considered in overseas jurisdiction and it has generally been concluded that sub loop unbundling is not economically viable (except under certain conditions).¹
- 3.7 As a result, it is likely that all of the ULL lines from the Telstra pillar would need to be connected across to the competitor's node at one time and there can only be one FTTN network based on twisted copper pair local loop in a particular geographic area.
- 3.8 Subsequently, access seekers wishing to compete in the downstream market would need to seek access to the sub-loop and as such the G9 plans to seek access to the sub-loop in the future.

The impact of deployment of fibre based network on downstream market

To what extent would the deployment of a fibre-based network affect the ability of access seekers to compete in downstream markets?

The downstream markets

- 3.9 Deployment of a fibre network would have a substantial impact on access seekers. The most immediate impact is that such a network would partially or completely strand the infrastructure investments that access seekers have made in installing DSLAMs in Telstra's exchanges. The extent of this impact would depend on the proportion of copper wires remaining directly connected to the exchange. Telstra figures show there are around one third of households that are within 1.5 km of the exchange and hence can receive 12 megabits per second using existing DSL technology.² If all customers at a given exchange were served via a fibre network, and no copper wires remained connected directly to the exchange, all DSLAM investment at the exchange would be stranded. On the other hand, if some wires remained connected directly to the exchange, then access at the exchange would remain feasible and the impact of a fibre network in stranding investments would be reduced.

¹ Analysys, 2007, *The Business Case for Sub-loop Unbundling in the Netherlands*.

² 23 June 2006, The Allen Consulting Group, A competitive model for national broadband upgrade, an alternative to Telstra's fibre-to-the-node proposal that is in the national interest, p30

3.10 The impact on competition from deployment of a fibre-based network would depend largely on access seekers' ability to gain access to the sub-loop, and the terms relating to sub-loop access on which a fibre network would be deployed. In this regard we distinguish between:

- no access to the sub-loop (ie. the status quo);
- “sub-loop unbundling” (provision of access to the sub-loop on a line-by-line basis); and
- “sub-loop access” or “pillar migration” (the situation where all copper lines entering the pillar are cut and reconnected to the fibre network).

No access to the sub-loop

3.11 In the absence of the variation to the ULLS definition, access seekers may not be able to get access to the sub-loop. This implies that access seekers would lose the ability to serve customers via their own infrastructure in areas covered by the fibre network. Currently, infrastructure-based competition is a significant and fast growing segment of the telecommunications industry. We note that the data available to the ACCC indicates that “take-up of each of the ULLS and LSS grew in the order of 100 per cent during calendar year 2006.” Without regulated access to services provided over a new FTTN, ULLS-based competition would be severely curtailed or eliminated. Clearly in this scenario the deployment of fibre would have a severe impact on the ability of access seekers to compete in the downstream markets.

Sub-loop unbundling

3.12 Assuming the variation to the ULLS definition was accepted, access seekers could get access to SIOs served by the fibre network. However, the economic viability of such access would be uncertain if it was provided on a line-by-line basis (sub-loop unbundling) whereby each access seeker needed to install its own DSLAMs at each node. Since each node serves a smaller number of SIOs than does an exchange access seekers competing for a portion of the lines available at each node would not be able to achieve scale economies as favourable as they were able to achieve from the exchange (in the absence of a fibre network).

3.13 Since sub-loop unbundling would not be viable with respect to the majority of nodes, in this scenario the deployment of fibre would have a negative impact on the ability of access seekers to compete in downstream markets, relative to the current situation. However, sub-loop unbundling may potentially be viable in particularly high value and/or high density areas. Analysys in 2007 found that sub-loop unbundling may be economically viable in some of the larger street cabinets in dense urban areas in the Netherlands. However this result applied only under certain conditions relating to favourable regulatory and revenue conditions. While sub-loop unbundling is only likely to be viable in a limited range of circumstances, to the extent that it is viable, the variation to the ULLS definition could limit the negative impact of a fibre network on competition to some extent.

Sub-loop access

- 3.14 In the event of a fibre rollout all copper lines entering the pillar would be reconnected to the fibre network such that one DSLAM would serve each node. In such a situation the access provider (and DSLAM owner) could achieve all potential scale economies. Certainty around sub-loop access is the primary reason for the variation to the ULLS service description; since the variation would give potential non-Telstra investors in a fibre network certainty that it will be legally feasible to connect the new network to Telstra's copper wires at the node.
- 3.15 Turning to the impact of a fibre network on access seekers' ability to compete in downstream markets, this impact will depend to a significant extent on market structure, and in particular on whether the owner and/or operator of the network is controlled by a single access seeker. If the network owner is vertically integrated with a retailer / access seeker, then it has the incentive to discriminate in favour of its own downstream affiliate and provide inferior services to other access seekers compared to those it provides to itself. For further discussion of Telstra's capacity to sabotage competitors we refer the ACCC to the Allen Consulting Report³.
- 3.16 By contrast, if the network owner/operator is structurally separate from access seekers then it will have less incentive to discriminate against (or in favour of) any particular access seeker. In such a scenario all access seekers would have equal opportunity to compete in downstream markets on their merits. This would represent an improvement in the environment for competition relative to a vertically integrated FTTN proposal and also relative to the current situation (where the incumbent owns the copper network and is also a retailer).

Demand for ULLS/or the sub-loop

How will deployment of a fibre-based network affect demand for the ULLS/or the sub-loop?

Demand for sub-loop

- 3.17 The G9 believes the deployment of a fibre-based network would increase consumer demand for sub-loop access or sub-loop unbundling. It is understood under a FTTN network, DSLAMs will be placed closer to the customer, allowing for deployment of technologies such as VDSL which is capable of providing much greater broadband speed to the end users.
- 3.18 This will open up consumer demand for applications which rely on high bandwidth and customer can access services like IPTV, Multi-HDTV and Virtual Reality. The G9 believes as demand for these applications increase so too will the demand for broadband services capable of supporting the application, ie, sub-loop access or sub-loop unbundling.
- 3.19 Demand for sub-loop access by access seekers (as opposed to consumers) is discussed in the previous section.

Demand for ULLS

³ 23 June 2006, The Allen Consulting Group, A competitive model for national broadband upgrade, an alternative to Telstra's fibre-to-the-node proposal that is in the national interest, p33

- 3.20 In a fibre-based network, it is expected demand for ULLS (as presumably defined) will reduce considerably. The extent of the reduction would depend on the proportion of copper wires remaining directly connected to the exchange. If all customers at a given exchange were served via a fibre network and no copper wires remained connected directly to the exchange, it would not be feasible for access seekers to gain access to the ULLS at the exchange.

4. The supply of sub-loop access

Is sub-loop access currently being provided by Telstra and/or other access providers? On what basis?

- 4.1 We do not believe there is any significant services involving sub-loop access currently being provided by Telstra and/or other access providers.

Is it technically feasible to connect to the local loop at a RAU such as a node? How? Are there any technical impediments?

- 4.2 The G9 submits it has been technically feasible to connect to the local loop at a node. As mentioned elsewhere, this would involve taking all the copper wires currently coming into the pillar from the exchange side and connect them to a single node located nearby the pillar. The node would contain broadband equipment including DSLAMs and the node would be connected by fibre to the exchange or other point of interconnection.
- 4.3 This would be the most economic method to build a HFTP FTTN network. Due to the physical size and capability restraints of the pillars it is not practical to provide separate connectivity to multiple access seekers equipment and would only be practical to connect all customers at a pillar to the node.

Is it possible for access to be provided at the exchange at the same time as access further along the communications cable at a RAU? Does this affect the quality of services supplied from either point? In what way (if any)? How can this be overcome?

- 4.4 The G9 believes it is possible for access to be provided at the exchange at the same time as access further along the communications cable at a RAU. It is our understanding that this scenario is catered for multiple feeds, namely Deployment state B, ACIF C599. This involves fibre and copper feeding the same cable distribution area (DA) with some services fed from the exchange over copper while over services are fed from a lower reference point closer to the customer, for example at the remote node.
- 4.5 Under Deployment state B (ACIF C599), it is our understanding that performance of high speed DSL services such as VDSL, were reduced by other DSL services fed from the exchange. Another problem that can arise from midpoint injection is serious impairments on the exchange fed services. The problem of multiple feeds is further discussed in the Allen Report.⁴ To

⁴ 23 June 2006, The Allen Consulting Group, A competitive model for national broadband upgrade, an alternative to Telstra's fibre-to-the-node proposal that is in the national interest, p31

overcome this, it would require power restrictions imposed on the node fed services but this can result in speed limitations on the services provided.

How would provision of access at multiple points on the communications cable affect the legitimate commercial interests of an access provider? How could these interests be protected?

- 4.6 The G9 submits multiple access points can affect the overall capability of the communication cable due to the previously mentioned midpoint injection problems. Further, the cutover of copper wires would mean Telstra can no longer use its copper line to provide services to its end users. To the extent that Telstra's interests might be affected. We believe it is likely that difficulties can be addressed via industry agreement through the Communications Alliance Working Committee. The industry agreement should outline how the FTTN is to be deployed and ensure the commercial interests of Telstra will be protected.

How will deployment of a fibre-based or IP-based network to locations beyond the exchange (eg. The node) affect access seeker's ability to use their current equipment? Does this depend upon whether access is regulated at multiple points along the communications cable? In what way (if any)?

- 4.7 As mentioned elsewhere, the deployment of a fibre-based or IP-based network to locations beyond the exchange will raise midpoint injection problems. The G9 further believes the HFTP FTTN will remove the copper connectivity to the exchange, thus reducing the serving area of access seekers equipment in the exchange. The HFTP FTTN by its nature isolates DSLAM equipment that has been deployed to service customers over copper pair from the exchange.
- 4.8 The G9 submits that regulating access points along the sub-loop would not protect DSLAMs from stranding but it provides certainty for access seekers to re-invest. It would provide access seekers with certainty of access to copper cross connect points and thereby provide opportunities to invest in services from the remote node.

How will deployment of a fibre-based or IP-based network to locations beyond the exchange affect investment plans of industry participants?

- 4.9 The G9 submits the question of whether the deployment of a fibre-based or IP-based network to locations beyond the exchange would affect investment plans of industry participants will largely depend on the level of certainty provided by the access regime put in place.
- 4.10 The G9 understands that in the current Telstra proposal to cater for very high speed broadband (VDSL) deployment from the node Telstra proposes:
- Only a single fibre feed from the exchange to the node;
 - A single DSLAM feed all customers fed from a particular cable distribution area (DA);
 - The only technologies likely to be provided under the proposal appear to be VDSL and ADSL 2+ with a single asymmetric band plan; and

- Other technologies such as primary rate interface, basic rate interface, symmetric high speed digital subscriber line (SHDSL), ESHDSL do not appear to be provided.
- 4.11 The G9 believes while there are technical and performance reasons supporting this proposal. It does pose the risk of stranding existing investment by access providers and restricting the range of services available to consumers.
- 4.12 The G9 therefore submits certainty of access to the copper cross connect points is necessary or else there would be no opportunity to invest in services provided from the remote node. Access seekers would simply be relying on Telstra in reselling their services.
- 4.13 As a result a structure which allows the access seekers to have a measure of influence in the capability and capacity of a node is required to continue to promote investment.

What has been the overseas experience in sub-loop access?

- 4.14 Internationally ULL regulation is well-developed with many countries allowing access-seekers to utilise an incumbent's fixed network via ULL.
- 4.15 With the arrival of fibre networks (connected the node and/or home) regulators have been moving towards instigating SLU. Legislation in the United Kingdom is most advanced and requires the incumbent operator (BT) to meet any request from an operator to 'co-mingle' equipment.⁵
- 4.16 'Co-mingling' involves physical co-location where an operator's equipment is fitted and operated in the same area as the dominant provider houses its own equipment, without a permanent barrier between them. Co-mingling is essentially the same as sub-loop unbundling, since it allows access seekers to co-locate their equipment at the node before the final copper tail.⁶
- 4.17 The G9 also understands that in the Netherlands, OPTA has initiated a review that will likely lead to the formulation of SLU regulations by the end of 2007.⁷ Further it appears that a similar process is occurring in Ireland where the regulator been requested to investigate and manage the incumbent's (Eircom) plans for a FTTN network.⁸

5. Other issues

Whether the Commission should consider declaring a new service rather than varying the ULLS declaration (and the timing of any such declaration review); and

⁵ Ofcom (2006), Evaluating the impact of the Telecoms Review- An interim report one year on, 18 October 2006.

⁶ Ofcom (2006), Evaluating the impact of the Telecoms Review- An interim report one year on, 18 October 2006; Ofcom (2004) Wholesale local access market review, Review of the wholesale local access, 12 May 2004.]

⁷ OPTA (2007), ALL-IP: letter to market parties on policy guidelines and functional separation, OPTA Media Release, 3 August 2007.

⁸ Eircom will 'wipe out' Irish telcos: ALTO, ElectricNews.net, 2 March 2007.

- 5.1 An eligible service can be declared by the ACCC after holding a public inquiry, if it is satisfied that making the declaration will promote the long-term interests of end users of carriage services or services provided by means of carriage services.
- 5.2 The G9 does not consider the ACCC should declare a new service rather than varying the ULLS declaration. From past experience, declaring a new service can be a long process. The indicative timeframes would depend on the time it takes to hold an inquiry, announce details of the inquiry, release discussion paper (if necessary), draft report (if necessary), final report (further 6 months or 9 months if complex) and issue written instrument under subs 152AL(3) declaring that the eligible service is a declared service.
- 5.3 It is understood that the Government will begin a tender process for the deployment of a FTTN network in a few months. It is important to provide bidders with regulatory certainty before they participate in the bidding process.
- 5.4 The G9 believes varying the ULLS declaration would have the same effect as declaring a new service and we therefore submit the ACCC should vary the ULLS declaration rather than declaring a new service.

Whether any transitional arrangements are needed to ensure access seekers and access providers smooth transition to fibre-based network(s).

- 5.5 The G9 considers transitional arrangements are needed to ensure access seekers and access providers smoothly transition to fibre-based network(s). The G9 believes an industry agreement has to be set in place that ensures access seekers have the same opportunity to deploy their equipment and provide their services to end users as they currently do under an exchange based deployment.

Jurisdiction issue

No acquisition of property other than on just terms

- 5.6 The G9 notes that Telstra has commenced proceedings in the High Court of Australia challenging the constitutional validity of Part XIC of the TPA insofar as it applies to the ULLS (and the LSS). The G9 rejects Telstra's argument for the reasons outlined below.
- 5.7 The Commonwealth, the ACCC and 11 other private defendants in the proceedings strongly disagree with Telstra's assertion. It is our view that Part XIC of the TPA:
 - (a) does not effect any "acquisition" of property at all;
 - (b) even if it does effect an acquisition of property, Part XIC is not a "law with respect to" the acquisition of property; and
 - (c) even if it is a law with respect to the acquisition of property, Part XIC provides for "just terms" in any event.

- 5.8 The G9 submits that the jurisdiction to consider any matter arising under the Australian Constitution should rest with the High Court, not with Telstra. Until such time as the High Court declares that Part XIC of the TPA insofar as it applies to the ULLS is invalid, that law is a valid exercise of power by the Australian parliament. It is presently unclear when the court proceedings will be resolved.
- 5.9 As noted in the ACCC Discussion Paper, there is currently a public debate surrounding the appropriate fibre-based network to deploy in Australia and it is likely that funding decisions (both private and Government) for the deployment of such networks will be made prior to the 2008 review of the ULLS declaration. Further, it is essential for both access providers and access seekers to have certainty in relation to whether access to the sub-loop at the node falls within the ULLS declaration. The G9 therefore submits that it is both appropriate and practicable to hold a public inquiry.

Proposal does not exceed the Commission's regulatory powers

- 5.10 The G9 submits the proposed variation would be within the scope of Part XIC of the TPA and is within the ACCC's powers. The G9 notes that there are three important issues which are discussed below.
- 5.11 First, there is no uncertainty surrounding what is required to be supplied by an access provider under the proposed varied service description. Even if there is, it could be clarified by suitable drafting which is an issue for the purpose of this inquiry.
- 5.12 Second, the service described by the proposed varied declaration would be an eligible service within the meaning of s152AL(1)(b) of the TPA. It is unequivocal that the service described in the current ULLS declaration is an eligible service within the meaning of s152AL(1)(b) of the TPA. The varied declaration would simply clarify that the service declaration extends to the provision of access at all points on the communication wire and that the point of interconnection does not need to be located at or associated with a CAM. Fundamentally, the described service remains a service that facilitates the supply of a listed carriage service which is, or is capable of being, supplied.
- 5.13 Third, the proposed varied declaration is consistent with the standard access obligations (SAO) in section 152AR of the TPA. We consider that Telstra currently has the ability to provide interconnection of facilities pursuant to the obligation at subsection (5) in relation to the service described by the proposed varied declaration. In particular that the proposal to access the ULLS at "*a junction or concentration point*" will allow Telstra to provide the service as if it were supplying it to itself in the context of its proposed fibre network build.
- 5.14 The G9 therefore submits the proposed variation is within the scope of Part XIC the TPA and hence within the ACCC's regulatory powers.